



Oregon Institute of Technology
2025-2026 Catalog

2025-2026 Catalog	1
Welcome to Oregon Tech	3
Accreditation	3
Non-Discrimination Policy	8
Students with Disabilities	8
Alternate Format	8
General Catalog Production	8
Directories	9
Instructional Faculty	15
Admissions	25
Financial Aid	31
Tuition and Fees	36
Academic Policies and Procedures	38
Baccalaureate General Education Requirements	50
Graduate Studies	52
Campus Locations	57
Applied Computing & Geomatics Department	62
Applied Mathematics Department	102
Behavioral Sciences Department	117
Applied Behavior Analysis	118
Master of Science Applied Behavior Analysis	118
Marriage and Family Therapy	119
Civil Engineering Department	120
Communication Department	153
Computer Systems Eng Tech Department	193
Dental Hygiene Department	245
Electrical & Renewable Energy Department	273
Humanities & Social Sciences Department	340
Management Department	340
Manufacturing & Mechanical Eng Department	475
Medical Imaging Technology Department	525
Natural Sciences Department	595
OHSU Nursing Department	698
Instructors	698
Physical Therapy Department	699
Course Sets	713
Requirement Sets	727

Welcome to Oregon Tech



Aerial view of Oregon Tech Klamath Falls Campus

Welcome to Oregon Tech! You have chosen a university that will challenge you, excite you, and provide many opportunities for you to learn, innovate and grow in a unique polytechnic university environment. Oregon Tech graduates are known for their ability to excel immediately in their careers as well as in graduate and professional schools.

The small class size and hands-on, applied approach to education at Oregon Tech is perfectly tailored to an experiential learning environment that encourages communication, collaboration, and engaging in professional practice. Oregon Tech is focused on providing high value to students, and a high return on investment to our graduates, who excel across many industries and in-demand fields. Faculty members bring their real-world problem-solving experiences into the classroom, creating numerous opportunities for Oregon Tech students to gain professional experience outside the classroom through externships, internships, field work, cooperative programs, and capstone projects.

You have chosen rigor, quality, and relevance by attending Oregon Tech. You are now part of our focus on excellence, innovation, and professional preparation that has served Oregon Tech's graduates well and has continuously increased our reputation and rankings in Oregon, the Pacific Northwest, and nationally. Welcome to Oregon Tech – we're glad you're here and we look forward to helping you achieve your own personal and professional success.

[Welcome to Oregon Tech](#)

About Oregon Tech

For nearly 80 years, Oregon Institute of Technology (Oregon Tech) has focused on changing students' lives by preparing them to meet the technology, innovation and management needs of industry. Oregon Tech is accredited by the Northwest Commission on Colleges and Universities, and individual programs are also accredited by the appropriate professional organizations. Today, Oregon Tech offers nearly 50 bachelor's and master's degree programs in engineering, technology, health technologies, management, communication and the applied sciences, along with a Doctor of Physical Therapy Program. In addition to a residential campus in Klamath Falls, a growing number of bachelor's degrees and degree-completion programs are offered online, and bachelor's and master's degree programs can be entirely completed at Oregon Tech's Portland-Metro campus in Wilsonville.

With a mission to deliver professionally-focused education throughout the Pacific Northwest and to students from other parts of the country and world, we partner with industry leaders to ensure our programs adapt to ever-changing technologies and workforce demands. Year after year, our graduates garner the highest starting salaries in Oregon and among the highest in the nation.

Our applied approach to teaching, which blends theory and practice, is the main reason our graduates and alumni are so avidly recruited. Oregon Tech students have unique opportunities to apply what they learn in lab-based classes, clinics, externships and workplaces, as well as in clubs and special activities. Oregon Tech's faculty and staff, who come to Oregon Tech with relevant industry experience, reinforce this practical focus in the classroom. And in every program, a relevant interdisciplinary core underscores major studies, broadening students' understanding of the world and teaching them to communicate effectively, solve problems, and think for themselves. This student-focused approach to teaching and learning engages students in professional practice throughout their time at Oregon Tech.

Accreditation

Oregon Tech is accredited by the Northwest Commission on Colleges and Universities (NWCCU), 8060 165th Avenue, N.E., Suite 100, Redmond, WA 98052-3981. NWCCU is an institutional accrediting body recognized by the Council for Higher Education and/or the Secretary of the U.S. Department of Education. Accreditation, licensure or approval of individual programs are listed in departmental sections. Copies of accreditation documents are available in the Office of the Vice President for Academic Affairs/Provost, Oregon Tech, 3201 Campus Dr., Klamath Falls, OR 97601-8801.

One Oregon Tech, Three Primary Campuses, and Program-Specific Sites

Oregon Tech is one institution with multiple locations. Established in 1947, Oregon Tech offers bachelor's and master's degree programs throughout Oregon and beyond to meet the needs of students seeking a top quality, professionally-focused education.

Oregon Tech's residential campus is located in **Klamath Falls** in beautiful Southern Oregon, and is nestled on the eastern slope of the Cascade Mountains. The 190-acre campus offers spectacular views of Upper Klamath Lake, pine-studded knolls and snow-capped peaks from nearly every building. Klamath Falls, a city of about 22,000 residents (70,000 in Klamath County), is located about 20 miles north of the California border and in the same county that boasts Crater Lake National Park. Known as Oregon's "City of Sunshine," Klamath Falls enjoys about 300 days of blue skies each year.

Oregon Tech's **Portland-Metro** campus in Wilsonville, located just south of Portland, offers 21 bachelor's and master's degree programs in a state-of-the-art facility designed to provide an industry-focused, urban university experience in the heart of Oregon's "Silicon Forest". The campus offers high-demand degree programs, and is easily accessible to students of all ages and backgrounds, including business professionals, transfer students and new first-year students just out of high school. Oregon Tech provides excellent opportunities for students seeking internships and employment while completing their degrees.

Oregon Tech also offers a growing number of **Online** programs for working professionals or returning students who are busy and ready to advance their education as quickly and conveniently as possible. Oregon Tech Online allows students to finish certificates, associate, or bachelor's degrees without leaving home or the office, and without the hassles of travel, childcare or giving up their current job. The primary mission of Oregon Tech Online is to offer convenient programs and courses to both students seeking a degree, and those wishing to skill-up by taking just a course or two.

Oregon Tech also offers a bachelor's program in dental hygiene in **Salem** through a partnership with Chemeketa Community College. The classrooms and Dental Hygiene Clinic are located in Chemeketa's new, state-of-the-art Health & Sciences complex. Before acceptance, the program requires one year of prerequisite (pre-dental hygiene) coursework.

Oregon Tech **Seattle** offers a Bachelor of Science in Manufacturing Engineering Technology, Mechanical Engineering, or Mechanical Engineering Technology and a Master of Science in Manufacturing Engineering Technology to Boeing employees at sites in the Puget Sound area. Also offered are review classes for the Society of Manufacturing Engineers' CMfgT and CMfgE exams and three certificate programs.

Oregon Tech is accredited by the Northwest Commission on Colleges and Universities. Additional accreditations, licensure and approvals of individual programs are listed in the appropriate program sections of this catalog. Copies of accreditation documents are available in the Office of the Vice President for Academic Affairs/Provost, Oregon Institute of Technology, 3201 Campus Dr., Klamath Falls, OR 97601-8801.

Oregon Tech Online is an approved institutional participant in the National Council for State Authorization Reciprocity Agreements (NC-SARA) initiative, which allows for increased access to online courses for many out-of-state students. Oregon Tech Online is authorized by the Washington Student Achievement Council and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes Oregon Institute of Technology to offer field placement components for specific degree programs. The council may be contacted for a list of currently authorized programs. Authorization by the council does not carry with it an endorsement by the council of the institution or its programs. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the council at P.O. Box 43430, Olympia, WA 98504-3430.

[Welcome to Oregon Tech](#)

History at a Glance

1947 –	July 14, under the direction of first president, Winston Purvine, the first classes at Oregon Vocational School were held in a deactivated World War II Marine Corps hospital three miles northeast of Klamath Falls.
1948 –	In a vote by the State Board of Education, the University's name was changed to Oregon Technical Institute – also known as OTI or Oregon Tech.
1950 –	KTEC radio went on the air, broadcasting from Oregon Tech's campus.
1953 –	Associate degree programs in Surveying and Structural Engineering Technologies were first accredited by the Engineers' Council for Professional Development.
1956 –	KOTI television opened and went operational on campus.
1957 –	Oregon Tech was made a separate division of the State Board of Education and an engineering study was begun to determine whether to repair or rebuild the facilities.
1960 –	Oregon Tech was transferred to the jurisdiction of the State Board of Higher Education.
1962 –	Oregon Tech was accredited by the Northwest Association of Secondary and Higher Schools.
1964 –	Oregon Tech moved to its newly constructed campus on a geothermal site overlooking Upper Klamath Lake.
1966 –	Oregon Tech received authorization to grant bachelor's degrees.
1970 –	Bachelor's degree programs first accredited by ABET.
1973 –	OTI name changed to Oregon Institute of Technology or OIT; Oregon Tech continues in use as well.
1975 –	Geo-Heat Center established.
1976 –	Kenneth Light appointed second President of Oregon Tech upon Purvine's retirement.
1983 –	Larry Blake appointed third President of Oregon Tech. Metro Center established in Portland to offer in-demand degrees.
1984 –	Small Business Development Center established.
1988 –	Portland Metro Center moved to its first permanent facilities on Southeast Harmony Road in Clackamas.
1989 –	State Board of Higher Education authorized Oregon Tech to grant master's degrees.
1991 –	Lawrence J. Wolf appointed fourth President of Oregon Tech.
1995 –	First master's degree offered.
1997 –	First online degrees offered.
1998 –	Martha Anne Dow appointed fifth President of Oregon Tech.
2001 –	Oregon Renewable Energy Center (OREC) established in law by the Oregon legislature.
2005 –	Oregon Center for Health Professions established.
2008 –	Christopher G. Maples appointed sixth President of Oregon Tech. Martha Anne Dow Center for Health Professions opens.
2012 –	Oregon Tech's Portland-Metro presence expands with the opening of the Portland-Metro Campus in Wilsonville, and broadens degree options.

2015–	Oregon Institute of Technology became an independent public body governed by its own Board of Trustees.
2017–	Nagi G. Naganathan appointed seventh President of Oregon Tech.
2017	Oregon Manufacturing Innovation Research and Development (OMIC R&D) established.
2018–	Behavior Improvement Group Applied Behavior Analysis (BIG ABA) clinic in Klamath Falls established. Name changed in 2025 to BRIDGE ABA clinic.
2021–	Honorable Governor Kate Brown signed House Bill 2472A into law, granting Oregon Tech official designation as Oregon's Polytechnic University.
2021–	Oregon Tech Foundation surpasses \$10 million in scholarships awarded since Foundation developed.
2022–	Construction of the Center for Excellence in Engineering and Technology (CEET) completed, and first classes were held in winter 2022.
2022–	Oregon Tech offers in-state tuition for all Native American students.
2022–	The Boeing Company and Oregon Tech announce new Collaboration Lab in Klamath Falls.
2023–	Oregon Tech launches its first doctoral program, a Doctor of Physical Therapy, in partnership with Oregon Health & Science University.
2025–	Construction begins on the Kip Thomet Memorial Fieldhouse, a new athletics facility funded through private donations.
2025–	Construction begins on a \$35-million, mass-timber residence hall at the Klamath Falls campus, designed to house more than 500 students and reduce carbon impact.
2025–	Oregon Tech announces its intention to establish a new public College of Medicine, with a focus on addressing rural physician shortages.

[Welcome to Oregon Tech](#)

University Mission

Mission Statement

Oregon Institute of Technology ("Oregon Tech"), Oregon's Polytechnic University, offers innovative, professionally-focused undergraduate and graduate degree programs in the areas of engineering, health, business, technology, and applied arts and sciences. To foster student and graduate success, the university provides a hands-on, project-based learning environment and emphasizes innovation, scholarship, and applied research. With a commitment to diversity and leadership development, Oregon Tech offers statewide educational opportunities and technical expertise to meet current and emerging needs of Oregonians as well as other national and international constituents.

Vision

Oregon Tech will be a student-centered, world-class polytechnic university that inspires students to become tomorrow's leaders.

Institutional Student Learning Outcomes

Institutional Learning Outcomes (ISLOs), also referred to as Oregon Tech's Essential Student Learning Outcomes (ESLOs), support Oregon Tech's institutional mission and are in alignment with the Northwest Commission on Colleges and Universities (NWCCU) standards.

The ESLOs reflect the common expectations about the general knowledge, skills, and abilities that all Oregon Tech graduates will acquire by graduation regardless of degree program. They define the Oregon Tech learning experience that lay the foundation upon which each major program builds. The ESLOs may be achieved in many ways depending on the unique curriculum of each degree program, supporting graduates in developing habits of mind and behaviors of professionals and lifelong learners.

Oregon Tech Student Learning Outcomes:

Communication, Teamwork and Ethical Reasoning

Oregon Tech graduates will:

- communicate effectively orally and in writing
- collaborate effectively in teams or groups, working to accomplish group tasks and resolve conflict within groups and teams; and
- recognize decisions requiring ethical judgments, determine potential reasonable courses of action, and select the course of action best supported.

Diverse Perspectives

Oregon Tech graduates will demonstrate:

- an ability to identify and explain diverse perspectives which requires the self-awareness, intellectual flexibility, and broad knowledge that enables perception of the world through the eyes of others. This includes perspective of diverse cultures and personalities, with consideration of varied places, histories, and technologies.
- cultural sensitivity through the knowledge, awareness, and acceptance of other cultures, along with awareness of differences without promoting hierarchy within those differences
- global awareness through ability to view the world from a global perspective, competently and perceptively navigate the challenges and opportunities of a globalized world, demonstrate willingness to suspend own cultural biases to appreciate multiple global perspectives, and identify and appreciate the relevance of historical, demographic, social, cultural, political, economic, and/or environmental factors to a global issue(s).

Inquiry and Analysis

Oregon Tech graduates will demonstrate an ability to:

- analyze and explain how they process cognitively toward a goal when the problem solver does not initially know a solution method.
- maintain information literacy, identifying when information is needed and having the ability to locate, evaluate, and use the needed information ethically and effectively.
- identify and explain critical analysis of the problem/question/issue; recognize stakeholders and contexts; identify and evaluate assumptions; identify and evaluate evidence; formulate personal responses and/or acknowledge other perspectives, and identify and evaluate implications, conclusions, and consequences.
- analyze and explain logical thinking skills through logical extrapolation, reflecting an informed evaluation and ability to place substantial evidence and perspectives in priority order that lead to a conclusion or other outcome.
- appropriately extract, interpret, evaluate, construct, communicate, quantitative literacy and reasoning skills by applying quantitative information and methods to solve problems, evaluate claims, and apply and analyze quantitative data.
- analyze and explain inquiry and analysis skills which consists of posing meaningful questions about situations and systems, gathering and evaluating relevant evidence, and articulating how that the evidence justifies decisions and contributes to students' understanding of how the world works.

Welcome to Oregon Tech

Non-Discrimination Policy

Oregon Tech does not discriminate on the basis of race, color, ethnicity, national origin, gender, disability, age, religion, marital status, sexual orientation or gender identity in its programs and activities. The following individuals are designated to handle inquiries and complaints regarding this non-discrimination policy: Civil Rights Officer, Title IX Coordinator (sex-based and gender-based discrimination) (541) 885-1108; email: oithr@oit.edu.

Students with Disabilities

Oregon Tech is committed to accommodating the academic and programmatic needs of qualified students with disabilities. Students with disabilities who anticipate needing accommodations should contact Disability Services, LRC 229C, as soon as possible in advance of enrollment, to ensure timely provision of services. Questions may be directed to: Disability Services, Oregon Tech, 3201 Campus Dr., Klamath Falls, OR 97601-8801. (541) 851-5227.

Alternate Format

This publication is available in an alternate format for persons with disabilities. Please contact Disability Services at (541) 851-5227.

General Catalog Production

The 2025-26 General Catalog was produced by the Registrar's Office. Information in this catalog was accurate at the time of publication, but is subject to change without notice and does not constitute a contract between Oregon Tech and the student or applicant. The general catalog is published annually and available on the web at www.oit.edu.

Welcome to Oregon Tech

Governance of Oregon Tech

Prior to 2015, the Oregon Institute of Technology was governed by the Oregon State Board of Higher Education, the governing board for the seven public universities in Oregon. In April 2014, the State Board of Higher Education authorized the Oregon Institute of Technology to establish a Board of Trustees, appointed by the Governor and approved by the Senate.

Effective July 1, 2015, the University became an "independent public body" governed by the Board of Trustees with every authority necessary or appropriate for the operation of a major public university. The Oregon Tech Board of Trustees approves the University's mission, programs, budgets, and strategies; and works with the Higher Education Coordinating Commission (HECC) to provide final approval for the University's mission and any new academic programs.

[Welcome to Oregon Tech](#)

Oregon Tech Board of Trustees

Members and term expiration dates:

- Cecelia Amuchastegui, 2027
- Stefan Bird, 2026
- David Cauble, 2027
- John Davis, 2026 (Chair)
- Keegan Dentinger, 2026 (Student Representative)
- Dr. Vijay Dhir, 2027
- Dr. Johnnie Early II, 2027
- Don Gentry, 2027
- Kanth Gopalpur, 2026
- Aaron Hill, 2026 (Student Representative)
- Vincent Jones, 2026 (Vice Chair)
- Mark Neupert, 2026 (Faculty Representative)
- Celia Núñez-Flores, 2026
- Mike Starr, 2026
- Michele Vitali, 2023
- Dr. Nagi Naganathan, University President, ex-officio member

Directories

[Directories](#)

University Offices

- **President**, Nagi G. Naganathan, Ph.D., ASME Fellow
- **Provost and Vice President for Academic Affairs and Strategic Enrollment Management**, Joanna Mott, Ph.D.
- **Vice President for Finance and Administration**, John Harman, M.B.A.
- **Vice President for University Advancement**, Ken Fincher, Ph.D.
- **Vice President for Student Affairs**, Mandi Clark, Ed.D.
- **Vice Provost of Research & Academic Affairs**, Abdy Afjeh, Ph.D.
- **Associate Vice Provost for Academic Excellence**, ChihChien "Linus" Yu, Ph.D.
- **Associate Vice President and Chief Information Officer**, Tony Richey
- **Associate Vice President for Human Resources**, Sandi Hanan, B.S.
- **Associate Vice Provost for Faculty Relations**, Beverley McCreary, Ph.D.
- **Associate Vice President for Finance and Controller**, Alicia Dillon
- **Associate Vice President for Student Affairs & Dean of Students**, Mandi Clark, Ed.D.
- **Assistant Vice President for Government Relations**, Vacant
- **Dean, College of Engineering, Technology and Management**, Neslihan Alp, Ph.D.
- **Dean, College of Health, Arts and Sciences**, Vacant
- **Assistant Dean, College of Health, Arts and Sciences**, Michelle Butina, Ph.D., MLS.
- **Dean of Online Education and Global Engagement**, Ruth Black, Ph.D.
- **Admissions**, Josephine Ness, M.S., Director
- **Advising & Retention**, Robert Ivory, Ph.D., Director
- **Athletics**, John Van Dyke, M.S., Director
- **Board Secretary**, Vacant
- **Campus Security**, Vacant
- **College Union**, Josh Winter, Manager

- **Disability & Testing Services**, Jennifer James, DM, Director
- **Educational Partnerships and Outreach**, Carlene Starr, M.A.I.S., Director
- **Facilities Management and Planning Services**, Thom Darrah, Director
- **Financial Aid**, Tracey Lehman, M.M., Director
- **Housing and Residence Life**, Bonita Bontrager, Director
- **Institutional Research**, Farooq Sultan, B.S., Director
- **Integrated Student Health Center**, Vacant
- **Library Services**, Vacant
- **Marketing, Communication, and Public Affairs**, Lacey Jarrell, M.B.A., Executive Director
- **Office of Diversity, Inclusion, and Cultural Engagement**, Jennifer Wilson, Ph.D., Executive Director
- **Online Education & Global Engagement**, RuthClaire Black, Dean
- **Oregon Manufacturing Innovation Center, Research & Development (OMIC)**, Vacant
- **Oregon Renewable Energy Center**, Vacant
- **Payroll Services**, Karen Blevins, A.S., Director
- **Procurement, Contracts and Risk Management**, Vivian Chen, J.D., Director
- **Registrar's Office**, Wendy Ivie, M.M., Associate Vice Provost & University Registrar
- **Resilience, Emergency Management & Safety**, Doug Tripp, M.S., Executive Director
- **Sponsored Projects & Grants Administration**, Vacant
- **University General Counsel**, David Groff, J.D., General Counsel
- **Veterans Services**, Don Stockton, Director

Directories

Oregon Tech Foundation Board of Directors

- Alan Polaski, President
- Christine Mangan , Vice President
- Don Johnson, Treasurer
- Jim Blair, Secretary
- Diedra Thompson, Past President
- Parke Blundon
- Luke Breazeal
- Ann Cavanaugh
- Sarah Dammen
- James De Hoog
- Bill DeWitt
- Robert Femling
- Gerald Freschi
- Jim Hackett
- Steven Hyde
- Robert Kingzett
- James Monroe
- Robert Neathamer
- Alan Parks
- Doug Pratt
- Darrel Samuels
- Mason Wichman
- Dan Withers
- Rick Whitlock
- Don Young

Emeritus Directors

- Timothy Bailey
- Lance Bishop
- Marge Bocchi
- Don Boyd
- Sherrill Boyd
- Greg Bulkley
- Nancy Coffin-DeFeyter

- Dave Cowan
- Alan Craigmiles
- William Early
- Trudy Farr
- Fred Foulon
- John Gerbert
- Winifred Hood
- Gerda Hyde
- Gary Johnston
- Doug Kintzinger
- Susan Laubengayer
- Ron Loveness
- James McCobb
- John Novak
- Andy Peterson
- Jean Pinniger
- Kristi Redd
- Richard Siemens
- Joan Staunton
- Lois Stilwell
- Ted Thom
- Don VanLuvanee
- Tom Van Thiel
- Nancy Wendt

Ex-Officio

- Dr. Ken Fincher, Executive Director
- Dr. Nagi Naganathan, Oregon Tech President
- John Harman, Oregon Tech Vice President for Finance and Administration
- Chris Frasier, Oregon Tech Alumni Advisory Board President
- Jeremy Morris, President, Shaw Historical Library

Directories

Administration

Administration

Omar Abdelnaby (2024), Communications Specialist, Admissions.

Abdy Afjeh (2018), Senior Vice Provost of Research and Academic Affairs. B.S., Sharif University of Technology (1997); M.S., University of Toledo (1981) ; Ph.D., University of Toledo (1984).

Carl Agrifoglio (2009), Director, IT Operations & Classroom Technology, Information Technology Services.

Neslihan Alp (2024), Dean of Engineering, Technology & Management.

Michael Anderson (2023), Head Coach, Track & Field and Cross Country, Athletics. B.S. Eastern Oregon University.

Diana Angeli (2006), Executive Assistant, President's Office.

Cody Apple (2020), Machining Solutions Researcher, OMIC.

Willow Augustine (2021), Employer Relations Specialist, Career Services. B.S. (2019), Oregon Institute of Technology.

Kinsey Babiracki (2025), Coordinator, Peer Consultant & Supplemental Instruction, Academic Advising & Retention

Jennifer Bavarskas (2005), Health Educator, Integrated Student Health Center. B.A. (1991), University of Oregon; M.S. (2000), San Jose State University.

Julia Betts (2022), Executive Director, STEM Hub.

Ruth Claire Black (2023), Dean of Online Learning & Global Engagement. Ed.D., University of Southern California; J.D., Vanderbilt University.

Karen Blevins (2013), Director, Payroll Services. A.S. (2010), Klamath Community College.

Gale Bloom (2016), Assistant Director, Educational Partnerships & Outreach. M.A. (2013), University of Portland; B.A. (2012), Washington State University.

Bonita Bontrager (2024), Director, Housing & Residence Life.

Jacen Bridges (2022), Director, Alumni Relations, University Advancement.

Keeley Bryant (2024), Program Manager, Humanities and Social Science

RaShell Carvalho (2021), Senior Leadership Gift Officer, University Advancement. B.A. (2008) Oregon Institute of Technology.

Katie Cavendish (2015), Manager, Donor Relations, University Advancement. A.S. (2005), Mt. Hood Community College.

Shawni Cayeteno-Ramos (2021), Associate Director, Student Leadership Development & Cultural Engagement, Student Involvement & Belonging. M.S. (2021) Southern Oregon University; B.S. (2017) Southern Oregon University.

Vivian Chen (2015), Director, Procurement & Contracts. J.D. (2011) University of California, Berkeley; B.A. (2006) Wellesley College;

Barb Childers (2024), HRIS Systems & Data Administrator, Payroll Services

Anna Clark (2018), Assistant Director, Budget Office. M.S. (2014), University of Wyoming; B.S. (2007) California Polytechnic State University.

Mandi Clark (2004), Vice President for Student Affairs. Ed.D. (2020), Concordia University-Chicago; M.S. (1999), University of Nebraska; B.A. (1997), Kansas State University.

Tammy Clark (2007), Executive Assistant, College Health, Arts and Sciences. A.S. (2006), Klamath Community College.

Courtney Clemmer (2022), Residence Life Coordinator, Housing & Residence Life.

Jason "Jake" Coatney (2007), Senior Counselor, Financial Aid. A.A. (2002), College of the Siskiyous; B.S. (2005), Eastern Oregon University.

Spencer Corey (2021), Associate Clinic Supervisor, Humanities & Social Sciences. M.Ed (2019) University of Utah; B.S. (2015) Brigham Young University.

Molly Covey (2025), Leadership Gift Officer, University Advancement

Julie Daniels (2007), Scholarship Officer/Counselor, Financial Aid. B.A. (2003), Southern Oregon University.

Thom Darrah (2016), Director, Facilities Management Services.

Carrie Dickson (2014), Director, Online Learning, M.B.A. (2013), Southern Oregon University; B.S. (2009), Oregon Institute of Technology.

Alicia Dillon (2022), Associate Vice President & Controller, Business Affairs Office.

Hunter Drops (2023), Assistant Coach, Track & Field, Athletics.

David Eames (2024), Associate MRS Additive, OMIC

Jonathan Ellis (2023), Director of Marketing Communication for OMIC.

Robert Evory (2022), Director, Academic Advising & Retention.

Kimberly Faks (2019), Assistant Director, Student Involvement, Student Affairs.

Kelly Sullivan (2021), Coordinator, Academic Advising and Retention. B.A. (2014) Creighton University.

Ken Fincher (2020), Vice President, University Advancement.

Gretchen Fincher (2024), Admissions Counselor.

Savannah Fincher (2022), HR Generalist - Recruitment, Human Resources.

Mitchell Fink (2022), TechRec Coordinator, Athletics.

Ethan Foore (2024), Director of Marketing, University Advancement

Luci Galan Carrillo (2024), Spanish Interpreter, Dental Hygiene, College of HAS

Carlos Garcia (2024), Admissions Counselor.

Michael Garrard (2007), Manager of Sales and Marketing, Athletics.

Alexis Garrison (2023), Head Coach, Women's Volleyball, Athletics.

Mason Giustino (2023), Regional Admissions Counselor, Admissions

Prashant Gokhale (2025), Leadership Gift Officer, University Advancement

Celia Green (2020), Operations Assistant, Business Affairs. M.A. (2005), University of Wyoming; B.A. (1992), University of Wyoming.

David Groff (2018), Vice President & University General Counsel. J.D. (1993), Willamette University; B.A. (1989), Dartmouth College.

Pamela Grove (2018), Assistant to University General Counsel. A.A, Coastline Community College.

Cate Guenther (2024), University Librarian, Library

Danny Guthrie (2021), Senior Admissions Counselor, Admissions. B.S. (2002), Sierra Nevada College.

Sandi Hanan (2008), Associate Vice President, Human Resources. B.S. (2013), Oregon Institute of Technology; A.S. (1999), Oregon Institute of Technology.

Dierdre Harlan (2009), Executive Assistant, Strategic Enrollment Management.

John Harman (2021), Vice President Finance & Administration. M.B.A. (1993), East Tennessee State University; B.B.A. (1989), East Tennessee State University.

Serena Harris (2024), Grants Business Manager, Grants & Sponsored Projects

Dale Hatley (2013), Maintenance Supervisor, Facilities Services

Owen Haugh (2024), MMET Lab Manager, College of ETM

Kaulani Hedlund (2024), Regional Admissions Counselor, Admissions

Sarah Henderson-Wong (2017), Assistant Director, Benefits, Human Resources. M.S. (2005), Golden Gate University; B.A. (2000), San Francisco State University.

Don Hendrickson (2024), Executive Director, OMIC

Ryan Henley (2023), Disability & Testing Coordinator, Student Affairs

Leticia Hill (2006), Procurement and Risk Officer. B.S. (2016), Oregon Institute of Technology.

Josie Hudspeth (2014), Assistant Dean of Students, Student Affairs. M.A. (2013), California State University, Fullerton. B.A. (2011), California State University, Fullerton.

Brandy Hunter (2007), Assistant Director, Student Health.

Rebecca Ingerson (2024), Academic Advisor, Academic Advising & Retention.

Wendy Ivie (1999), University Registrar, Registrar's Office. M.M. (2005), Southern Oregon University; B.S. (1997), Oregon State University.

Penny Jahraus (2022), Director Career Connected Learning, Strategic Partnerships & Outreach

Jennifer James (2022), Operations Manager, University Advancement. Ph.D. (2021).

Pablo Jimenez Arenas (2025), Machine Operator & Research Assistant, OMIC

Cathy Jinich (2019), Counselor, Integrated Student Health Center. M.A. (2013), Naropa University; B.A. (2009), Massey University; B.A. (2005), Western State College.

Anwen Jones (2025), Coordinator, Academic Advising & Retention

Jennifer Kammerman (2021), Research Administrative Manager, OMIC. B.S. (1994) Brigham Young University.

Nicole Kandra (2024), Head Athletic Trainer, Athletics

Steven King (2025), Research Project Manager, OMIC

Tabitha Knight (2024), Academic Advisor, Academic Advising & Retention

Fredrick Kowalski (2018), Director, IT Security and Compliance. M.S. (2003), Towson University; B.S. (1996), McGill University.

Suzanne Kunse (2025), Associate Vice President, Government & Community Relations, President's Office

James Lake (1988), Assistant Director, Facilities Services. A.S. (1984), Sierra College.

Trent Lamont (2023), MSR-Additive, OMIC.

Joy Lease (2023), Head Coach Women's Basketball, Athletics. M.A. (2022) Capella University; B.A. (1996) Linfield College.

Tracey Lehman (1999), Director, Financial Aid. M.M. (2005), Southern Oregon University; B.A. (1988), State University of New York; A.S. (1986), Mohawk Valley Community College.

Cristina Leventon (2018), Executive Assistant, University Advancement

Sara Mansfield (2022), Campus Operations Manager.

Kendal Marks (2012), Financial Aid & Registration Coordinator, Financial Aid. M.S. Ed., (2013) Arizona State University; B.S., (2007) Southern Oregon University.

Emily Martin (2023), Disability & Testing Services Assistant, Student Affairs

Erin Martin (2025), Career Advisor, Career Services

Chad Mattox (2022), Grounds Supervisor, Facilities Services.

Gaylyn Maurer (2013), Executive Director, Center for Health & Wellness. M.A. (1996), University of Denver; B.S. (1993), University of Houston.

Beverly McCreary (2021), Associate Vice Provost for Labor Relations. Ph.D. University of Oregon; M.S. University of Oregon; B.S. University of Southern California.

Kyle McGann (2021), Machine Solutions Researcher, OMIC. M.S. (2021) Oregon State University; B.S. (2019) Oregon State University.

Sean McManamon (2022), Head Coach Men's Soccer, Athletics. B.S. Southern Oregon University.

Michelle Meyer (2014), Director, Audit & Compliance, Finance & Administration. B.S. (2004), Oregon State University; Certified Public Accountant, Oregon.

Mark Mitchell (2023), Facilities Manager, OMIC.

Thomas Moore (2023), Head Coach Women's Soccer, Athletics. M.S. (2010) Ohio University; B.S. (2022) Huntingdon College.

David Myers (2021), Head Golf Coach, Athletics. M.S. (1993) Oregon State University; M.S. (1988) Oregon State University; B.S. (1986) Oregon State University.

Nagi Naganathan (2017), President. Ph.D. (1986), Oklahoma State University; M.S. (1981), Clarkson University; B.E. (1978), National Institute of Technology.

Urmaze Naterwalla (2019), Director of Research Operations, OMIC. M.B.A. (2009), University of Oregon; M.S. (1996), Ohio State University; B.S. (1993), Indiana Institute of Technology.

Josephine Ness (2021), Director of Admissions. M.S. Western Governors University; B.A. Willamette University.

Valjean Newsome (1997), Executive Assistant, College of Engineering, Technology, and Management. A.S. (1998), Oregon Institute of Technology.

Teresa Nguyen (2024), Assistant Athletic Director, Athletics

Shane O'Brien (2025), Associate Director, Government Relations, President's Office

Mary Jane Owen (2023), Associate Director, Educational Partnerships & Outreach.

Dahiana Padilla (2024), TOP Advisor, Student Affairs

Justin Parnell (2012), Head Men's Basketball Coach & Assistant Athletic Director, Athletics. B.S. (2011), Oregon Institute of Technology.

Adria Paschal (2007), Senior Executive Assistant to the President. A.A. (2016), Oregon Institute of Technology.

Ashlie Pence (2016), Associate Registrar, Registrar's Office. M.Ed. (2021) Western Oregon University; B.S. (2016), Oregon Institute of Technology.

Suzet Petersen (2002), Assistant Director, Financial Aid. B.S. (1998), Oregon Institute of Technology.

Elizabeth Peterson (2022), Coordinator, Academic Advising & Retention. B.S. (2021) Oregon Institute of Technology.

Lara Pracht (2016), Director Academic Affairs, Portland-Metro. Office of the Provost. Ph.D. (2017), University of Washington; B.S. (2010), University of Kansas.

Maria "Lupe" Preciado (2023), Senior Admissions Counselor, Admissions.

Gary Preston (2024), Coordinator, Academic Advising & Retention

Michelle Preston (2024), Associate Dean, College of Health, Arts, & Sciences

Sierra Repp (2024), Associate MSR, OMIC

Robert Reynolds (2021), Transfer Services Manager & Pre-Admission Advising, Educational Partnerships & Outreach. M.S. (2020) Portland State University; B.A. (2009) California State University, Chico.

Anthony "Tony" Richey (2003), Associate Vice President & Chief Information Officer. Information Technology. M.S. (2010), Colorado Technical University; B.S. (2005), A.A. (1989), Oregon Institute of Technology.

Lesly Rodriguez (2022), MESA-STEM Partnership Coordinator, Education Partnerships & Outreach. B.A. (2021) Portland State University.

Joseph Rourke (2023), Educational Partnerships & Outreach.

Christopher Sacks (2023) Manager, Bookstore.

Mike Safford (2022), Director, Sports Information, Athletics. B.A. (1998) Pacific Lutheran University.

Taylor Schaming (2020), Associate MSR, OMIC.

Victoria Seward (2022), Assistant Director, Business Affairs Office.

Danny Shapiro (2025), Counselor, Integrated Student Health Center

Carleen Starr (2013), Director, Educational Partnerships & Outreach. M.A.I.S. (2007), Oregon State University; B.S. (2005), Oregon State University.

Greg Stewart (2004), Head Coach Women's Softball, Athletics. B.S. (1992), Sterling College.

Don Stockton (2022), Director, Veteran's Services. M.A. (2023) George Mason University.

Elizabeth Stovall (2024), Director, Career Services.

Greg Stringer (2024), Associate Vice President, Strategic Enrollment Management & Retention

Cynthia Stripling (2013), Department Coordinator, Admissions. B.A. (1996), Jacksonville State University.

Karissa Sultan (2010), Accounts Receivable Manager, Business Affairs. B.S. (2005), University of Nevada-Reno.

Christopher Syrnyk (2012), Executive Director, Honors Program, Office of the Provost.

Amy Taylor (2024), HR Generalist, Human Resources

John Timmerman (2024), Machine Operator & Research Assistant, OMIC

Paul Titus (2018), Manager of Academic Finance & Operations, Office of the Provost. B.S. (2013), Oregon Institute of Technology.

Doug Tripp (2021), Executive Director Resilience, Emergency Management & Safety. M.S. University of Wisconsin; B.A. St. Ambrose University.

John VanDyke (2018), Director, Athletics. M.S. (2007), United States Sports Academy; B.A. (1992), Western Washington University.

Michelle Vitali (2017), Operations & Policy Advisor, OMIC. B.S. (1990), Florida Atlantic University.

Charlotte Waite (2022), Access Services Manager, Library

Ricky Walker (2024), Head Men's Baseball Coach, Athletics

Alan Wallace (2005), Director, Enterprise Applications, ITS

William Watts (2024), Associate MSR, OMIC

Sara Welsh (2023), Behavior Analyst, Humanities and Social Sciences

Erin Williams (2013), Athletic Programs Operations, Athletics. B.S. (2017) Eastern Oregon University.

Jennifer Wilson (2021), Assistant Vice President for Institutional Equity & Title IX Coordinator.

Josh Winter (2022), Service Desk Manager, ITS.

Rachel Winters (2014), Executive Assistant, Student Affairs.

Mira Wonderwheel (2018), Assistant Vice President, University Advancement. B.A. (1999), Sonoma State University.

Jacie Wyatt (2024), Annual Giving Manager, University Advancement

Michael Yilek (2021), Assistant Director of Operations, Admissions. B.S. (2021) Oregon Institute of Technology.

Matthew Young (2023), Assistant Director, Housing & Residence Life.

Niki Young (2023), Counselor, Integrated Student Health Center.

ChihChien "Linus" Yu (2024), Associate Vice Provost, Academic Excellence. Ph.D. (2008) State University of New York at Buffalo; M.S. (1998) Tamkang University; B.S. (1996) Tamkang University.

Directories

Instructional Faculty

This listing reflects faculty for the 2025-26 academic year. In some cases, changes taking effect for 25-26 are included in the faculty lists under the department descriptions.

Mateo Aboy (2005), Professor, Electrical Engineering and Renewable Energy. B.S. (2002), B.S.E.E. (2002), M.S.E.C.E. (2004), Portland State University; Dipl. Ing. (2003), M.Phil. (2004), Ph.D. (2005), ETSIT-University of Vigo; Exec. Cert. (2007), Massachusetts Institute of Technology; M.B.A. (2011), L.L.B./QLD (2014), University of London. Registered Professional Engineer (PE), European Union (COIT No. 12684). Registered US Patent Agent (USPTO Bar Admission No. 64040). Certified Licensing Professional (CLP).

Abdelouahab Abrous (2014), Associate Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1981), University of Science & Technology, Algeria; M.S. (1984), University of Washington, Seattle; Ph.D. (1988), University of Washington, Seattle. Registered Professional Engineer, Washington, Idaho, Oregon, and California.

Stefan Andrei (2023) Professor, Computer Systems Engineering Technology. B.S. (1995), M.S. (1995), A. I. Cuza University of Iasi; Ph.D. (2000), Hamburg University.

Dawn Bailey (2017), Associate Professor, Humanities and Social Sciences, Clinical Director/Practicum Coordinator MS Applied Behavior Analysis Program. B.S. (1996), M.S. (2005), Ph.D. (2008), Florida State University.

Richard L. Bailey (1991), Professor, Management. B.S. (1984), M.A. (1985), Utah State University. Certified Public Accountant.

Rachelle Barrett (2018), Instructor, Medical Laboratory Science. Certificate (2013), University of Texas Medical Branch; B.S. (2005), Oregon State University; B.S. (2006), Oregon Institute of Technology; M.S. (2012), Rush University

Pramiti Barua (2024), Instructor, Computer Systems Engineering Technology. M.S. (2023), Bowling Green State University.

Krista Beaty (2017), Assistant Professor, Dental Hygiene. A.A.S. (2004), Clark College; B.S. (2008), Eastern Washington University; M.S. (2019), Idaho State University.

Sharon Beaudry (2014), Instructor, Management. B.S. (1985), College of New Rochelle; J.D. (2009), Northwestern California University; M.B.A. (2013), Northcentral University. Senior Professional in Human Resources (SPHR).

Vanessa Bennett (2008), Associate Professor, Medical Imaging Technology. B.S. (2001), Oregon Institute of Technology; M.Ed. (2015), Western Governors University. Certified Nuclear Medicine Technologist (CNMT).

Nate Bickford (2022), Associate Professor, Natural Sciences.

Sonja Bickford (2023), Associate Professor, Management. B.S. Management (2000), Appalachian State University; M.B.A. (2001), Arkansas State University Jonesboro.

Jeannie Bopp (2016), Assistant Professor, Dental Hygiene. B.S. Dental Hygiene (2011), Oregon Institute of Technology; M.S. (2020) Oregon Institute of Technology.

Charisse Botsch (2015), Instructor, Dental Hygiene (Salem). B.S. (1985), Oregon Health Sciences University.

Jacklyn Brechter (2023), Associate Professor, Health Sciences. DPT (2018), Chapman University.

Todd W. Breedlove (1999), Professor, Computer Systems Engineering Technology. B.S. (1996), Oregon Institute of Technology; M.S. (1999), Southern Oregon University.

Kevin J. Brown (2001), Professor, Communication. A.A. (1986), Ricks College; B.A. (1988), Idaho State University; M.A. (1991), Washington State University; Ph.D. (2000), University of Utah.

Arief Budiman (2021), Assistant Professor, Manufacturing & Mechanical Engineering Technology. M.S. (2006); Ph.D. (2008), Stanford.

Ben S. Bunting, Jr. (2013), Professor, Humanities and Social Sciences. B.A. (2003), Kent State University; M.A. (2007); Ph.D. (2012), Washington State University.

Jess Burden (2023) Instructor, Communication. M.A. (2008), San Fransico State University.

Calvin K. Caldwell (1986), Professor, Computer Systems Engineering Technology. B.S. (1981), Oregon Institute of Technology; M.S. (1989), California State University, Chico.

Richard D. Carson (2006), Associate Professor, Medical Imaging Technology. B.S. (1997), Oregon Institute of Technology; M.Ed. (2012), Western Governors University. Registered Technologist (R) (CT) ARRT.

Kyle Chapman (2016), Associate Professor, Humanities and Social Sciences. B.A. (2008), Texas Tech University; M.A. (2011) Texas Tech University; Ph.D. (2014), University of Kansas.

Ryan Cherrick (2024), Assistant Professor, Management. A.S. (2010), Ventura Community College; B.S. (2011), Union Institute & University; Ph.D. (2024), University of The Cumberland.

Edward Clint (2022), Assistant Professor, Humanities and Social Sciences. B.S. (2012), University of Illinois – Urbana-Champaign.

James Cloen (2023), Assistant Professor, Library. B.S. (2002), Southwestern Assemblies of God University.

Robyn L. Cole (2004), Associate Professor, Medical Imaging Technology. B.S. (2000), Oregon Institute of Technology; M.Ed. (2007), Western Governors University.

Cristina Crespo Veiga (2009), Professor, Electrical Engineering and Renewable Energy. B.S. (2002), M.S. (2004), Portland State University; M.Phil. (2009), Ph.D. (2010), Etsit-University of Vigo. Registered US patent agent (USPTO bar admission no. 68725).

David Culler (2007), Professor, Manufacturing and Mechanical Engineering and Technology. A.A. (1985), University of New Mexico, Albuquerque; B.S. (1988), M.S. (1990), Ph.D. (1994), New Mexico State University, Las Cruces.

Carmen Curtz (2016), Instructor, Emergency Medical Services.

Don DaSaro (2008), Senior Instructor 1, Management. A.S. (1964), Metropolitan College; B.S. (1967), University of Missouri Science and Technology; M.B.A. (1991), Marymount University.

Anne Davenport (2024), Instructor, Health Sciences. DPT (2018), Duke University School of Medicine.

Kenneth Davis (2016), Associate Professor, Mathematics. B.A. (1981), Reed College; M.S. (1985), Portland State University; Ph.D. (1989), Washington State University.

Dibyajyoti Deb (2013), Professor, Mathematics. B.S. (2004), Chennai Mathematical Institute, India; M.S. (2006), University of Kentucky; Ph.D. (2010), University of Kentucky.

Irina Demeshko-Prosnik (2006), Associate Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1996), B.A. (2001), M.S. (1996), M.A. (2001), Far Eastern State Transport University.

Caroline Doty (2016), Associate Professor, Medical Laboratory Science. B.S. (2007), Clayton State University; M.S. (2012), Northwestern University; B.S. (2014), Oregon Institute of Technology and Oregon Health Sciences University. M.t. (ASCP) certified.

George Drouant (2018), Senior Instructor 1, Computer Systems Engineering Technology.

James Eastham (2014), Senior Instructor 1, Electrical Engineering and Renewable Energy. B.S. (2009), Oregon Institute of Technology; M.S. (2014), Portland State University.

Rachel Edwards (2022), Assistant Professor, Natural Sciences. B.S. (2012), Northwestern University; Ph.D. (2021), University of Minnesota, Twin Cities.

Holly Edwins (2022), Instructor, Emergency Medical Services. B.S. (2017), Warner Pacific University.

Todd Ellingson (2008), Senior Instructor 1, Medical Director, Emergency Medical Services. B.S. (1998), Washington and Lee University; M.D. (2003), Oregon Health and Science University.

Tricia Elliott (2018), Senior Instructor 1, Natural Sciences. B.S. (1998), California State Polytechnic University, Pomona; M.S. (2002), California State Polytechnic University, Pomona.

Jared Emard (2016), Senior Instructor 1, Management. B.S. (2009), B.S. (2010), Oregon Institute of Technology; M.B.A. (2016), Southern Oregon University.

Kerry Farris (2017), Instructor, Natural Sciences. B.S. (1996), University of Idaho; M.S. (2000), University of Idaho.

James P. Fischer (1999), Professor, Mathematics. B.S. (1989), B.A. (1991), Humboldt State University; M.S. (1993), University of New Hampshire; Ph.D. (1998), Oregon State University.

Tiernan Fogarty (2002), Professor, Mathematics. B.S. (1995), M.S. (1997), Ph.D. (2001), University of Washington.

Matthew Fowler (2024), Assistant Professor, Health Sciences.

Marisa Fox (2024), Instructor, Dental Hygiene. B.S. (2007) Point Loma Nazarene University; DDM (2011), Oregon Health & Science University.

Andria "Andie" Fultz (2012), Professor, Communication. B.S. (1997), M.S. Communication Studies (2007), M.S. Post-Secondary, Adult, & Continuing Education (2007), Portland State University.

Kamal Gandhi (2017), Associate Professor, Natural Sciences. B.S. (2001), UC San Diego; Ph.D. (2006), UC Berkeley.

Yanqing Gao (2013), Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1982), Qingdao University of Science & Technology; M.S. (2000), Southern Illinois University, Edwardsville; M.S (2001), Ph.D. (2010), University of Arizona.

Kevin Garrett (2017), Associate Professor and Clinical Director, M.S. Marriage and Family Therapy Program, Humanities and Social Sciences. B.S. (2003), Utah State University; M.Ed. (2006), University of Oregon; MedFT Certificate (2009), University of Nebraska Medical Center/ University of Nebraska-Lincoln; Ph.D. (2014), Kansas State University.

Carrie Giacomelli (2022), Assistant Professor, Medical Imaging Technology. B.S. (2003), Oregon Institute of Technology; MBA, (2020), Western Governors University.

Iris K. Godwin (2007), Associate Professor, Head of Special Collection and University Archives, Library Services. B.A. (2000), Rhodes College; M.L.I.S. (2005), University of Tennessee, Knoxville.

Marybeth Grant-Beuttler (2022), Associate Professor, Health Sciences.

Ashton Greer (2019), Associate Professor, Civil Engineering. B.S. (2014); M.S. (2015); Ph.D. (2019), The University of Alabama.

Eean Grimshaw (2023), Assistant Professor, Communication. B.S. (2012), M.S. (2016), The University of Montana.

David Grossnickle (2023), Assistant Professor, Natural Sciences. B.A. (1999), DePauw University; M.S. (2013), Indiana University; Ph.D. (2018), The University of Chicago.

Cate Guenther (2024), University Librarian.

Emily Gustafson-Plummer (2021), Instructor, Dental Hygiene. B.S. (2017), Oregon Institute of Technology.

Tara Guthrie (2011) Associate Professor, Medical Imaging Technology. B.S. (2003), B.S. (2004), Oregon Institute of Technology. Registered Vascular Technologist and Diagnostic Cardiac Sonographer (2005) ARDMS; M.S. (2016), University of Nebraska Kearney.

David K. Hammond (2013), Professor, Mathematics. B.S. (1999), California Institute of Technology; Ph.D. (2007), New York University.

Christopher Hamper (2012), Instructor, Emergency Medical Services. A.A.S. (2010), Oregon Health and Science University/Oregon Institute of Technology; B.S. (2017), Portland State University/Oregon Health and Science University.

Cecily Heiner (2019), Associate Professor, Computer Systems Engineering Technology. B.S. (2003), Brigham Young University; M.S. (2005), Carnegie Mellon University; Ph.D. (2009), University of Utah.

Paula Hendrix (2019), Professor, Dental Hygiene. B.S. (1985) Oregon Health Sciences University; M.Ed. (2013), Concordia University.

Luis Hernandez (2022), Assistant Professor, Electrical Engineering and Renewable Energy. Ph.D. (2011), Polytechnic University of Madrid.

Philip Howard (2014), Associate Professor, Computer Systems Engineering Technology. B.S. (1982), B.A. (1982), Central Washington University; Graduate Certificate (1988), Multnomah School of the Bible; Ph.D. (2012), Portland State University.

Franny Howes (2014), Professor, Communication. B.A. (2006), M.A. (2010), Michigan State University; Ph.D. (2014), Virginia Polytechnic Institute and State University.

Richard G. Hoylman (2002), Professor, Medical Imaging Technology. B.S. (1988), Oregon Institute of Technology; M.M. (2006), Southern Oregon University. Certified Nuclear Medicine Technologist (CNMT).

Alishia Huntoon (2005), Professor, Humanities and Social Sciences. B.S. (1999), University of Wisconsin, Stevens Point; M.S. (2002), Ph.D. (2005), Washington State University.

Ganghee Jang (2023), Assistant Professor, Computer Systems Engineering Technology. B.S. (2003), Korea University; M.S. (2006), University of Florida; Ph.D. (2016) University of California, Irvine.

David Johnston (2018), Senior Instructor 1, Natural Sciences. B.S. (2006), Binghamton University; M.S. (2008), The College of William & Mary; Ph.D. (2017), The College of William & Mary.

- Leah Jolly** (2014), Assistant Professor, Medical Imaging Technology. B.S. (2003); M.S. (2018), Oregon Institute of Technology. Registered Vascular Technologist (RVT) and Registered Phlebology Sonographer (RPhS).
- Fuat Karakaya** (2023), Assistant Professor, Computer Systems Engineering Technology. M.S. (1998) Illinois Institute of Technology; Ph.D. (2004) The University of Tennessee, Knoxville.
- Jherime L. Kellermann** (2013), Professor, Natural Sciences. B.A. (1998), Penn State University; M.S. (2007), Humboldt State University; Ph.D. (2012), University of Arizona.
- Maria Lynn Kessler** (2002), Professor, Humanities and Social Sciences. B.S. (1983), Northeastern University; M.S. (1989), Southern Illinois University, Carbondale; Ph.D. (1994), Florida State University.
- Joseph Kim** (2024), Assistant Professor, Geomatics. B.S. (1998), United States Military Academe, West Point; M.B.A. (2008), Harvard Business School.
- Jesse M. Kinder** (2016), Associate Professor, Natural Sciences. B.A. (2001), Depauw University; M.S. (2004) University of Pennsylvania; Ph.D. (2008) University of Pennsylvania.
- Ian King** (2023), Instructor, Management. B.A. (1985), University of Southern California; MBA (1991), Chapman University; DBA (2015), George Fox University.
- Thomas Kivatinos** (2023), Instructor, Humanities and Social Sciences. M.A. (2014), Ph.D. (2017) The City University of New York.
- Naga Korivi** (2023), Associate Professor, Electrical Engineering and Renewable Energy. M.S. (2002), Louisiana Tech University; Ph.D. (2011), Louisiana State University, Baton Rouge.
- Amber Lancaster** (2018), Associate Professor, Communication. Ph.D. (2008), Texas Tech.
- Kangjae Lee** (2023), Assistant Professor, Electrical Engineering and Renewable Energy. M.S. (2014), Seoul National University; M.S. (2016), Ph.D. (2020), University of Florida.
- Meng-Lun Lee** (2023), Assistant Professor, Manufacturing and Mechanical Engineering and Technology. Ph.D. (2022), The State University of New York, Buffalo.
- Su Jin Lee** (2022), Assistant Professor, Geomatics. B.S. (2000), Hanyang University; M.S. (2003) Hanyang University.
- Steven Lemery** (2022), Instructor, Manufacturing and Mechanical Engineering and Technology. B.S. (1987), M.S. (2007), Oregon Institute of Technology.
- Hui Yun Li** (2006), Professor, Natural Sciences. B.S. (1988), National Taiwan University; M.S. (1990), Michigan State University; Ph.D. (1994), University of Massachusetts, Amherst.
- Ashley Iliff (2024), Instructor, Health Sciences.
- Roger V. Lindgren** (1999), Professor, Civil Engineering. Dip1H. (1985), Northern Alberta Institute of Technology; B.Sc. (1989), University of Alberta; Ph.D. (2005), Portland State University. Registered Professional Engineer: Alberta, Nevada.
- Gary Lomprey** (2019), Associate Professor, Management. B.S. (2005), Northwest Christian University; M.S. (2008), University of Oregon.
- Jessica Luebbers** (2015), Assistant Professor, Dental Hygiene. A.A.S. (2010), Portland Community College; B.S. (2012), Oregon Institute of Technology; M.S. (2017), Idaho State University; Ed.D. (2021), George Fox University.
- Travis J. Lund** (2014), Professor, Natural Sciences. B.S. (2006), George Fox University; Ph.D. (2013), University of Colorado Boulder.
- Kari J. Lundgren** (2014), Associate Professor, Communication. B.A. (2004), Franciscan University of Steubenville; M.A. (2006), Ph.D. (2013), Carnegie Mellon University.
- Douglas W. Lynn** (1996), Professor, Computer Systems Engineering Technology. B.S. (1982), M.E. (1985), Ph.D. (1988), Brigham Young University.
- Ryan Madden** (2010), Professor, Humanities and Social Sciences. B.A. (1984), University of California – Davis; M.A. (1988), University of Vermont; Ph.D. (1993), University of New Hampshire.
- Emily McCadden** (2024), Instructor, Dental Hygiene. B.S. (2020), Oregon Institute of Technology.
- Rosalind J. McClure** (2000), Professor, Natural Sciences. B.S. (1986), Oregon Institute of Technology; M.S. (2010), University of North Dakota.
- Debbie L. McCollam** (1995), Professor, Medical Imaging Technology. B.S. (1990), Oregon Institute of Technology; M.B.A. (1996), Southern Oregon University. Registered Technologist (R, M, ARRT)
- Andrea McCracken** (2019), Senior Instructor 1, Communication. B.A. (2004), Michigan State University; M.A. (2006) University of Montana; Ph.D. (2009) University of Texas at Austin.
- Don McDonnell** (2007), Professor, Medical Imaging Technology. B.S. (1997), Oregon Institute of Technology; M.Ed. (2012), Western Governors University. Registered Technologist (R, ARRT).
- Pake Melland** (2023), Assistant Professor, Mathematics.
- Darrel Mooers** (2022) Instructor, Medical Laboratory Science. M.B.A. (1991), Willamette University.

Brian Moravec (1989), Professor, Manufacturing and Mechanical Engineering and Technology. B.S.M.E. (1980), M.S.A.A. (1987), University of Washington.

Carmen Morgan (1989), Associate Professor, Management. A.A. (1984), B.S. (1986), Oregon Institute of Technology; M.B.A. (1991), Portland State University. Certified Public Accountant: Oregon; Certified Management Accountant; Certified in Financial Management, Personal Financial Specialist.

Sophie Nathenson (2012), Professor, Medical Sociology, Humanities and Social Sciences. B.S. (2006), University of Tulsa; M.S. (2009), Ph.D. (2012), University of Utah.

Stacie Neely (2022) Assistant Professor, Dental Hygiene. B.S. (2011), M.S. (2023), Oregon Institute of Technology.

Cristina Negoita (2004), Professor, Mathematics. B.A. (1995), University of Oregon; M.S. (2002), Ph.D. (2003), Arizona State University.

Hallie A. Neupert (1999), Professor, Management. B.A. (1994), Wellesley College; M.S. (1996), University of Arizona.

Mark A. Neupert (1998), Professor, Humanities and Social Sciences. B.A. (1987), University of Colorado, Boulder; M.S. (1992), Ph.D. (1999), University of Arizona.

Lauren Nielsen (2024), Assistant Professor, Health Sciences. B.S. (2017), Oregon Institute of Technology.

Phong Nguyen (1999), Senior Instructor 1, Computer Systems Engineering Technology. B.S.E.E. (1985), United States Naval Academy; M.S.E.E. (1992), Naval Post Graduate School, Monterey.

Travis Owen (2023), Assistant Professor, Natural Sciences. B.S. (2005), Missouri State University; Ph.D. (2012), The University of Iowa.

Gregory Pak (2010), Associate Professor, Natural Sciences. B.S. (1992), University of Illinois at Urbana-Champaign; B.S. (1994), Illinois Institute of Technology; M.D. (2001), Jagiellonian Collegium Medicum.

Nupur Pande (2023), Instructor, Natural Sciences.

Randall D. Paul (2004), Professor, Mathematics. B.A. (1989), Rice University; M.S. (1998), Ph.D. (1998), University of Texas at Austin.

Michele Pedicone (2024), Assistant Professor, Health Sciences.

Trevor J. Petersen (2013), Professor, Humanities and Social Sciences. B.S. (2006), Brigham Young University; M.S. (2009), Ph.D. (2013), Ohio University.

Slobodan Petrovic (2009), Professor, Electrical Engineering and Renewable Energy. B.S. (1979), University of Belgrade, Serbia; Ph.D. (1984), Technical University of Dresden, Germany.

Alla V. Powers (2004), Associate Professor, Digital Initiatives Librarian, Library Services. B.A. (1985), Karelian State Pedagogical Institute; M.S. (1993), Karelian College of Culture; M.L.I.S. (2009), Drexel University.

Scott Prael (2012), Professor, Electrical Engineering and Renewable Energy. B.S. (1982), California Institute of Technology; Ph.D. (1988), University of Texas at Austin.

Ronald Rea (2024), Senior Instructor 1, Health Sciences.

Joseph Reid (2009), Professor, Mathematics. B.S. (2006), Western Oregon University; B.S. (2008), Oregon Institute of Technology; M.S. (2009), University of Washington; M.A.S. (2013), Penn State University.

Riley Richards (2021), Assistant Professor, Communication. Ph.D. (2021), University of Wisconsin, Milwaukee.

Charles "C. J." E. Riley (2008), Professor, Civil Engineering. B.S. (2001), Swarthmore College; M.S. (2003), Ph.D. (2009), Colorado State University, Ft. Collins. Registered Professional Engineer: Oregon.

Wendy Rogers (2018), Instructor, Medical Imaging Technology. B.S. (1993), Oregon Institute of Technology.

Yasha Rohwer (2013), Professor, Humanities and Social Sciences. B.A. (2000), University of Washington; M.A. (2006), Florida State University; M.A. (2009), Ph.D. (2012), University of Missouri.

Abigail Rollins (2020), Instructor, Dental Hygiene. B.A. (1981), University of Oregon; DMD (1989), Oregon Health and Sciences University.

Paula Russell (2011), Professor, Dental Hygiene. B.S. (1998), Oregon Institute of Technology; M.Ed. (2010), University of Phoenix. Expanded Practice Dental Hygienist (EPDH).

Mostafa Saber (2017), Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (2001), Sharif University of Technology; M.S. (2003), University of Tehran; Ph.D. (2013), North Carolina State University.

Aboubakr Salem (2021), Instructor, Electrical Engineering & Renewable Energy. Ph.D. (2015) Ghent University.

Neil Santos (2024), Provisional Instructor, Medical Imaging Technology. B.S. (1997), Oregon Institute of Technology.

Troy Scevers (2013), Associate Professor, Computer Systems Engineering Technology. B.S. (1997), M.S. (2002), Oregon Institute of Technology.

Tracy Scharn (2021), Associate Professor, Instruction and Outreach Librarian. A.A. (1995), Lane Community College, B.A. (1997), University of Oregon, M.S. (2009), University of Washington.

Ethan Schlecht (2024), Provisional Instructor, Medical Imaging Technology. B.S. (2017), Oregon Institute of Technology.

Markie Scheidegger (2021), Instructor, Communication. B.A. (2017), Northern Arizona University; M.A. (2019), Northern Arizona University.

Matthew W. Schnackenberg (2005), Professor, Communication. B.A. (1995), Michigan State University; M.A. (1998), Ph.D. (2006), Washington State University.

Michael Schwartz (2007), Program Director, Sleep Health. M.A. (1992), San Francisco State University.

Feng Shi (2011), Associate Professor, Electrical Engineering and Renewable Energy. B.S. (1985), Northwest Normal University, P.R. China; MME (1991), Yunnan Normal University, P.R. China; M.S. (2002), University of Rochester; Ph.D. (2008), University of Toledo.

Hong "Randy" Y. Shih (1984), Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1979), Chung-Yuan University, Taiwan; M.S. (1984), University of Nebraska, Lincoln.

Sean Sloan (2010), Associate Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1989), M.S. (1994), University of Illinois.

Jason Smith (2022), Instructor, Mathematics. M.S. (2009), Boise State University.

Laurie Sprauer (2022) Assistant Professor, Medical Laboratory Science. B.S. University of Wisconsin, La Crosse; M.B.A. (2019) Western Governors University.

Sean W. StClair (2004), Professor, Civil Engineering. A.S. (1996), Ricks College; B.S. (1998), Utah State University; M.S. (2000); Ph.D. (2004), Georgia Institute of Technology. Registered Professional Engineer: Oregon.

Clifford Stover (2017), Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1992), M.S. (1995), Cal Poly Pomona.

Wangping Sun (2005), Professor, Manufacturing and Mechanical Engineering and Technology. B.S. (1988), Beijing Jiaotong University; M.S. (2002), Ph.D. (2005), Kansas State University.

Darlene J. Swigart (2017), Associate Professor, Dental Hygiene. B.S. (1998); M.S. (2018), Idaho State University.

Christopher J. Syrnyk (2012), Associate Professor, Communication. Director, Oregon Tech Honors Program. B.A. (1991), M.A. (1998), University of Oregon; M.A. (2000), Virginia Polytechnic Institute and State University; Ph.D. and Ph.D. Minor (2016), University of Wisconsin-Madison.

Dawn Taylor (2010), Professor, Medical Laboratory Science. B.S. (1986), Illinois State University; Ed.M. (2014), Oregon State University. M.T. (A.S.C.P.) certified.

Terri Torres (2008), Professor, Mathematics. B.S. (1981), Brigham Young University; M.S. (1994), Idaho State University; M.S. (2010), Bowling Green State University.

Kenneth C. Usher (2000), Professor, Natural Sciences. B.S. (1990), University of Alberta; Ph.D. (1996), University of Oregon.

Christy VanRooyen (2013), Associate Professor, Natural Sciences. B.S. (2001), Oregon Institute of Technology. M.S. (2018) Southern Oregon University.

Chitra Venugopal (2018), Associate Professor, Electrical Engineering and Renewable Energy.

Jintai Wang (2021) Assistant Professor, Civil Engineering. B.S. (2010), Tongji University, China; M.Eng.(2014), Tongji University, China; Ph.D. (2018), Pennsylvania State University.

Kristy Weidman (2012), Professor, Management. B.S. (2001), Oregon Institute of Technology; M.A. (2006), Thomas Edison State University.

Alissa Whiteley (2023), Instructor, Mathematics. A.S. (2016), Harford Community College; B.S. (2018), Frostburg State University; M.S. (2020), Clarkston University.

Robyn S. Wilde (2002), Professor, Natural Sciences. B.S. (1994), Utah State University; M.S. (1996), Ph.D. (2000), University of Nebraska, Lincoln.

Yuehai Yang (2016), Associate Professor, Natural Sciences. Ph.D. (2013), Florida International University.

Rebeka Yocum (2022), Assistant Professor, Civil Engineering. Ph.D. (2022), Pennsylvania State University.

Faculty Senate Presidents

1965-1966	Eugene A. Wellman
1966-1967	Max A. Saunders
1967-1968	Arthur A. LeCours
1968	George E. Miller
1968-1969	Dalhart R. Eklund
1969-1970	Walter R. Richartz
1970-1971	William L. Bradford, Jr
1971-1972	Dale W. King
1972-1973	Larsen S. Svanevik
1973-1974	Sherman A. Anderson
1974-1975	Thomas J. Connors
1975-1976	James J. Boyle
1976-1977	Joseph T. Riker
1977-1978	Robert C. DeRosier
1978-1979	Richard H. Zbinden
1979-1980	Gary E. Wehr
1980-1981	Keith L. Spickler
1981-1982	Earl D. Kurtz
1982-1984	Charles V. Higbee
1984-1985	Edward Silling
1985-1987	Herbert H. Jolliff
1987-1988	Charles E. Harris
1988-1989	Ross S. Carroll
1989-1990	Pearl O. Juris
1990-1991	John V. Stec
1991-1993	James R. Etchison
1993-1995	Bradley D. Burda
1995-1997	Valerie J. Vance
1997-1999	David C. Warner
1999-2000	Alberto Bello, Jr.
2000-2002	Mark Clark
2002-2003	Timothy Thompson
2003-2006	Bradley D. Burda
2006-2008	Mark Neupert
2008-2009	Marla Miller
2009-2010	Debbie Caldwell
2010-2012	Matt Schnackenberg
2012-2014	Dan Peterson
2014-2016	Robyn Cole
2016-2018	David Thaemert
2018-2020	Terri Torres
2020-2022	Don McDonnell
2022-2024	Terri Torres
2024-2026	Yuehai Yang

Emeritus Faculty

Marshall Ager, B.S., Assistant Professor, Civil Engineering and Geomatics, 1977- 2004.

Randal Albert, M.S., Computer Systems Engineering Technology, 1984-2013.

Richard Bailey, B.S., Professor, Management, 1991-2024.

Sandra Bailey, B.S., Professor, Management, 2000-2024.

Robert E. Baird, E.E., Professor, Electrical Engineering and Renewable Energy, 1958-1979.

Lynda M. Baker, M.F.A., Professor, Humanities and Social Sciences, 1989-2012.

James Ballard, Ed.D., Associate Professor, Mathematics, 2000-2016.

William Bradford, M.S., Professor, Medical Laboratory Technology, 1960-1986.

Judy Bronkey, M.A., Associate Professor, Director, Ethnic and International Student Services, 1969-1995.

Gene Bruner, M.S., Professor, Electrical Engineering and Renewable Energy, 1982-2004.

Barry Canaday, M.S., Associate Professor, Medical Imaging Technology, 2009-2021.

Ralph Carestia, M.S., Computer Systems Engineering Technology, 1990-2013.

Ross Carroll, Ph.D., Professor of Communication, 1984-2003.

Mark H. Clark, Ph.D., Professor, Humanities and Social Sciences, 1996-2022.

Thomas J. Connors, Ph.D., Professor and Vascular Technology Program Director, 1969-1999.

Harriet Cornachione, M.S., Professor, Civil Engineering, 1995-2010.

Michael Cornachione, M.S., Professor, Civil Engineering, 1992-2010.

Ben Cornelius, M.A., Mathematics, 1980-2013.

Jesse Crabtree, Assistant Professor, Civil Engineering Technology, 1947-1976.

G. Gene Culver, B.S., Associate Professor, Associate Director, Geo-Heat Center, 1960-1995.

Hugh Currin, Ph.D., Manufacturing and Mechanical Engineering Technology, 1984-2013.

Kate P. Darling, B.A., Instructor, Emergency Medical Services, 2003-2022.

W.M. Douglass, M.Ed., Professor and Dean of Administration, 1954-1983.

Elaine M. Deutschman, M.B.S., Professor, Mathematics, 1983-2004.

David Dyrud, Ph.D., Professor of Communication, 1975-2003.

Marilyn Dyrud, Ph.D., Professor of Communication, 1983-2017.

James R. Etchison, M.Ed., Professor and Chair, Electrical Engineering and Renewable Energy, 1986-2004.

Marian Ewell, B.S., Assistant Professor, Allied Health Partnerships, Clinical Laboratory Science, 2001-2012.

Jeanne Ford, R.N., Assistant Professor, Administrative Director, Student Health Service, 1964-1983.

Abraham Furman, Clinical Laboratory Science, 2001-2016.

C. Fred Foulon, M.Ed., Professor, Civil Engineering Technology, 1954-1986.

James R. Gerhardt, M.S., Professor, Medical Imaging Technology, 1967-1992.

Charles C. Glover, B.S., Associate Professor, Diesel Power Technology, 1966-1990.

Harold E. Godfrey, Jr., B.S., Assistant Professor, Medical Imaging Technology, 1975-1997.

Yolanda Guran-Postlethwaite, M.S.E.E., Professor, Electrical Engineering and Renewable Energy, 1986-2004.

Charles E. Harris, M.S., Professor, Department of Extended Studies and Summer Session, 1976-1996.

Irving H. (Bud) Hart, III, M.S., Professor, Mathematics, 1972-1999.

Donald R. Hefty, M.S.E.E., Professor, Electrical Engineering and Renewable Energy, 1973-1993.

Charles A. Hermach, M.S., Professor, Manufacturing and Mechanical Engineering and Technology, 1983-1993.

Fred Hess, M.S., Professor, Mathematics, 1969-1991.

Charles V. Higbee, M.B.A., Professor, Business, 1970-1987.

David M. Hull, M.S., Professor, Civil Engineering Technology, 1962-1987.

Margaret Huntley, Professor, Management, 1975-2006.

Herbert H. Jolliff, M.S., Professor and Department Chair, Mathematics, 1968-1999.

Charles Jones, Ph.D., Dean, College of Engineering, Technology, and Management, 1997-2015.

Lewis Jones, M.A., Professor, Computer Systems Engineering Technology, 1969-1986.

Pearl O. Juris, M.S., Professor, Nursing, 1977-1992.

Claude Kansaku, Professor, Engineering Technology and Management, 1998-2018.

Jenny Kellstrom, M.Ed., Professor, Medical Imaging Technology, 1992-2016.

Richard A. King, M.S.E.E., Professor, Computer Systems Engineering Technology, 1982-2002.

David G. Korzan, M.S., Professor, Natural Sciences, 1973-2003.

Cecil R. Lake, M.Ed., Professor, Director of Planning and Research, 1949-1986.

Arthur LeCours, M.Ed., Professor, Physics, 1959-1982.

John W. Lund, Ph.D., Professor, Civil Engineering, and Director, Geo-Heat Center, 1967-1999.

Russell Madsen, M.Ed., Professor, Diesel Power Technology, 1958-1986.

LeAnn Maupin, M.Ed., Dean, College of Health, Arts, and Sciences, 1997-2019.

James C. McAtee, M.S., Professor, Dean, Computer Systems Engineering Technology, 1969-1996.

Marla Miller, M.S., Management, 1998-2013

Robert H. Mitchell, M.S., Professor, Natural Sciences, 1975-1998.

Richard M. Moore, Ph.D., Professor and Director, Portland-Metro Operations, 1972-1997.

W. Howard Morris, M.Ed., Professor, Physical Education, Director of Athletics, 1962-1992.

Julianne Murray, M.A., Associate Professor, Management, 1987-2011.

Gary J. Naseth, Ph.D., Professor, Humanities and Social Sciences, 1975-2009.

JoAnne M. Ogborn, M.S., Professor, Director, Extended Studies and Summer Session, 1968-1996.

Kenneth R. Ostrom, M.S., Professor, Mathematics-Physics, 1966-1995.

Lloyd Parratt, M.S., Associate Professor, Natural Sciences, 2010-2023.

Alf L. Peterson, M.S., Professor, Business Technologies, 1969-1990.

Ralph L. Pettit, M.S., Professor, Humanities and Social Sciences, 1969-1986.

Donald Phillips, M.S., Professor, Computer Systems Engineering Technology, 1972-1995.

Wayne Phillips, M.E., Professor, Manufacturing and Mechanical Engineering and Technology, 1979-1989.

David N. Pocock, M.S.E., Associate Professor, Electrical Engineering and Renewable Energy, 1991-2008.

Richard Pope, M.Ed., Professor, Manufacturing and Mechanical Engineering and Technology, 1957-1984.

Lawrence W. Powers, M.A., Dean, College of Health, Arts, and Sciences, 1993-2013.

John R. Puckett, B.A. Associate Professor, Communication 1986-2012.

Winston D. Purvine, L.L.D., President, Oregon Institute of Technology, 1947-1976.

Wayne Rawson, M.Ed., Professor, Civil Engineering Technology, 1955-1986.

Margaret E. Reid, M.S., Associate Professor, Nursing, 1981-1997.

John A. Ritter, Ph.D., Professor, Geomatics, 1996-2022.

Suzanne Riverman, M.N., Professor, Nursing, 1971-1989.

Alfred Roberson, M.Ed., Associate Professor, Director of Advising, 1966-1991.

Robert Rogers, M.S., Professor, Manufacturing and Mechanical Engineering and Technology, 1992-2007.

Errol Roy, M.B.A., Professor, Management, 1992-2004.

Mata A. Rust, M.S., Professor, Communication Department, 1972-1999.

Kathleen Sale, M.S., Associate Professor, Natural Sciences, 1992-2011.

Joseph E. Sarsenski, Ph.D., Professor, Civil Engineering, 1998-2008.

Elvira Schechtel, M.S., Professor, Natural Sciences, 1990-2021.

Jill Schultz, Professor, Dental Hygiene, 1984-2018.

Stephen M. Schultz, A.S., Professor, Medical Imaging Technology, 1995-2024.

Andrew J. Sedlock, M.S., Professor, Electrical Engineering and Renewable Energy, 1988-2008.

Maureen Sevigny, Ph.D., Professor, Management, 1995-2023.

Edward Silling, Ph.D., Professor, Communication Department, 1975-2003.

Jay F. Silva, M.S., Professor, Manufacturing and Mechanical Engineering and Technology, 1962-1981.

Donald R. Skudstad, Ph.D., Professor, Manufacturing and Mechanical Engineering and Technology, 1976-1996.

Susan K. Snyder, M.S., Professor, Physical Education, 1964-1995.

Michael Spektor, M.S., Professor, Manufacturing and Mechanical Engineering, 1985-2010.

John V. Stec, M.B.A., Professor, Management, 1986-1990 and 1992-2007.

James V. Stewart, M.Ed., Professor, Mathematics, 1984-2002.

Charles R. (Dick) Strohkirch, M.S., Professor, Medical Imaging Technology, 1972-1998.

William J. Stuart M.S. Associate Professor, Manufacturing and Mechanical Engineering and Technology, 2004-2019.

Edward R. Stuedli, D.D.S., Professor, Dental Hygiene, 1976-1998.

Pauline Stuedli, Assistant Professor, Dental Hygiene, 1977-1999.

Rees Stuteville, M.Ed., Professor, Medical Imaging Technology, 1991-2007.

Larsen S. Svanevik, Ph.D., Professor, Natural Sciences, 1966-1997.

Ron Swisher, Ph.D., Professor, Natural Sciences, 1976-2016.

Donald P. Theriault, Ed.D., Professor, Assistant to the President, Director of Development, 1962-1986.

Timothy C. Thompson, Professor, Mathematics, 1997-2017.

Francis M. (Mel) Turner, Associate Professor, Electrical Engineering and Renewable Energy, 1982-2000.

David J. Vargas, M.S.C.E., Associate Professor, Civil Engineering Technology, 1985-1997.

Eric E. Wakkuri, M.S., Professor, Mathematics, 1975-2004.

Jack Walker, B.S., Professor and Department Chair, Geomatics, 1984-2024.

John G. Ward, M.B.A., Professor, Management Department, 1969-1995.

David C. Warner, Ph.D., Professor, Natural Sciences, 1984-2002.

Gary E. Wehr, M.A., Professor, Department Chair, General Studies, 1969-1996.

Sherry Yang, Ph.D., Professor, Computer Systems Engineering Technology, 1997-2023.

John M. Yarbrough, M.A., Professor, Electrical Engineering and Renewable Energy, 1972-2002.

Linda S. Young, Ph.D., Professor, Communication, 1983-2017.

Richard H. Zbinden, B.S.C.E., Professor and Chair, Civil Engineering Technology, 1976-1997.

James W. Zipay, Assistant Professor, Electrical Engineering and Renewable Energy, 2001-2017.

Raenelle J. Zumbo, M.S., Assistant Professor, Communication, 1976-2008.

Directories

Emeritus Administration

Linda "Abbie" Allen, M.S., Student Services Specialist, 1988-2015.

Kelly Caleb, B.S., Athletic Trainer, 2007-2023.

Christian H. Eismann, Ph.D., Professor and Dean of Academic Affairs, 1986-1996.

Christopher Campbell, A.A., Facilities Services, 1990-2014.

Paula Cloud, Executive Secretary to the President, 1997-2008.

Delores "Lita" Colligan, Associate Vice President, Strategic Partnerships, 2007-2017.

Joemae Cox, M.S., Online Learning, 1994-2010.

Nancy K. Cox, Executive Secretary to the President, 1961-1999.

Barb DeKalb, M.A.T., Online Learning, 1986-2013.

Ted E. Dobson, M.A., Executive Director, Institutional Advancement, 1986-2001.

William R. Dodge, B.A., Director of Paper Owl Bookstore, 1985-1999.

Martha Anne Dow, Ph.D., President, 1998-2007.

Marla Edge, M.Ed. Director, Academic Agreements, 1983-2019.

Christian H. Eismann, Ph.D., Professor and Dean of Academic Affairs, 1986-1996.

Erin Foley, Ph.D., Vice President of Student Affairs & Dean of Students, 1999-2023.

Sharon Hanson, Media Services Coordinator, Information Technology, 1986-2009.

David "Haldane" Harris, M.B.A, Budget Officer, Financial Administration, 1990-2008.

Roger Hulet, A.A., Facilities Services, 1983-2014.

Mary Jane Isensee, B.S., Director, Student Health Center, 1983-1997.

Charles Jones, Ph.D., Dean, College of Engineering, Technology, and Management. 1997-2015.

Sandra "Sam" King, Payroll Supervisor, Business Office, 1990-2012.

April C. Leifeste, A.A., Executive Secretary, Academic Affairs, 1972-2006.

Paul Lienau, M.S., Professor and Director of the Geo-Heat Center, 1968-1997.

John Lund, Ph.D., Geo-Heat Center, 1967-2010.

LeAnn Maupin, M.Ed, Dean, College of Health, Arts, and Sciences, 1997-2019.

Ron McCutcheon, B.A., Chief Human Resources and Civil Rights/Diversity Officer, 1996-2016.

Cheryl Meyers, Executive Assistant, Provost and Vice President of Academic Affairs, 1989-2015.

Daniel J. Miles, B.A., Athletic Director and Men's Basketball Head Coach, 1970-2002.

Beth Murphy, M.S., Assessment, 1990-2010.

J. Samuel Murphy, Ph.D., CFLAT Specialist, Student Services, Assistant Professor, 1990-2011.

E. Susan Richards, B.S., Registrar's Office, 1989-2013.

Raymond Setters, B.S., Purchasing Manager, Business Affairs, 1989-2008.

Sandra Setters, Benefits Officer, Human Resources, 1989-2008.

Timothy J. Stanaway, Ed.D., Interim Provost and Vice President for Student Affairs, 1975-1999.

Robert Thompson, B.S., Sports Information Director, Athletics, 1993-2007.

Gary L. Willhide, M.S., Director, Public Affairs, 1988-2005.

Shelby Wilsdon, B.S., Director, Human Resources, 1971-2003.

Lawrence Wolf, President Emeritus, Professor, Manufacturing and Mechanical Engineering and Technology, 1991-2017.

Douglas P. Yates, Ed.D., Vice President for Finance and Administration, 1980-2002.

Betty J. Young, Office Manager, Business Office, 1961-1999.

Admissions

Office of Admissions

Klamath Falls, College Union, 1st Floor

800-422-2017 (toll free)

(541) 885-1150

(541) 885-1024 (fax)

oit@oit.edu

www.oit.edu/admissions

The Oregon Tech Admissions Office is located on the first floor of the College Union on the Klamath Falls campus. Open weekdays from 8 am to 5 pm, its primary functions are to help prospective students investigate and evaluate Oregon Tech, to manage applications for admission and to assist applicants with the enrollment process. The Admissions Office operates with the cooperation and support of the entire campus community. Admissions welcomes visiting students and their families for daily tours, and sessions with admissions counselors, coaches, and other staff. Oregon Tech hosts several campus preview events and admitted students events annually. For event dates or to register for an event, please visit www.oit.edu/visit or call (541) 885-1150 or (800) 422-2017. For the hearing impaired please call the TTY number (541) 885-1072.

Admission requirements apply to all applicants of Oregon Tech. All students who wish to enroll in more than eight credits in a term, receive financial aid and/or graduate from Oregon Tech must apply and be accepted for admission. Applications for general admission are processed on the Klamath Falls campus regardless of the campus location for the student.

Applying to Oregon Tech

Application Deadlines

The priority application deadline for maximum scholarship and financial aid consideration each fall term is March 1. Oregon Tech accepts applications on a rolling basis, but students must have a complete application on file in Admissions three weeks prior to the first day of classes as follows:

2025-2026	Application Deadlines
Fall Term	September 10, 2025
Winter Term	December 15, 2025
Spring Term	March 9, 2026
Summer Term	June 1, 2026
2024-2025	Application Deadlines
Fall Term	September 4, 2024
Winter Term	December 16, 2024
Spring Term	March 10, 2025
Summer Term	June 2, 2025

Applications

Applications for admission are available online at www.oit.edu/apply. A complete application consists of an application for admission, application fee, official transcripts, and other required documentation depending on the type of applicant (see Admission Eligibility Requirements).

Students who were previously enrolled but have stopped out more than four terms must submit an application for re-admission. Previously admitted students that did not enroll need to submit a new application.

Students who have not yet registered for classes who wish to change their entry term, major, or campus can do so by contacting the Admissions Office at oit@oit.edu or 541-885-1150.

Students who wish to take eight credits or less per term may submit a non-degree seeking student application. Alternatively, students may submit the appropriate first-year or transfer application and enroll part time. Please note, non-degree seeking students are ineligible for financial aid.

International students must complete an application for admission at www.oit.edu/apply. International students seeking enrollment through an approved exchange program must complete the International Exchange Application. For more information about Oregon Tech's international exchange program please go to www.oit.edu/international.

The following majors require a secondary application process after students are granted general admission to Oregon Tech.

- Medical Laboratory Science (OHSU/Portland-Metro)
- Diagnostic Medical Sonography
- Dental Hygiene (Klamath Falls, Salem)
- Echocardiography
- Nuclear Medicine and Molecular Imaging Technology
- Nursing (with OHSU/Klamath Falls)
- Paramedic/EMT (OHSU/Portland-Metro)
- Radiologic Science
- Respiratory Care
- Vascular Technology

Each program has its own application process, requirements, and deadlines. Details are outlined on the departmental pages of this catalog.

Application Procedures

Every applicant must complete the following steps to be considered for Admission to Oregon Tech:

All offers of admission are contingent upon submission of satisfactory final official transcripts prior to enrollment

1. Complete the appropriate application found at www.oit.edu/apply or, for first year freshman applicants only, at commonapp.org.
2. Pay the \$50 non-refundable application fee. Some students may qualify for an application fee waiver. Please visit www.oit.edu/apply for more information.
3. First year applicants do not need to submit official high school transcripts when submitting application but will be required to provide an official high school transcript upon graduating from high school, and before enrolling at Oregon Tech. GED students will need to submit official GED test results.

- Transfer students need to send official transcripts from all post-secondary institutions attended or received credit from if applying as a transfer student. A final high school transcript is required unless a student has a conferred degree, or has earned 60 semester credits or 72 quarter credits from a regionally-accredited college or university. High school transcripts will be used to evaluate a student for admission if the student has earned fewer than 24 semester credits or 36 quarter credits.

All official documents must be sent to the Oregon Tech Admissions Office and become property of Oregon Tech

Admission and registration may be cancelled if a student fails to submit required documentation in a complete and satisfactory order, or if a student, upon submitting final documentation, no longer meets admission requirements..

Some online degree completion programs have additional eligibility requirements. Please visit www.oit.edu/online/evf to determine your eligibility.

Some Oregon Tech programs do not have sufficient space to enroll all qualified applicants. Oregon Tech reserves the right to offer admission to the most qualified applicants on a first-come, first-served basis, or through a combination of these two strategies.

Not upon admission, but prior to registration, all students must have a complete health form showing adequate immunizations on file with the Student Health Center. For more information, please see the Student Health section of this catalog. Students enrolled in 6 credits or less per term are exempt.

Social Security Number Disclosure and Consent Statement

Students are requested to provide, **voluntarily**, a Social Security Number (SSN) to assist Oregon Tech in developing, validating, or administering predictive tests and assessments; administering student aid programs; improving instruction; internally identifying students; student parking; collecting student debts; or comparing student educational experiences with subsequent workforce experiences. By providing a Social Security Number, students consent to the uses identified above. This request is made pursuant to ORS 351.070 and 351.085. Provision of a Social Security Number and consent to its use is not required and, if a student chooses so, will not be denied any right, benefit or privilege provided. Applicants may enter a series of zeros (000-00-0000) on their admission application in place of their actual SSN. Students should be aware that by not providing their SSN they will not be eligible to receive federal student aid or some university scholarships.

Additionally, applicants should be aware that Oregon Tech is required to obtain a Social Security Number to file certain returns with the Internal Revenue Service (IRS) for the applicant to receive a 1098T and to furnish a statement. The returns that Oregon Tech must file contain information about qualified tuition and related expenses. Privacy Act Notice: Section 6109 of the Internal Revenue Code requires students to give a correct SSN to persons who must file information returns with the IRS to report certain information. The IRS uses the SSN for identification purposes and to help verify the accuracy of tax returns. For more information, refer to IRS code 6050S.

Admissions

Admissions Requirements

First-Year Admission

Effective 2023-2024, Oregon Tech will admit first year applicants based on an unweighted College-Preparatory GPA with no requirement to submit standardized test scores such as the ACT, SAT, AP, or IB. The college-prep GPA will be recalculated based upon 14 courses. Students may be deficient in no more than two subjects, unless the two subjects are combined in Math and Lab Science. While there is no minimum ACT or SAT score, nor are score submissions required for admission review, scores may be used to meet subject deficiencies and for placement purposes at the time of enrollment. Deficiencies are subjects not taken or subjects in which a grade of D or F was earned. Repeat courses may be used to replace grades. Applicants older than 22 are exempt from the college-prep course requirements as well as students who have taken the GED. Merit-based scholarships awarded at the time of admission will use cumulative high school GPA.

For first-year admission, students must meet entrance requirements adopted by the State Board of Higher Education in Oregon. Applicants who are enrolled in or who have graduated from regionally accredited high schools must:

- Report subjects and grades on the application. Unless requested to do so by the Admissions Office, please do not submit transcripts. An official, final high school transcript with the graduation date will be required before registering for classes.
- Applicants must satisfactorily (grade of C- or above) complete at least 15 units (one year is equal to one unit) of college preparatory work in the following areas unless they graduated from high school prior to spring 1985. Applicants will be reviewed for admission on the following:
 - English (4 units). Shall meet one of the following: four years of high school English (composition/literacy-based). Transferable three-credit or four-credit college English courses may be substituted, one for one, for one year of high school English .
 - Mathematics (3 units). Shall meet one of the following: three years of high school math courses, including one year each of Algebra I, Geometry, and a third class that primarily focuses on concepts in algebra, calculus, data science, discrete mathematics, geometry, mathematical analysis, probability, or statistics. Prospective students are encouraged to take a fourth math course in their senior year of high school. Those intending to study a STEM (science, technology, engineering, or mathematics) major, or another field for which calculus is required, are strongly encouraged to take pre-calculus, and if possible, calculus, in high school.

- Social Science (2 units). Shall meet the following from: 2 years social science such as: Asian, African, European, Middle Eastern, United States history, world history, economics, sociology, geography, government, psychology, or anthropology. Transferable three-credit or four-credit college social science courses may be substituted, one for one, for one year of high school social science.
- Laboratory Science (3 units). Shall meet one of the following: three years of high school laboratory science (one year each of biology, chemistry, and earth science, or physics. An integrated science class may be substituted for one required course); Transferrable three-credit or four-credit college laboratory science courses may be substituted, one for one, for one year of high school science. An integrated science or advanced level science class may be substituted for one required course.
- Career and Technical Education or Fine Art (1 unit). One year or a two-semester combination of high school fine arts or Career and Technical Education (CTE) or one transferable three-credit or four-credit college fine arts course or CTE course.
- Academic Elective (1 unit). Shall meet one of the following: One year of high school courses such as computer science, STEM, engineering, second language, or other college prep-course that may fall within any of the above subjects.

3. Applicants who are applying based on GED scores must submit official GED test scores. A minimum overall score of 680 with scores of 170 or higher in each subject is required for admission. Special admission may be offered to those scoring no less than 150 on the Reasoning Through Language Arts and Social Studies test; no lower than 160 on the Science test; and no lower than 170 on the Mathematics Reasoning test. GED tests taken between 2002 and 2014 must have a minimum composite score of 500 with a minimum score of 410 in each subject. Tests taken prior to 2002 must have a minimum composite score of 50 with a minimum score of 41 in each subject. GED applicants can request official test scores from the Department of Education from the state in which the test was taken. Test scores must be sent to the Admissions Office.

Transfer Admission

A transfer student is one who has earned credits at another regionally accredited college or university after graduating from high school. A student must have earned at least 36 college-level credit hours (24 semester credits) to be admitted based solely on their college record. Students with fewer than 36 college-level credit hours (24 semester credits) will be reviewed on college and high school coursework.

1. Transfer applicants must have a cumulative 2.25 GPA or better in college level classes unless they hold an Oregon Transfer Module (OTM) or an associate or bachelor's degree, in which case, a cumulative GPA of 2.0 is required.
2. To be admitted to Oregon Tech, transfer applicants must demonstrate proficiency in English and Math by completing the equivalent of Math 95 (Intermediate Algebra) or higher and WRI 115 (Introduction to Writing) or higher with grades of "C-" or better. Special admission for students missing these courses will be granted at discretion of the Director of Admissions and/or the Admission's Committee.
3. Applicants who do not have an associate's or a bachelor's degree must have at least 36 college-level credits to be reviewed on college coursework alone. If more than 10 percent of an applicant's credits are in Physical Education, credits beyond the 10 percent threshold will not be counted toward meeting GPA requirements.
4. Applicants must be eligible to re-enroll in the previously attended institution(s).

Official transcripts from all post-secondary institutions must be submitted for consideration, as well as a high school transcript or GED for any students who do not have a conferred degree or who have not earned 60 semester credits or 72 quarter credits from a regionally accredited college or university.

Applicants who have earned fewer than 36 quarter or 24 semester hours of college-level work will be reviewed based on both high school and transfer GPA and subject requirements. Students who have completed fewer than 12 transferable quarter credits (8 semester) must meet freshman admission requirements. Students who have not completed 12 college credits must submit the first-year application for admission.

Acceptance of vocational/technical courses may be granted after registration if the student's administering department finds that vocational/technical courses have satisfied certain bachelor's degree requirements. In all cases, course and/or department prerequisites will be enforced.

The transferability of credits earned at Oregon Tech is at the discretion of the receiving college, university, or other educational institution. Students considering transferring to any institution should not assume that credits earned at Oregon Tech will be accepted by the receiving institution. Similarly, the ability of a degree, certificate, diploma, or other academic credential earned at Oregon Tech to satisfy an admission requirement of another institution is at the discretion of the receiving institution. Accreditation does not guarantee credentials or credits earned at Oregon Tech will be accepted by or transferred to another institution. To minimize the risk of having to repeat coursework, students should contact the receiving institution for evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

Transfer Articulation Agreements

Oregon Tech is dedicated to enhancing partnerships with regional community colleges. One important way of doing this is by forming articulation agreements. An articulation agreement is an officially approved agreement that matches coursework between schools. These agreements are designed to help students make a seamless transition when transferring to Oregon Tech. Articulation agreements give students a clear understanding of what courses will transfer to Oregon Tech and satisfy requirements for their major while minimizing overlap or repeat of courses. Some agreements accept an associate degree in its entirety while other agreements outline specific courses to take as a student plans for transfer. Students should inform the Admissions Office and their academic department advisor when they are utilizing an articulation agreement.

A list of articulation agreements can be found online at <https://www.oit.edu/educational-partnerships/articulations>; students may search by Oregon Tech major or by transfer institution. Questions regarding these agreements may be directed to the students' academic department or the Office of Academic Agreements.

Non-Degree Seeking Students

A non-degree seeking student may not enroll in more than eight credits per term at Oregon Tech at the graduate or undergraduate level, must not have been previously enrolled as a degree seeking student, and is not eligible for financial aid. Out-of-state residents are subject to non-resident tuition and fees if enrolling in more than 6 credits. A tuition and fee schedule can be viewed online at www.oit.edu/college-costs/tuition-fees. College-level classes taken as a non-degree seeking student may be used toward Oregon Tech graduation requirements upon completion of the admission process as a degree-seeking undergraduate or graduate student. Credits may be transferred to other institutions at the discretion of the receiving institution. Enrollment as a non-degree seeking student does not guarantee future admission to Oregon Tech. To enroll at Oregon Tech as a non-degree seeking student, submit the Non-Degree Seeking Application (www.oit.edu/apply) at least one week prior to enrollment. Oregon Tech reserves the right to deny enrollment to those who seek non-degree seeking status.

Admission to Programs with Clinical or Practicum Requirements

It is important that prospective students understand that admission to those programs that have clinical or practicum requirements:

1. Is selective.
2. Will be granted after consideration of an applicant's ability to assume professional responsibility for clients, patients or students served by the program; and may be denied to any student with a record of past criminal behavior or psychiatric illness, which bears upon the student's ability to fulfill clinical or practicum responsibilities.

Students seeking admission to online degree completion programs in Vascular Technology, Echocardiography, Diagnostic Medical Sonography, or Respiratory Care, must meet all regular admission requirements and be registered professionals working in their chosen field. This will ensure access to clinical sites as required in these programs. For more information, contact the Online Education Office.

International Student Admission

Oregon Tech welcomes international students as applicants and as vital members of our campus community. In addition to the application and \$50 application fee, the following documents must be sent to the Admissions Office:

1. Official transcripts of all high school and post-high school institutions attended.
2. An official credential evaluation from an Oregon Tech-approved credential service for all coursework completed at a post-secondary institution outside the United States. Examples include the Educational Credential Evaluators, Inc. (www.ece.org) and World Education Services (www.wes.org). A comprehensive list of approved evaluation agencies can be found at <https://www.oit.edu/admissions/international-students/transcripts>.
3. Official English proficiency test scores from one listed:
 1. Test of English as a Foreign Language (TOEFL) with a minimum internet-based score of 68 if taking the internet-based exam (520 if paper-based test, or 190 if computer-based test)
 2. English Language Testing System exam (IELTS) with a minimum score of 6
 3. Duolingo English Test (www.englishtest.duolingo.com) with a minimum score of 95.
 4. Students may be excused from taking an English language proficiency exam if they have completed a level 112 course at an ESL Language Center, received a B or better in Writing 121 from a regionally accredited US college or university, or are from a country on Oregon Tech's list of exceptions. Please see the list of exceptions at <https://www.oit.edu/admissions/international-students/english-language-proficiency>.
4. A completed *Statement of Financial Responsibility* form, indicating the necessary financial resources in U.S. dollars to support yourself while enrolled. This form can be found at www.oit.edu/admissions/international-students/i20
5. A letter, if appropriate, from parents and/or sponsors indicating the amount of financial support they will provide in U.S. dollars.
6. Documentation showing that you, your parents and/or your sponsors have adequate financial resources to meet your expenses while enrolled at Oregon Tech. Examples include official bank statements, tax forms and letters of employment showing annual earnings.

A completed health history and immunization form must be submitted after admission but prior to registration. In addition to the health requirements that need to be fulfilled before registration; international students must have at least one documented MMR vaccine on file at the Integrated Student Health Center prior to the student attending any classes (per OAR 333-050-0130). Also, students from countries identified as high risk for tuberculosis (most countries in Latin America and the Caribbean, Africa, Asia, Eastern Europe and Russia) are required to complete a TB screening upon entrance to Oregon Tech. This may include a TB skin test and/or a chest x-ray. This can be done at the Integrated Student Health Center if records are not available. Please refer to the Integrated Student Health Center section of this catalog for health history and immunization requirements and questions.

Exchange Student Admission

Oregon Tech welcomes exchange students through multiple exchange partnership agreements. Students at partner institutions work with an advisor at their "home" campus to meet the requirements of Oregon Tech's international exchange application process. It is recommended that exchange students begin the exchange application process at least nine months prior to the planned date of entry. This allows ample time for submission of documents that the U.S. Bureau of Citizenship and Immigration Services requires Oregon Tech to collect before we can issue the I-20 form used to secure a F-1 visa.

Admission Exceptions

The Admissions Committee and Director of Admissions retain the right to make exceptions to the specified requirements for admission or add stipulations to certain offers of admission. For additional information, contact the Director of Admissions.

Important Admissions Information for Military Connected Students

Per federal regulations Schools may not provide any commission, bonus, or other incentive payment based directly or indirectly upon success in securing enrollments or the award of financial aid to any individual or entity engaged in any recruiting or admission activities or in making decisions about awarding FSA program funds. The Admissions Department follows a policy that bans employees from receiving any incentives for recruiting or securing enrollment of any service members or any other student group.

The Admissions Department also refrains from any high-pressure recruitment tactics by any means (phone, email etc.) for securing enrollments of Veterans or any other student group. If a student receives emails or phone calls from us, they have the option to opt out of communications from us.

Before enrollment at Oregon Tech there are a few steps military connected students must take:

- Review the [VA website](#) and determine which educational benefits (programs/chapter) you are eligible for.
- Get admitted to Oregon Tech
- Receive approval from your ESO.
- Complete VA application
- Submit a Certificate of Eligibility (sent via mail VA application has been processed) to the campus-specific School Certifying Official.
- Once registered for classes, complete the [Course Certification form](#)

Per federal regulations a school must promptly readmit a service member with the same academic status as he had when last attended the school or was accepted for admission to the school. This requirement applies to any student who leaves school due to military service such as deployment, active duty etc.

Bring Your Own Device

Both the Klamath Falls and Portland-Metro campuses are now designated as Bring Your Own Device (BYOD) campuses. This allows students the flexibility to use Oregon Tech licensed applications on their own laptops rather than from stationary computers in computer labs. Investments have been made in remote technologies to give students the freedom to work with Oregon Tech applications from their own computer in class, outside of the class, on-campus or off-campus.

Registration

Registration events for new students occur prior to the start of each fall term. All students new to both the Klamath Falls and Portland Metro campuses must participate in a New Wings Registration event. Students will have the opportunity to meet with an advisor to plan their academic schedule, register for classes, set up Oregon Tech computer and email accounts, receive their university ID card and learn how to make a successful transition to Oregon Tech. Students are encouraged to attend an early registration event rather than waiting to register at the beginning of a term. Visit www.oit.edu/newwings or contact the Admissions Office at (541) 885-1150 or oit@oit.edu for more information. New students for winter, spring, and summer terms will be contacted by their advisor to schedule an advising and registration appointment prior to the start of term.

Placement Testing

Oregon Tech's Student Success Center (SSC) administers all placement testing. Student admission records are examined to determine placement requirements. Transfer students transferring in math credit for calculus or beyond, or who have transferrable college-level math within one year of matriculation, are exempt from the math placement requirement. Students entering a health program requiring Human Anatomy and Physiology with transferable college credit for this course are exempt from the entry assessment for the Human Anatomy and Physiology course sequence. Placement tests are available prior to the term of entry and in conjunction with new student registration. Visit www.oit.edu/newwings or contact (541) 885-1791 or testing@oit.edu for more information.

Western Undergraduate Exchange (WUE)

WUE Eligible States and Programs

Students who are residents of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, South Dakota, Utah, Washington, Wyoming, the Federal States of Micronesia, the Republic of the Marshall Islands, the Republic of Palau, American Samoa, Guam and the Commonwealth of the Northern Mariana Islands are eligible for WUE tuition.

All majors in the College of Engineering, Technology and Management, and the College of Health, Arts and Sciences are eligible for WUE tuition apart from:

- Medical Laboratory Sciences (Pre-Medical Laboratory Science is eligible)
- Pre-Dental Hygiene and Dental Hygiene
- Pre-Medical Imaging Technology and Medical Imaging Technology (Diagnostic Medical Sonography, Echocardiography, Nuclear Medicine Technology, Radiologic Science, and Vascular Technology)
- Nursing after acceptance by Oregon Health & Sciences University (OHSU) (Pre-Nursing is eligible)
- Pre-Paramedic and Paramedic Education Program
- Oregon Tech Online Education Programs

First-year freshman WUE eligible students are eligible to receive Presidential Scholarships upon review of their application. Transfer WUE students are not eligible.

To maintain WUE eligibility, students must be seeking their first bachelor's degree and remain enrolled full-time throughout Fall, Winter, and Spring terms of the academic year. Summer term is not required to keep eligibility. Students must be enrolled in at least 12 credits per term and maintain satisfactory academic standing. If dually enrolled with Oregon Tech and a community college, 9 of the 12-credit minimum must be from Oregon Tech. GPA and completed credits are monitored each academic year for continued scholarship and WUE eligibility.

If a student wishes to 'stop-out' a term, a written request must be submitted to the Office of the Registrar before the start of the term. Requests are granted at the discretion of the university.

Admissions

Residency

Residency

In Oregon, as in all other states, tuition at publicly supported four-year universities is higher for non-resident students than for resident students.

The rules used in determining residency seek to ensure that only bonafide Oregon residents are assessed the resident fee. Please see <https://www.oit.edu/registrar/residency> for the latest version of the residency standards.

Financial Aid

College Union, 1st Floor

Klamath Falls

(541) 885-1280

dollars@oit.edu

www.oit.edu/faid

The Financial Aid Office is committed to providing high-quality service to all Oregon Tech students, and their families. Our office strives to provide information on a complex topic that enables students to make decisions regarding their educational funding.

The information contained in this catalog is general in nature and is not meant to serve as notification of students' rights and responsibilities as financial aid recipients. Oregon Tech's Financial Aid Award Guide serves that purpose. The *Award Guide* is available on our website at www.oit.edu/faid. Additional questions regarding the FAFSA application process should be directed to the Financial Aid Office.

Estimated Financial-Aid Budgets for 2025-2026 Academic Year

Financial aid budgets can include amounts for tuition and fees, books and supplies, room and board, technology, and miscellaneous expenses. Please remember that these are **estimated average costs for students**, and student spending habits will vary. On a very limited, case-by-case basis, the Financial Aid Office may be able to adjust a student's budget as permitted by federal regulations.

Students with Disabilities

Under certain circumstances, a student's aid package may be adjusted to reflect additional expenses. Please contact the Financial Aid Office if you would like additional information or to schedule an appointment.

Financial Aid

Application Procedures

All students applying for federal and state aid must complete the *Free Application for Federal Student Aid* (FAFSA) and list Oregon Tech's school code (003211). We encourage you to file as soon as possible to be considered for your maximum eligibility. Some funds are very limited and are expended early.

Once the FAFSA information is received and reviewed by the Financial Aid Office, new students will receive a letter instructing them on how to log into "Tech Web" and their "Web for Student" to view their award notification and the federally mandated shopping sheet online. Students may accept their aid online and request changes. Returning students will receive an email to their Oregon Tech email account when their award notification is ready to view online. *After accepting aid students must log back in to web for student and answer the Title IV authorization questions (24 hours later).* The Financial Aid Award Guide is located on our website at www.oit.edu/faid. It is important that students read the guide and follow the instructions on the letter they are sent.

Any updates/changes to award notification letters will result in an email to the student's Oregon Tech email account. If additional information is requested, such as tax transcripts or worksheets, students should return the documents as soon as possible to receive a *Financial Aid notification letter* (email for returning students). The award notification letter will list all types of aid for which the student is eligible. The *Award Guide* is a detailed booklet explaining programs, disbursement procedures and student rights and responsibilities, as well as cost estimates and other miscellaneous information. It is the student's responsibility as a financial aid recipient to become familiar with the contents of the *Award Guide* and contact the Financial Aid Office if additional questions or concerns arise. Additionally, students should check their **Oregon Tech email accounts** for announcements and notifications from Financial Aid regularly.

The *FAFSA must be filed for each year* a student wishes to be considered for financial aid eligibility.

Consortium Agreement Information

In some cases Oregon Tech's Financial Aid Office will process a paper consortium agreement with another school in order to allow a student taking courses at another institution to receive aid from one school for all eligible classes. The school must be one with which Oregon Tech does not have a dual enrollment agreement. The institution that will be awarding the degree and awarding financial aid is defined as the "home institution"; the "host institution" is defined as the institution from which the student is taking additional courses. Consortiums must be submitted before the end of the second week of the term.

When Oregon Tech is serving as the "home institution," the following criteria must be met to have classes at a "host institution" apply toward financial aid:

1. The student must be fully admitted to one of Oregon Tech's degree-granting programs and eligible for financial aid.
2. The student must be enrolled at least half-time (6 credits) at Oregon Tech
3. The classes taken at the host institution must be 100-level or higher.
4. The classes at the host institution must apply toward the student's Oregon Tech degree.
5. The classes taken at the host institution must not be offered by Oregon Tech during the term of enrollment.
6. The paper consortium must be received within the first two weeks of the term.

It is the student's responsibility to ensure that both the "host" and the "home" institutions complete the appropriate consortium agreement. Consortium-agreement forms are available at www.oit.edu/college-costs/financial-aid/resources/forms. Students must provide Oregon Tech's Financial Aid Office with a final grade report from the "host institution" within 30 days of completing the course.

Financial Aid

Veteran Students

Located in the Financial Aid Office in Klamath Falls, and the Student Services Office in Portland-Metro, the VA School Certifying Officials process enrollment certifications through the Veterans Affairs Regional Processing Center for students receiving education benefits. Oregon Tech complies with the Veterans Access, Choice, and Accountability Act of 2014 ("Choice Act") requirements for covered individuals and PL 115-251, section 301 and the Johnny Isakson and David P. Roe, M.D. Veterans Health Care and Benefits Improvement Act of 2020 (P.L. 116-315). These benefits allow **eligible** out-of-state veterans to receive in-state tuition rates.

Any student receiving VA education benefits while attending Oregon Tech is required to obtain transcripts from all previously attended schools and submit them to the school for review of prior credit. This includes, but is not limited to: Joint Services Transcripts (JST), Community College of the Air Force, Air University, ACE-approved credits, DANTES, CLEP, CCAS, Service Members Opportunity Credit, etc. Refer to the Military Credit section of our catalog for more details. Good standing is an additional VA requirement. Any student that falls below satisfactory progress for more than one term will lose all veteran benefits until academic standing is improved to good standing. Please see Academic Suspension Policy.

In compliance with the Veterans Benefits and Transition Act of 2018, section 3679 of title 38, Oregon Tech has the following policies in place to support "covered individuals" utilizing VA benefits.

Note: A **“Covered Individual”** is any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation and Employment (now referred to as Veteran Readiness and Employment), or chapter 33, Post-9/11 GI Bill Benefits.

Oregon Institute of Technology permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under Chapter 31 or 33 (a “certificate of eligibility” can also include a “Statement of Benefits” obtained from the Department of Veterans Affairs’ (VA) website –VA.gov, eBenefits, or a VAF 28-1905 form for Chapter 31 authorization purposes) and ending on the earlier of the following dates:

1. The date on which VA payment is made to the institution.
2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

Oregon Institute of Technology ensures that the university will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under Chapter 31 or 33.

Veterans and dependents receiving education benefits, and military members who submit appropriate documentation have priority registration in order to achieve timely program completion. Veterans and military members who are not receiving education benefits must submit a copy of one of the following pieces of documentation to receive priority registration:

US Armed Forces Active Duty Orders

DD214 under honorable or general conditions

For additional resources and information, please email veterans@oit.edu or visit <https://www.oit.edu/college-costs/financial-aid/veterans>

38 U.S.C. 3679(c). Veterans Access, Choice, and Accountability Act of 2014

A student is entitled to pay tuition and fees at Oregon Institute of Technology at the rates provided for Oregon residents without regard to the length of time the person has resided in this state if the student resides in this state while enrolled in the institution and the student:

1. Is receiving Chapter 30: Montgomery OR Chapter 33: Post-9/11 GI Bill® educational assistance; and
 - Enrolls within 3 years of discharge after serving 90 days or more on active duty; or
 - Anyone using transferred entitlement within 3 years of the transferor's discharge after serving 90 days or more on active duty; or
 - Surviving Spouses or Children under the Fry Scholarship who enroll within 3 years of an active duty Service member's death in the line of duty after serving 90 days or more; or
2. Students who remain continuously enrolled after initially meeting the requirements and are using Montgomery and Post-9/11 GI Bill® educational assistance.

Air Force ROTC

Portland Metro partners with the University of Portland to offer Air Force Reserve Officer Training Corps (AFROTC) to educate and train young men and women to become Officers in the United States Air Force or Space Force. You can pursue the degree of your choice at Oregon Institute of Technology – Portland Metro while simultaneously taking classes at the University of Portland to fulfill your AFROTC requirement. In this program, students will grow mentally and physically while acquiring the leadership skills to be successful commissioned officers. AFROTC is a three or four-year program for full-time undergraduate students where members participate in Aerospace Studies courses, leadership laboratory, and physical training. In the first two years of AFROTC, students are enrolled in the General Military Course; where they learn about the Air and Space Force heritage, values, and build a foundation of leadership and team building. The summer between sophomore and junior year, students will attend a two-week training and evaluation known as Field Training. Upon completion of Field Training, cadets enter the Professional Officer Course; where they enhance their leadership and communication skills in addition to learning about their role as a military officer in the Armed Forces. AFROTC offers a variety of scholarships that vary from high school and in college programs. Visit <https://www.afrotc.com/scholarships> for more information on scholarships and a list of the Air Force's highly desired majors. For further information about the academic program and cadet life visit the University of Portland AFROTC site <https://www.up.edu/afrotc> or contact the Aerospace Studies Program, University of Portland, 5000 N. Willamette Blvd., Portland, Oregon 97203-5798. rotc695@up.edu and (503) 943-7216 or toll free (800) 227-4568, ext. 7216.

AS 101 - Heritage and Values (1) Fall

AS 102 - Heritage and Values (1) Spring

AS 111 - Leadership Laboratory (2) Fall

AS 112 - Leadership Laboratory (2) Spring

AS 201 - Team and Leadership Fundamentals (1) Fall

AS 202 - Team and Leadership Fundamentals (1) Spring

AS 211 - Leadership Laboratory (2) Fall

AS 212 - Leadership Laboratory (2) Spring

AS 215 - Leadership Laboratory (2) Fall

AS 216 - Leadership Laboratory (2) Spring

AS 301 - Leading People and Effective Communication (3) Fall

AS 302 - Leading People and Effective Communication (3) Spring

AS 311 - Leadership Laboratory (2) Fall

AS 312 - Leadership Laboratory (2) Spring

AS 401 - National Security/Leadership Responsibilities/Commissioning Preparation (3) Fall

AS 402 - National Security/Leadership Responsibilities/Commissioning Preparation (3) Spring

AS 411 - Leadership Laboratory (2) Fall

AS 412 - Leadership Laboratory (2) Spring

AS 415 - Leadership Laboratory (2) Fall

AS 416 - Leadership Laboratory (2) Spring

Financial Aid

Type of Aid

All federal and state programs are need-based with the exception of the Unsubsidized Stafford Loan, Graduate PLUS Loan and the Parent Loan for Undergraduate Students (PLUS). Students receiving federal aid are allowed to receive at maximum, the cost of attendance as determined by the Financial Aid Office through all aid programs, including outside benefits such as third-party payments. Individual financial-aid packages will vary based on determined cost of attendance, expected family contributions and outside resources.

Federal Pell Grants

The estimated maximum annual Pell Grant for **2024-2025 is \$7,395**. Students may receive Pell Grants for less than full-time, but the grant will be prorated accordingly. Pell Grant eligibility is limited to those students who have not yet obtained a bachelor's degree or reached the lifetime limit of 600%. All students will be considered for Pell Grant eligibility if they file a FAFSA. Awards are granted based on the federally calculated expected family contribution (EFC).

Oregon Opportunity Grant

The annual Oregon Opportunity Grant award for 2023-2024 was up to a maximum of \$7,524. This grant program provides funding to Oregon residents in undergraduate programs attending Oregon schools. The Oregon Opportunity Grant is awarded by the Office of Student Access and Completion. Students not enrolled full-time (at least 12 credits) **may be** eligible for a prorated part-time award if attending half-time. By filing a FAFSA, students are applying for this grant. Funds are available on a first come, first-served basis and are limited. A student can receive an Oregon Opportunity Grant for a maximum of 12 terms. More information is available at www.oregonstudentaid.gov.

Federal Supplemental Educational Opportunity Grants (SEOG)

SEOG funds are very limited at Oregon Tech, although priority for SEOG funds is given to zero EFC students. The typical award is \$600 for an academic year. Only students who have not yet completed a bachelor's degree and are eligible to receive a Pell Grant will be considered for this grant.

Federal Work-Study Program

The Federal Work-Study Program allows students to earn money by working part-time on campus or at an off-campus community service site. Information regarding available jobs and application procedures are located in the Career Services Office and on the Oregon Tech website. Awards are usually \$2,500 per year, which can be earned at any time during the academic year provided the student is enrolled at least half-time. Awards can be increased, if needed, and if money is remaining.

Direct Lending

Federal Stafford Loans (subsidized and unsubsidized) are available to most students through the federal government Direct Loan Program. Loan amounts vary based on student need and grade level in a declared major at Oregon Tech. A fee for guarantee and origination will be taken at the time of disbursement. Contact the Oregon Tech Financial Aid Office for current interest rates. The interest rates for 2023-2024 was 5.50%. The difference between a subsidized and an unsubsidized loan is that the federal government pays the interest on subsidized loans while the student is in school. Students who wish to borrow through the unsubsidized loan program should remember that interest is accruing on the loan. Interest payments can be made while in school and during the grace period, but are not required. The loans go into repayment 6 months after the student no longer attends school in at least 6 or more credits. Any interest that has accrued at the time of repayment will be capitalized. Students must complete entrance counseling and fill out a promissory note before funds will be disbursed. To complete these items go to www.studentaid.gov.

Matthews Loan, YATES Loan, and Oregon Tech Long Term Loan

The Matthews Loan, YATES Loan, and Oregon Tech Long Term Loan are loans offered by Oregon Institute of Technology. These institutional loans offer no origination fee, and repayment begins six months (Matthews Loan, and YATES Loan), and nine months (Oregon Tech Long Term Loan) after students cease to be enrolled at least half-time. The interest rates for the Matthew Loan and Oregon Tech Long Term Loan is 5% and the interest rate for YATES Loan is 4%.

Students must complete a promissory note to receive the funds.

Federal Parent Loans for Undergraduate Students (PLUS)

Parents of dependent students can apply for funds through Parent Loans for undergraduate students. These loans are available for up to the cost of attendance minus other financial aid and resources each year. Interest begins to accrue immediately. The interest rate for 2023-2024 was 8.05%. An origination and guarantee fee will be taken at the time of each disbursement. Loan repayment begins 60 days after the final disbursement of the academic year. If you're a parent PLUS borrower, you can defer repayment of Direct PLUS Loans while the student for whom you obtained the loan is enrolled at least half-time, and for an additional 6 months after the student graduates or drops below half-time enrollment (half-time enrollment status is determined by your child's school). You must separately request each deferment period. This can now be set up in the application process.

Presidential Scholarships

First-time first-year applicants and transfers will receive consideration for Presidential Scholarships by applying and being accepted for admission by March 1 for the following fall term and meeting the minimum scholarship requirements. These scholarships are for full-time students and may be renewed for up to four years, so long as a student maintains a 3.0 GPA. Award levels vary depending on each recipient's academic record. For more information, go to www.oit.edu/scholarships.

Engineering Honors Scholarship

Students eligible for any of the four presidential scholarship awards and majoring in engineering are also eligible for the Engineering Honors Scholarship of \$1,000 a year, renewable for four years. Students must maintain a 3.0 GPA to keep their scholarship. The Engineering Honors Scholarship is automatically awarded to any applicant majoring in engineering who will attend Oregon Tech starting fall term after graduation from high school, and who is able to meet the Presidential Scholarship criteria. Students must apply for admission, meet all admission requirements, and be accepted for admission by March 1 for enrollment fall term. Recipients must be new, full-time undergraduate students at Oregon Tech.

Klamath County Scholarship

The Klamath County Scholarship is automatically awarded to any applicant living in Klamath County who will attend Oregon Tech starting fall term after graduation from high school and who is able to meet the Presidential Scholarship criteria. Students must apply for admission, meet all admission requirements and be accepted for admission by March for enrollment fall term. Recipients must be new full-time undergraduate students at Oregon Tech. This scholarship is valued at \$1,000 and is NOT renewable.

Oregon Tech Foundation Scholarships

More than 200 new and returning students annually receive funding from scholarships administered by the Oregon Tech Foundation. Alumni, businesses, industry, and friends of Oregon Tech generously fund these awards. To receive consideration, students must be currently enrolled at Oregon Tech, or accepted for admission for the following fall term. Application forms and deadlines are available on the Oregon Tech Web site at www.oit.edu/scholarships. The online scholarship application process is seamless for students and automatically generates a list of scholarships the student is eligible to apply for. The winter application process opens in early December and has a deadline of March 1. There is a smaller process in the summer. Please contact Financial Aid for more information.

Leadership and Diversity Scholarships (LAD)

Oregon Tech awards Leadership and Diversity (LAD) Scholarships each year to students who meet the application criteria. The applicant's background, identities, experiences and how they will make a difference and contribute to Oregon Tech being a place where all students feel a sense of belonging are some of the criteria considered when awarding this scholarship. LAD scholarship recipients are expected to attend events/workshops each term surrounding the topics of leadership development and/or cultural competency. Leadership and Diversity Scholarships are \$2,000 per year for Oregon residents or those attending under the Western Undergraduate Exchange, and \$3,000 per year for non-residents.

Applicants must be accepted for admission by the Oregon Tech priority deadline and apply through the Oregon Tech Foundation scholarship application by March 1st. For more information visit www.oit.edu/scholarships.

Owls Scholarship

Any incoming first-year student who achieves eight (8) or more college credits in a science, technology, engineering or math course, with a grade of B or better, may apply for the Oregon Tech OWLS program. Applicants must have just finished high school and are applying for fall term admission; transfer students are NOT eligible. Scholarship award is \$1,500 when college credits have been completed at Oregon Tech, and \$1,000 if completed elsewhere.

Students must be fully admitted and complete the scholarship application by March 1. For more information visit www.oit.edu/scholarships.

Tuition and Fees

Snell 116

(541) 885-1202

Fees and deposits at Oregon Tech are charged according to a uniform plan, varying on the nature of coursework offered. Oregon Tech reserves the right to make changes in fee schedules without notice.

Below is a partial list of the estimated fees paid by students regularly enrolled for undergraduate and graduate study.

For a list of on-campus fees (Building Fee, Incidental Fee, Health Service Fee, Student Recreation Center Fee, and International Insurance) that are dependent on the number of credits enrolled and are charged on a term-by-term basis, see the "Tuition and Fees by Program" PDF on the Oregon Tech website (<https://www.oit.edu/college-costs/tuition-fees>). Payment of full-time fees entitles students to use the library. Students may receive medical attention from the Student Health Center, use the fitness center (TechRec) and other student services. No reduction in fees is made for students who do not wish to access these services.

The estimated fee schedule for the 2025-26 academic years is provided for planning purposes only. Fees are subject to change. The current fee schedule is available from the Business Affairs Office or on the Oregon Tech website.

Tuition and Fees

Special Fees

All special fees are subject to change without notice.

Application Fee (Non-refundable) - \$50

Must be paid at the time of application submission for admission to Oregon Tech.

Differential Tuition - Medical Imaging, Respiratory Care & Dental Hygiene

Tuition is assessed as the base tuition rate plus 37 percent for students enrolled in Medical Imaging, Respiratory Care and Dental Hygiene programs.

Differential Tuition - Engineering and Technology

Tuition is assessed as the base tuition rate plus 37 percent for students enrolled in Engineering and Technology programs.

Interest - Annual rate of 12%

The periodic rate of interest is one percent per month, or a fraction thereof, of the unpaid balance remaining on the account at the time statements are run (around the middle of each month - see the Cashier's Calendar at <https://www.oit.edu/business-affairs/accounts-receivable/cashiers-office> for exact statement dates).

Late Payment Fee - \$99

Students paying fees after scheduled payment due dates for any term will be charged a late fee of \$99.

Late Registration Fee - \$20

A fee of \$20 is charged to students registering for classes after the second week of each term.

Transcripts - \$12/copy

Official transcripts are \$12 per copy and charged by Parchment.

PDF Transcript - \$16.75

A fee of \$16.75 is charged by Parchment for each electronic PDF official transcript requested.

Malpractice Fee - \$2

A malpractice fee of \$2 is charged to all on-campus students who are in majors in the following departments: Medical Lab Sciences, Emergency Medical Services, Respiratory Care, Dental Hygiene, and Medical Imaging Technology. This fee covers malpractice insurance.

Matriculation Fee (Non-refundable) - Undergraduate \$350; Graduate \$165

A one-time fee assessed to all new on-campus Oregon Tech students. The Matriculation Fee covers student orientation, new student programming, testing services, and tutoring.

Matriculation Distance Education Fee (Non-refundable) - \$50

A one-time fee assessed to all new Oregon Tech Distance Education students.

Online Tech Fee - \$65

Fee of \$65 charged for each fully online course, except for 0 credit online labs. This fee covers the cost of technology to deliver a course.

Parking Fees

All student, staff and faculty vehicles for the Klamath Falls campus must be registered with Parking Services and operated in compliance with *Regulations Governing Traffic Control*. At the time of vehicle registration, a parking fee will be assessed in accordance with a schedule approved by the President of the University and approved by the Oregon Tech Board of Trustees. Parking permits may be purchased online in AIMS Parking, accessed by clicking on the tile named "Parking Permits" in TECHweb. Vehicles must be registered by the first day of classes. Parking Fees for 2025-26 are:

Students	Faculty/Staff	
\$162/year	\$256/year	
\$82/term	\$129/term	

Petition to Graduate Fee - \$56

The \$56 fee is a **graduation processing fee** charged by Oregon Tech after a student submits a Petition to Graduate form. It covers administrative costs associated with:

- Reviewing and verifying degree requirements
- Processing the graduation application
- Conducting final audits of the student's academic record
- Preparing and issuing the diploma
- Updating official university and transcript records
- Supporting commencement-related processing

Returned Check or Electronic Payment Fee - \$25

If payments to a student account are made by check or electronic payment and are returned because of any irregularity, the student becomes responsible for a \$25 Returned Check or Electronic Payment Fee that will be charged on their student account. A Late Payment Fee will also be added to the student account for unpaid balances resulting from a returned check or electronic payment.

Room and Board Costs

The 2025-26 estimated annual room-and-board costs range from \$11,265 to \$12,873 depending on room type and meal plan purchased. Room-and-board charges are assessed by term. Fees are due in accordance with the same fee payment schedule as exists for tuition. Payments are due at the end of the fourth week of the term (unless enrolled in the payment plan in Transact – please see details and due dates on the Oregon Tech Cashier's webpage).

Senior Citizen Instruction Fee

Senior citizens are persons aged 65 or older. Such persons are authorized to attend classes on a space-available basis. Charges for special materials (any extra class fees), if any, do apply. The senior-citizen privilege is extended to persons auditing classes only (not seeking credit or working toward a degree).

Per-credit hour: There is no charge for tuition and on-campus fees (Incidental, Health Service, Building, and Student Recreational Center Fees), therefore fee privileges are not provided.

Service Charge - Payment Plan - \$10

A \$20 service charge per term is assessed for enrolling in the payment plan (completed in Transact). See the Student Financial Responsibility Agreement (found on the Cashier's webpage <https://www.oit.edu/business-affairs/accounts-receivable/cashiers-office>) for more details on payment plan requirements.

Special Course Fees, per course

Special Course Fees, fees in addition to regular tuition, are assigned for some courses. These fees are noted in the *Schedule of Classes* for each term. These fees cover required consumable materials for the course that the institution purchases for students for more competitive pricing or because of better availability to the institution than to individuals.

Special Examination Fee, per credit - \$50

Examination for credit.

Tuition and Fee Refunds

Students who withdraw from the university and who have complied with the regulations governing academic withdrawals may be entitled to certain refunds of tuition and fees assessed, depending on the time of withdrawal. The refund schedule has been established by the Oregon Tech Board of Trustees and is on file in the Business Office. Included with the refund schedule is the mandated order in which financial aid must be returned to the appropriate programs for students receiving financial aid. All refunds are subject to the following regulations:

- Tuition and Fee Refund Appeal forms must be submitted to the Business Affairs Office no later than 90 days after the last day of the term in which the course(s) was dropped.
- An official notice of withdrawal must be completed, and necessary clearance signatures filed with the Registrar's Office.

Refunds in all cases are calculated from the date of receipt of the application for refund or date of withdrawal, and not from the date when the student ceased attending classes, except in unusual cases when formal withdrawal has been delayed through cause beyond the student's control.

Tuition and Fees

Library Fines and Charges

The following regulations govern library fines and charges:

1. **Overdue Fines**—Separate overdue fines apply to reserve items, equipment and materials borrowed from other libraries.
2. **Oregon Tech Lost Items**—Borrowers failing to return materials within 60 days of the due date for Oregon Tech Library's material will be charged a \$20 processing fee plus the replacement cost of the items.
3. **For Alliance and ILL Lost Items**—Borrowers failing to return materials within 40 days of the due date for ILL and Alliance (Summit) materials will accrue separate charges. For Alliance (Summit) items the replacement charges are \$75, plus a \$15 service charge in addition to any overdue charges for each Alliance item not returned. For ILL lost items the replacement charges are established by the lending library in addition to any overdue charges for each ILL item not returned.
4. **Refunds**—When a lost item for which the borrower has been billed is returned before replacement has been ordered, a refund not exceeding the replacement cost may be made at the discretion of the library. In cases where replacement has been ordered, no refunds to the borrower will be made.

Academic Policies and Procedures

Student Rights and Responsibilities

Students are responsible for knowing and understanding Oregon Institute of Technology's requirements relating to registration, academic standards, student activities and student organizations as well as adhering to the Student Code of Conduct found on the website. Students are encouraged to meet regularly with their departmental advisors and to contact the Registrar's Office with questions about academic procedures, policies or regulations. More information can be found [here](#).

Academic Advising

Students are assigned advisors from their academic programs. If a student should change programs, a new advisor will be assigned. Degree-seeking students are required to meet with their advisors prior to registration.

Student Classification

Students are classified according to the number of college-credit hours earned as follows: 0-44, freshman; 45-89, sophomore; 90-134 junior; 135 and above, senior. Transfer credits are included in determining classification.

Quarter System

Oregon Institute of Technology operates on an academic year consisting of three quarters (or terms) of approximately 11 weeks each (10 weeks of classes and 1 week of final examinations) and a summer session of eight weeks.

Oregon Common Course Numbers

The state of Oregon has identified a set of commonly transferred lower division courses across all public higher education institutions that are part of a common course numbering system. These courses have aligned course numbers, learning outcomes, credit hours, course titles and descriptions. The courses are identified in the catalog, the class schedule and on official transcripts with the letter 'Z' placed at the end of the course number. Courses with the common course Z identifier are guaranteed to transfer within public institutions in Oregon.

Excessive Course Load

Admitted students are allowed to register for 21 credit hours (including audits) during an academic term without special permission. Fifteen credits are the maximum for summer session. Students wishing to register for an overload must have a 3.0 cumulative GPA and receive special approval from the advisor and the University Registrar.

Non-admitted students are restricted to eight credits per term, with the exception of summer where 15 credit hours are the maximum.

Academic Policies and Procedures

Student Records and Right to Privacy

In compliance with the federal Family Educational Rights and Privacy Act (FERPA), state law and Oregon Tech policy, students have certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the day the university receives a request for access. Students should submit written requests to the registrar, dean, head of the academic department, or other appropriate official, that identify the record(s) they wish to inspect. The university official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, that official shall advise the student of the correct official to whom a request should be addressed.
2. The right to request the amendment of the student's education record that the student believes is inaccurate or misleading. Students should write the university official responsible for the record; clearly identify the part of the record they want changed; and specify why the record is inaccurate or misleading. If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of their right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to consent to disclosures of the personally identifiable information contained in the student's educational record, except to the extent that FERPA authorizes disclosure without consent. One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic or research, or support staff position (including health staff and members of the university's law enforcement department); a person or company with whom the university has contracted; a person or company acting as consultant or volunteer for the university; a person serving on the university's Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee. A university official has a legitimate educational interest if the official needs to review an educational record in order to fulfill their professional responsibility.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Oregon Institute of Technology to comply with the requirements of FERPA.

The name and address of the office that administers FERPA is:

Family Policy Compliance Office

U.S. Department of Education

400 Maryland Avenue, SW

Washington, DC 20202-5920

1-800-USA-LEARN (1-800-872-5327)

Website: <https://www.ed.gov/category/keyword/family-policy-compliance-office-fpc>

The information provided here is for informational purposes only. For more FERPA resources please see the Office of Registrar [FERPA webpage](#).

Oregon Tech Directory Information:

- Student's full legal name
- Current mailing address
- Current phone number
- Hometown
- Dates of attendance by term
- Degree program/major field of study
- Honor roll (President's & Dean's List)
- Date of graduation
- Full time, half-time, or less than half-time enrollment status
- Most recent/previous school attended
- Participation in sports/activities
- Age, height, and weight or athletic team members

A student may request to have all of the above directory information kept confidential. To do so, please reach out to the Registrar's Office at registrar@oit.edu.

Release of Student Information to Military Recruiters (Solomon Amendment)

Oregon Tech provides information about students that is requested by military recruiters under requirements of the Solomon Amendment (As of Oct. 23, 1998 [63 Fed. Reg. 56819] and the Interim Rule published Jan. 13, 2000 [65 Fed. Reg. 2056] by Department of Defense). Under this federal law, military recruiters may request the following information: Name, current mailing address (as provided by the student), current telephone number (as provided by the student), age, class level (e.g., freshman, sophomore, etc.), and academic major. The information may be requested for the immediately previous term, current term, or future term for all students age 17 and older who are or were registered at OIT for at least 1 credit in the requested term. Recruiters may request this information each term. Recruiters may not obtain any information that is not in the above list of student recruiting information. For example, they may not request any of the following: Social Security Number or ID Number, place of birth, race/ethnicity/nationality, grades and GPA, grades of low-performing students, religious affiliation, names of students with loans in default, veteran status, or names of students no longer enrolled at OIT. Institutions that do not comply with the Solomon Amendment risk losing federal funding from the departments of Defense, Education, Health and Human Services, Labor, and Transportation. Institutions do not risk losing student-aid funding such as Perkins Loans, Federal SEOG or Work-Study funds.

Use of Social Security Number (SSN)

You are requested to provide voluntarily your Social Security Number to assist OIT (and organizations conducting studies for or on behalf of OIT) in developing, validating, or administering predictive tests and assessments; administering student aid programs; improving instructions; internal identification of students and alumni; collection of student debts; or comparing student educational experiences with subsequent workforce experiences. When conducting studies, OIT will disclose your Social Security Number only in a manner that does not permit personal identification of you by individuals other than representatives of OIT (or the organization conducting the study for OIT) and only if the information is destroyed when no longer needed for the purposes for which the study was conducted. By providing your Social Security Number, you are consenting to the use identified above. This request is made pursuant to ORS 352.004, ORS 352.107, and ORS 352.146. Provision of your Social Security Number and consent to its use is not required and if you choose not to do so you will not be denied any right, benefit, or privilege provided by law. You may revoke your consent to the use of your Social Security Number at any time by contacting the Registrar's Office at registrar@oit.edu.

All access and use at Oregon Tech of the Social Security Number is prohibited except for meeting federal or state requirements, compliance, and reporting.

Academic Policies and Procedures

Academic Standing

Academic Warning

An academic warning is a caution to the student that there is a lack of satisfactory academic progress. Students, including first term freshmen, who do not achieve a 2.0 in any given term will receive an Academic Warning. Students who have no earned credits, withdrawals (i.e., all Fs, withdrawals (W) and/or incompletes (I)), for two consecutive terms will also receive an Academic Warning.

Academic Probation

Students who have attempted two or more terms at Oregon Tech and have an Oregon Tech cumulative GPA below 2.0 will be placed on Academic Probation. Students who have no earned credits, (i.e. all Fs, withdrawals (W) and/or incompletes (I)), for three or more consecutive terms will also be placed on Academic Probation. Students placed on probation will receive notification that they are on Academic Probation as well as instructions on how to proceed. Once placed on probation, students are advised to limit their course load to 13 credits. Courses transferred in from other institutions are not included in institutional cumulative GPA.

Academic Suspension

Students on academic probation for one term who do not meet the 2.0 cumulative GPA requirement in the successive term of enrollment will be placed on Academic Suspension for at least one term. To re-enroll, a student must complete the prescribed procedures and appeal to the Academic Progress and Petitions Committee for reinstatement. Students should contact the Registrar's Office for re-enrollment information. Students who have been suspended are denied all privileges of the institution.

Veteran students receiving benefits will lose all benefits until academic standing is improved to good standing.

NOTE: When a student is placed on academic warning, probation or suspension both the student and their advisor will be notified.

Academic Progress and Petitions Committee

Administration of the regulations governing academic performance is vested in the Academic Progress and Petitions (AP&P) Committee. This committee also has authority to assess probation or to suspend any student from the university when it appears that the student's work is at such a level that the student cannot benefit by continued attendance. The university requires that students make substantial progress toward meeting graduation requirements, including maintaining a minimum 2.0 GPA. Any cumulative GPA below 2.0 is considered unsatisfactory and will bring the student's record under review. Courses transferred in from other institutions are not included in institutional cumulative GPA.

The AP&P Committee also serves as an advisory group to the Registrar's Office regarding academic appeals. For information regarding appeals to this committee, students may contact the Registrar's Office. Committee decisions are final.

Academic Policies and Procedures

Policies

- Final Examinations
- Dead Week
- Repeat Courses
- Auditing Courses
- Academic Forgiveness
- Academic Grievance

Final Exams

All teaching faculty will meet their classes during finals week at the final-examination time designated in the official class schedule issued at the beginning of each term.

1. No student activities or athletic events will be scheduled during finals week
2. Methods of evaluation are at the discretion of the instructor. The methods of evaluation of student achievement and grading standards should be specified in the course syllabus and distributed to students the first week of class
3. Faculty who use a final examination will administer that exam at the time designated in the official class final examination schedule. Finals times are designed not to conflict

Individual students may request exceptions to this policy. These must be approved in advance by the instructor.

Course instructors may request exceptions to this policy. The exception must be approved by the dean of the college and students should be given at least three weeks prior notice of the change.

Dead Week Policy

Dead Week (the period of Monday morning prior to finals week until the Monday morning of finals week) is the last week of regularly scheduled activities for the term. As such, Dead Week includes routine activities (e.g., lectures, discussions, laboratories, quizzes, assignments, appropriate course reviews, etc.).

1. Final examinations, when utilized, must be given at the scheduled time during finals week
2. No student activities or athletic events will be scheduled during Dead Week
3. Projects and/or examinations due Dead Week may not exceed 20 percent of the final course grade without giving students at least three weeks prior notice

The Provost and Vice-President for Academic Affairs must approve any exceptions to this policy.

Repeat Policy

The following restrictions apply for course-repeat situations:

1. Students may attempt the same course (for a "W" or a letter grade) a total of four times
2. Each withdrawal ("W") is considered an attempt. Withdrawals, however, are not included in GPA calculations
3. The new grade earned will replace the previous grade(s) when computing GPA. Only the first two earned grades will be excluded for GPA calculations. The last grade earned will be used on the application for degree
4. All grades and credits remain on the student's official transcript

NOTE: Students should consult with their financial aid counselor to determine financial eligibility for repeat courses.

Auditing Policy

A student has the option to enroll in a class for informational purposes only. This enrollment is classified as an audit and is regulated by the following procedures:

1. Audit classes are charged at regular tuition rates as printed in the class schedule
2. The only grade an audit class may be granted is "N" (audit). The "N" grade is disregarded in the GPA and is not valid toward graduation requirements
3. Class attendance shall be in accordance with the instructor's attendance policy for all students in the class
4. Instructors having audit students have no obligation to grade or record the audit student's work
5. An audit option may be requested during the registration period. Changes "to" or "from" the audit option may be requested no later than the 10th academic day of the term
6. Students auditing a course may, at a later term:
 - Register for the same course for credit
 - Challenge the course by examination

Academic Forgiveness

The Academic Forgiveness policy allows undergraduates with an unsatisfactory GPA to drop a maximum of three consecutive terms of work from consideration in their GPA. Academic forgiveness applies to terms only. Students are not allowed to select courses within terms for forgiveness.

Academic forgiveness is granted on a case-by-case basis by the Academic Progress and Petitions Committee. It is an extreme measure; it may be granted only once and only when a student provides clear and convincing evidence of a renewed commitment to advancing his or her education. Once forgiveness is granted, it may not be revoked. Forgiveness can be applied only to credits earned at Oregon Tech.

If the petition is approved, the student's transcript will have a notation stating, "Academic Forgiveness Granted" above each term in which forgiveness was granted. Forgiven courses and grades are no longer calculated in the GPA and do not apply toward graduation. However, a record of all coursework will remain on the transcript.

Eligibility

To apply for consideration for academic forgiveness a student must:

- Have earned less than a 1.0 term GPA for the term(s) being considered for forgiveness. The term(s) for which forgiveness is being requested must have been taken at least seven years prior to the request
- Have had at least a two-year lapse in enrollment at Oregon Tech
- Be currently enrolled at Oregon Tech
- Have completed a minimum of 30 graded credits at Oregon Tech with minimum cumulative GPA of 3.0 or better since resuming studies at Oregon Tech
- Apply for forgiveness with the Academic Progress and Petitions Committee before degree completion

Procedure

To apply for academic forgiveness, a student must submit a formal letter of request to the University Registrar, which must include:

1. Specific term(s) (maximum of three consecutive) for which forgiveness is being requested
2. Statement of academic goals and a term-by-term plan for degree completion signed by the student's academic advisor
3. Rationale for the request

The University Registrar will forward the application to the Academic Progress and Petitions Committee for review and will notify the student of the Committee's decision.

Student Academic Grievance

Academic Disputes Covered by Policy

1. Student claims that final course grade resulted from unfair or prejudicial treatment by instructor or unusual or irregular procedures that impacted an individual student's grade in a disproportionate manner.
2. Student is dismissed from a professional program because of failure to meet prerequisite or sequential course requirements.
3. Student is dismissed from a professional externship component because of failure to meet standards of conduct or performance as required by the professional program and/or the externship site, as published in the Student Handbook for that program.

Academic and Related Disputes Not Covered by Policy

- Grades assigned to tests, quizzes, homework, papers, projects, or other components of a course.
- Final grades based on failure to meet published (via syllabus) standards for the course, in which no unusual or prejudicial treatment is claimed.
- Disciplinary or other student conduct matters not specifically covered above.
- Challenges to the instructor's grading system or components thereof, as long as the system was made available to students at the beginning of the academic term.

Procedure

1. Student reads policy to determine if the grievance can be appealed.
2. Student makes appointment to dispute with course instructor. Since reconciliation of the dispute at this level is in the best interests of all parties, instructors and students are urged to engage in an honest and open-minded effort to resolve the problem.
3. Failing to resolve the dispute with the instructor, the student makes an appointment with either the program director (if one exists) or department chair, as appropriate. a. The student and the instructor document the dispute in writing. b. The department chair should confer with the instructor, either before (preferred) or after consultation with the student. c. The department chair refers the matter back to the instructor for resolution or decides the dispute based on information that is available.

4. If disagreement with the department chair decision results, the student may request an appointment with the dean of the appropriate school (HAS or ETM). The student should indicate that the appointment concerns a grade dispute and the department, course, and instructor involved.
- Students will not be seen by the dean unless the preceding steps have been followed. An exception to this is when the course instructor is the department chair. Then, the second level of appeal is the dean.
 - The dean contacts the department chair and, when appropriate, the course instructor to obtain information on the dispute.
 - After consultation with the department and the student, the dean offers the student the choice of a summary decision by the dean or the opportunity for a hearing by the Student Conduct Review Commission.

Seattle Site Students:

The Washington Student Achievement Council (WSAC) has authority to investigate student complaints against specific schools. WSAC may not be able to investigate every student complaint. Visit <https://www.wsac.wa.gov/student-complaints> for information regarding the WSAC complaint process.

Academic Policies and Procedures

Transfer Credit

Oregon Tech makes every effort to give maximum consideration to the transfer work presented by enrolling students. To ensure that the student has the requisite knowledge, Oregon Tech follows these policies in determining credit:

Accreditation Status of Institution

The institution where the transfer credit was earned must be accredited by a regional accrediting body recognized by the Council for Higher Education (CHEA).

Students transferring work from an institution that is not regionally accredited by a CHEA-recognized accrediting body may receive transfer credit by:

1. demonstrating prior experiential learning with a portfolio
2. applying for credit after demonstrating competencies in advanced coursework in the same subject area or
3. challenging courses by exam

International Institutions

Students seeking transfer credit from international institutions must provide Oregon Tech with a credential evaluation from an Oregon Tech-approved credential evaluation service. Credential evaluation information may be obtained from the Office of Admissions. The credential evaluation must include course titles, credits and grades. Students must also provide course descriptions in English from the international institution. Any associated costs are the responsibility of the student.

Official Transcripts

Prior to the formal awarding of transfer credit, the transfer student must provide an official transcript of coursework completed at all other higher education institutions. Failure to list all colleges attended on the Application for Admission may result in denial of admission or transfer credit.

Admitted transfer students must submit official transcripts at least one term prior to enrollment to ensure timely evaluation of transfer credits.

Any student receiving GI Bill® education benefits while attending Oregon Tech is required to obtain transcripts from all previously attended schools and submit them to the school for review of prior credit.

GI Bill® is a registered trademark of the United States Department of Veterans Affairs (VA).

Determination of Transfer Credit

The Oregon Tech Registrar's Office determines the transfer equivalency of general education courses using articulation agreements, course descriptions, course outlines, and course syllabi. The student's major department determines the transfer equivalency for technical or major courses using similar resources.

Articulation Agreements

Oregon Institute of Technology is dedicated to enhancing partnerships with regional community colleges. One important way of doing this is by forming articulation agreements. An articulation agreement is an officially approved agreement that matches coursework between schools. These agreements are designed to help students make a seamless transition when transferring to Oregon Tech. Articulation agreements give students a clear understanding of what courses will transfer to Oregon Tech and satisfy requirements for their major with the least overlap or repeat of courses. Some agreements accept an associate degree in its entirety while other agreements outline specific courses to take as a student plans for transfer. Students should inform the Admissions Office, their academic department advisor, and Registrar's Office when they are utilizing an articulation agreement.

A list of articulation agreements can be found online at www.oit.edu/articulations; students may search by Oregon Tech major or by transfer institution. Questions regarding these agreements may be directed to the students' academic department or the Office of Academic Agreements.

Applicability of Transfer Credit

Oregon Tech provides a report upon the admission of the student, prior to the planned term of enrollment. The evaluation delineates the transfer credit on a course-by-course basis and specifies direct course equivalencies, courses which may be used towards general-education requirements, elective credits and courses which do not receive credit.

At the time of admission, Oregon Tech's report may include elective credits that do not apply towards a specific degree. These credits will be recorded as transfer credit for registration purposes, allowing the student an earlier registration appointment based on total earned credit hours.

Some transfer work, which may not be directly equivalent to Oregon Tech courses, may be appropriately substituted to meet Oregon Tech requirements. Students may seek course substitution approval by completing the Course Substitution form and obtaining the signature of the advisor, department chair and University Registrar.

The transferability of credits earned at Oregon Tech is at the discretion of the receiving college, university, or other educational institution. Students considering transferring to any institution should not assume that credits earned in any program of study at Oregon Tech will be accepted by the receiving institution. Similarly, the ability of a degree, certificate, diploma, or other academic credential earned at Oregon Tech to satisfy an admission requirement of another institution is at the discretion of the receiving institution. Accreditation does not guarantee credentials or credits earned at Oregon Tech will be accepted by or transferred to another institution. To minimize the risk of having to repeat coursework, students should contact the receiving institution in advance for evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

Credit for Alternative-Delivery Courses

Courses taken by alternative delivery from other accredited institutions will be evaluated as transfer credit.

Minimum Grade Standards

Oregon Tech considers for transfer those courses that carry a grade of D or better from an accredited institution. However, many Oregon Tech departments require C or better course grades for prerequisite and graduation purposes.

Pre-College Level Transfer Credit

Oregon Tech students who plan to enroll at other institutions during the summer or to complete coursework for the degree in absentia are encouraged to obtain written pre-approval of transfer credit to ensure transfer equivalency for degree purposes.

Pre-Approval of Transfer Credit

Oregon Tech students who plan to enroll at other institutions during the summer or to complete coursework for the degree in absentia are encouraged to obtain written pre-approval of transfer credit to ensure transfer equivalency for degree purposes.

Military Credit

Oregon Tech will grant credit for military courses and experiences based on American Council of Education (ACE) guidelines (found in the Guide to the Evaluation of Educational Experience in the Armed Forces) and faculty recommendations. Credit is awarded in accordance with transfer credit policies at Oregon Tech. Students may request evaluation of military credit by furnishing an official AARTS or SMART transcript.

College-Level Examination Programs and Advanced Placement: College Level Examination Program (CLEP)

Oregon Tech will award credit for several college-level examination programs. These examinations must be completed with a satisfactory score and an original copy of test results must be forwarded to the Registrar's Office from the testing service. In order to receive such credit, the student must be admitted to an Oregon Tech degree program and registered for classes during the term in which the request is made. Oregon Tech awards credit for College-Level Examination Program (CLEP) subject examinations, but not for CLEP general examinations. Information on CLEP course equivalencies and minimum scores may be obtained from the Oregon Tech Registrar's Office.

Advanced Placement (AP)

Students who complete college-level work in high school under the Advanced Placement (AP) program must achieve a minimum score of three to be granted credit on their Oregon Tech transcript. AP course equivalences may be obtained from the Office of Admissions or Registrar's Office.

A maximum of 25 percent of the credits used toward the degree may be CLEP and AP.

International Baccalaureate

Oregon Tech evaluates IB test scores much in the same way it evaluates AP scores. Students must have official test scores sent to the Office of Admissions. Oregon Tech may award credit to students who receive a 5 or higher on any Higher Level IB examination. For more information, please contact the Registrar's Office at (541) 885-1300.

Credit for National Registry or Licensure Exams

Oregon Tech will award a pre-approved block of credit to fully admitted and enrolled students who have passed a national registry or licensure exam in majors offered by the institution. This award of credit is based on the academic department's annual review of the national exam questions in comparison to the curriculum taught on campus. Full information is maintained in the Registrar's Office and via Oregon Tech Online, which coordinates online degree-completion programs offered by Oregon Tech.

[Academic Policies and Procedures](#)

Credit by Exam and Credit for Prior Learning

Oregon Tech awards credit for educational accomplishments attained outside of accredited post-secondary institutions.

Credit by Examination

Students currently enrolled at Oregon Tech may request credit for a course by special examination. This process is called a course challenge and the provisions are:

1. Credit by examination (course challenge) is available to students who are fully admitted in degree-granting programs
2. Students may not challenge a course which they have previously taken for credit and received a grade other than an audit, nor may they challenge the same course more than once. If students register for a course they wish to challenge, they must drop and challenge the course before the last day to drop without a "W"
3. No more than 25 percent of the credits submitted for graduation may be credit by examination
4. Examinations receive either a "P" (pass) or "F" (fail). A pass suggests the student has mastered the material comparable to a grade of "C" or better in the course being challenged. The University Registrar records "P" grades on the student transcript, but does not count the P in grade point average calculations. The University Registrar does not record "F" grades
5. Students must pay a non-refundable per-credit fee, as published by the Office of Business Affairs, prior to the examination
6. Departments are responsible for preparing an appropriate examination, evaluating the student's response and submitting results to the Registrar's Office. Departments reserve the right to declare any course offering as non-challengeable

Further procedures and general guidelines for course challenges may be obtained from the Registrar's Office.

Credit for Prior Experiential Learning

Oregon Institute of Technology recognizes that students learn outside the classroom through experiences on the job, vocational education, professional development courses, workshops, and independent study. Oregon Tech may grant credit for experiential learning when it is judged that learning outcomes are equivalent to those of college-level courses in the Oregon Tech curriculum. This process is only appropriate for students who wish to demonstrate learning for more than one required course. Typically, credit for experiential learning will be a substitute for a series of major specific courses.

Level of Credit

Oregon Tech grants credit for prior experiential learning at the undergraduate level only. Credit will be awarded only for documented prior learning that has a balance, appropriate to the subject, between theory and practical application, and not just for prior experience. Credit should be appropriate to the academic context in which it is accepted.

Eligibility Requirements

The student must be fully admitted and enrolled at Oregon Tech. Credit will not be granted until the student has successfully completed the procedure outlined. Credit for prior experiential learning will not be granted if the student has already received credit for the same course. No more than 25 percent of the credits needed for a degree or certificate may be from credit for prior experiential learning. Credit may only be granted for courses offered by Oregon Tech and the university reserves the right to declare any course offering as inappropriate for prior experiential learning credit.

Awarding of Credit

Completion of the institution's review process does not guarantee a student will receive credit for prior experiential learning. If the student successfully demonstrates evidence of college-level learning, credit will be identified on the student's transcript as credit for prior learning. This credit will not be graded or counted in the student's grade point average. Students wishing to appeal the award of credit should appeal to the Provost, whose decision is final.

Tuition and Fees

Fees charged for portfolio assessment are based on the services performed. The application fee for a specified course is published by the Office of Business Affairs. This non-refundable fee must be paid prior to submitting the portfolio for assessment. Proof of payment must accompany the student's Credit for Prior Experiential Learning Application.

Transfer of Prior Experiential Learning Credit

Oregon Tech accepts credit for prior learning from other institutions, provided that the transfer institution awards such credit on the basis of standards similar to those outlined by the Northwest Association of Colleges and Universities (NWCCU).

Faculty Evaluator Qualifications

Credit is awarded based on the recommendation of teaching faculty who are qualified in the subject area and who are on regular appointment with the university on a continuing basis.

Procedure

Students seeking credit for prior experiential learning should first confer with their advisor to help assess if their experience and learning are appropriate for this process. If it is determined that experiential learning assessment is appropriate, the student should contact the University Registrar.

The University Registrar will determine whether the student has met the eligibility requirements outlined in this procedure. If so, the University Registrar and the Department Chair will sign the student's Credit for Prior Experiential Learning Application. The student must then complete a prior experiential learning documentation course. This course may be utilized for curricular requirements by the major department if appropriate.

Upon completion of the documentation course, the student will submit his/her Credit for Prior Experiential Learning Application and completed portfolio to the department chair. At the department chair's discretion a faculty member will review the portfolio and if necessary will interview the student. The final decision is recorded on the student's Credit for Prior Experiential Learning Application and will be forwarded to the University Registrar. The Credit for Prior Experiential Learning Application will be included in the student's permanent academic record. The portfolio will be retained in accordance with Oregon Tech's archive guidelines.

[Academic Policies and Procedures](#)

Grading System

Student academic achievement is evaluated and reported in accordance with a system of letter grades assigned at the end of each course. These grades become part of the student's transcript, a permanent academic record. A summary statement of a student's total academic record is expressed as a cumulative grade point average (GPA). The academic grievance procedure can be found [here](#).

Grading Policy - Bachelor and Master

Oregon Tech uses a 4.0 grading scale to evaluate student performance. Upon completion of a course or upon termination of attendance in the course, a student's performance will be graded by the instructor and reported to the University Registrar as follows:

Letter Grade	Meaning	Points Per Credit Hour	Used to Calculate GPA
A	Exceptional	4	Yes
B	Superior	3	Yes
C	Average	2	Yes
D	Inferior	1	Yes
F	Failed	0	Yes
I	Incomplete	0	No
IP	In Progress	0	No
N	Audit	0	No
NP	No Pass: <i>Equated to a "D" or "F"</i>	0	No
P	Pass: Equated to a "C" or better	0	No
W	Withdrawn	0	No
Z	No Grade Assigned	0	No

For program specific grading, such as DPT, please refer to the program handbook.

Grade Point Average Example

A student's GPA is computed by assigning a numerical point value to each grade: "A," 4 points per credit; "B," 3 points per credit; "C," 2 points per credit; "D," 1 point per credit; "F," 0 points per credit. GPA at Oregon tech is truncated. GPA is the quotient obtained by dividing total grade points by total hours attempted. Grades of "I", "P", "NP", "W" and "N" are disregarded in calculating GPA; however, a "P" is equivalent to a "C" or better. For example:

Class #	Title	Credits	Grade	Point Value for Credits	Earned Grade
WRI 121Z	Composition I	3	B	3	9
ECO 201	Economics	3	C	2	6
MATH 111Z	Precalculus I: Functions	4	A	4	16
CHE 101	Elementary Chemistry	3	B	3	9
CHE 104	Elementary Chemistry Lab	1	B	3	3
HED 250	Contemporary Health Issues	2	A	4	8
PHED 190	Racquetball	1	B	3	3
Total					54

GPA = Sum of earned grade points = 54 = 3.1764 or 3.17; credits attempted: 17

Grade Change Policy

All grades except for 'I', 'IP' and 'Z' are considered final when filed by the instructor during grade processing each term. Thereafter, a grade change may be made only in the case of clerical, institutional, procedural or calculation error although a student's grade may be changed following a student's appeal through Academic Grievance Procedures.

No grade other than 'I' or 'IP', once reported, may be revised by re-testing, or by completing additional work. A student's grade cannot be changed by any person other than the instructor of record unless an exception is granted by the Department Chair, College Dean or Provost. Any grade change by the instructor of record must take place within one year subsequent to the term in which the grade was reported. Any grade change that is to be filed later than one year must be approved by the appropriate College Dean and the University Registrar.

Non-Standard Grading

Courses may be graded on the pass (P)/no pass (NP) basis at the discretion of the department and the University Registrar. Courses may include, but are not limited to seminars, externships, co-ops, independent study, certificate classes, and physical education.

Class Drop/Withdrawal

A student may drop/withdraw from a course through Friday of the seventh week of the term. Although teaching faculty may drop a student during the first two weeks of the term, according to the Faculty Initiated Withdrawal Policy, they are not required to do so. Students will be notified of instructor initiated drops in writing.

Faculty-Initiated Withdrawal

Teaching faculty can drop a student during the first two weeks of the term from a class if the student has not attended by the second regularly scheduled meeting of that class. The student will be notified of the withdrawal in writing by the Registrar's Office.

Student Initiated Drops/Withdrawals

1. During the first 10 days of the term, a student may drop one or more courses with no record. However, if a student withdraws from all courses, the student's transcript will note "Complete Withdrawal"
2. After the first 10 days of the term, a student who withdraws from one or more courses will receive a "W" for those courses. Students may withdraw from individual courses through Friday of the seventh week of the term
3. After Friday of the seventh week, students will receive a letter grade from the instructor
4. Complete withdrawals from the university may be processed through Friday of the week prior to final-exam week. Depending on the time of the term, a complete withdrawal will result in a notation of a "complete withdrawal" or "W's" on the student's transcript
5. Students requesting to withdraw from a course(s) after the published withdraw dates that have medical documentation supporting the withdraw should contact the **Dean of Student's Office**

NOTE: The deadlines for dropping/withdrawing from a course are listed in the Academic Calendar.

Incompletes

When the quality of a student's work is satisfactory, but some essential requirement of the course has not been completed for reasons acceptable to the instructor, a grade of Incomplete (I) may be assigned and additional time granted for completion. The instructor is responsible for submitting an "I" grade and completing the Request for Incomplete form and submitting it to the Registrar's Office.

An "I" grade must be removed by the end of the next term (summer session not included). An "I" may only be extended under the most extenuating circumstances and then only for one additional term. If an "I" is not removed within the allotted time, the "I" then reverts to the alternate grade assigned by the instructor on the incomplete form.

Incompletes received in the anticipated term of graduation must be finished and the grades recorded in the Registrar's Office within three weeks after the end of the final term. Otherwise, the diploma will be delayed until the term during which all degree requirements are met.

In Progress (IP) Grade

The "In Progress" grade is used for classes with coursework that continues past the end of the term in which the student is registered. Examples include externship, co-op, clinical and project classes. The "IP" grade may be retained over multiple terms. "IP" grades that are not changed during the allotted time revert to a grade of "F" for undergraduate and graduate courses.

"IP" grades given at the undergraduate level will be retained for a maximum of four terms. The "IP" grade for a specific graduate level course is maintained by the Registrar's Office for a maximum of five years. Each year the student should file a progress report with the Graduate Council signed by the student and the student advisor. After five years, the student can appeal to the Graduate Council to request a grade change beyond this five-year limit. The Graduate Council has the authority to approve or deny the student's petition.

No Grade Assigned (Z) Grade

The "No Grade Assigned" grade is a grade assigned by the Registrar's Office when no grade is reported by the instructor. A "Z" grade should be changed by the instructor as soon as possible. If a "Z" is not removed by the completion of the following term, the "Z" reverts to a grade of "F".

Academic Policies and Procedures

Graduation

Application for Degree

Students must file an *Application for Degree* at least two terms prior to the term of graduation. These forms are available in TECHweb, at the Registrar's Office, in the Portland-Metro Programs offices and in academic departments. They are submitted to the Registrar's Office for evaluation.

Oregon Tech Portland-Metro students must schedule a graduation degree-check appointment with their major's program director at least two terms prior to graduation. The final graduation check is completed by the Registrar's Office at the Klamath Falls campus.

Monitoring Degree Progress

DegreeWorks is a web-based degree audit and advising tool that is utilized by students and advisors. The software identifies courses students have completed and courses still needed to fulfill requirements. Students and Advisor access this tool through Web for Student or Web for Faculty. The Office of the Registrar works with faculty annually to maintain an accurate degree audit that is used to clear graduation requirements.

Sealing of a Degree

All grade changes, removals of incompletes, and transfer work necessary for completion of degree requirements must be on file in the Office of the Registrar by the Friday following the end of the term of graduation. Academic records are sealed ninety days after the conferral of a degree: no changes to the record will be made following that date.

Grade Point Requirement

Oregon Tech requires a minimum cumulative GPA of 2.0 for graduation.

Graduation Residency Requirements

All degree/certificate/diploma programs require students to take a minimum number of Oregon Tech courses (25 percent of total credits). For a certificate, a minimum of 5 term-credit hours must be taken from Oregon Tech. For an associate degree, a minimum of 30 term-credit hours must be taken from Oregon Tech. For a bachelor's, a minimum of 45 term-credit hours must be taken from Oregon Tech. For a master's, a minimum of 12 term-credit hours must be taken from Oregon Tech. Credits earned through Oregon Tech course challenge or the Oregon Tech Credit-for-Prior-Learning program are considered resident credits toward graduation requirements. All other credits granted by examination (CLEP or AP) or other methods are non-resident credits. Students desiring to complete course requirements for graduation from Oregon Tech at another college or university must receive prior approval from the Registrar's Office.

Catalog of Graduation

Students must meet all degree requirements from one Oregon Tech catalog. The catalog may be chosen from the year the student is first admitted and enrolled or from any subsequent year. However, at the time of graduation, all students, including transfer students, must use a catalog that is no more than seven years old.

Transfer students may select their catalog of graduation prior to full admission to Oregon Tech by obtaining written approval from their Oregon Tech major department and the University Registrar. The agreed upon catalog will be the one a student uses when he/she transfers to Oregon Tech. Students must enroll at Oregon Tech within two years of this approval.

Departments periodically review their curriculum for technical currency. As a result, significant program changes may occur. Courses previously required in the curriculum can no longer be offered. The major department will provide a transition plan for students to fulfill degree requirements.

Programs discontinued by the university may have specific entrance and graduation limits that override the catalog of graduation.

Baccalaureate Upper-Division Credit Requirement

Baccalaureate students must complete a minimum of 60 credits of upper-division work before a degree will be awarded. Upper-division work is defined as 300- and 400-level classes at a bachelor's-degree-granting institution.

Multiple Majors

An undergraduate student may earn multiple majors if all the degree requirements for each major are met. All successfully completed majors will be listed on both the transcript and diploma.

Concurrent Degrees

Students may be granted a second bachelor's degree provided they meet the requirements for both degrees and complete an additional 36 credits beyond the requirements of the first degree. 45 credits are required if the first degree was not granted by Oregon Tech and students must meet the general-education requirements as outlined in their catalog of graduation. If the first bachelor's degree was granted by Oregon Tech, the general education requirements are waived for the second degree.

Curricular Requirements

Curricular requirements are determined by, and vary with, the departments involved. Major requirements are published in this catalog.

Minors

A minor consists of a minimum of 18 credits in a subject field outside the student's major. The total credits required for a minor depend on the academic discipline, the prerequisites of the required courses and the student's starting level in the discipline. Requirements for approved minors are listed by department in this catalog. Minors will only be granted at the time students receive their baccalaureate degrees. Application for a minor must be submitted to the University Registrar with the student's application for degree.

Graduation in Absentia

Students wishing to complete the Oregon Tech degree by attending another college and transferring work after the minimum residency credits have been met (30 for associate and 45 for bachelor's degree) must complete an *Application for Degree* and have the final transferring classes approved for their degree by the transcript evaluator in the Oregon Tech Registrar's Office. This should be done prior to leaving Oregon Tech and beginning at the other college.

Commencement

Oregon Tech's main graduation ceremony is held in Klamath Falls, Oregon in June each year. We encourage earlier graduates of the academic year (Summer, Fall, and Winter), and the graduating candidates for Spring and Summer to participate. Graduates from all Oregon Tech campuses are also invited to participate. Academic honors are calculated after the June ceremony.

Diplomas

Diplomas are not issued at Commencement, regardless of graduation term. Students officially graduate when grades are finalized and it is verified that all degree requirements have been successfully completed. Please allow 4-6 weeks for the degree to be officially awarded to student records and mailed.

NOTE: Diplomas are held if there is an outstanding balance on student accounts and/or if required loan Exit Interviews have not been completed.

Academic Honors

At each Commencement, Oregon Tech recognizes academically outstanding students who will receive their bachelor's degree with academic honors. This honor is estimated and based on all Oregon Tech courses but may change after final grades are processed. *To be eligible for honors a student must complete a minimum of 75 Oregon Tech GPA hours/credits.*

Academic honors are based on the following criteria:

Cum Laude

Graduation with honors 3.50-3.74 GPA

Magna Cum Laude

Graduation with high honors 3.75-3.89 GPA

Summa Cum Laude

Graduation with highest honors 3.90-4.00 GPA.

NOTE: Students who do not have 75 Oregon Tech credits and who are graduating from a Degree Completion program must complete a minimum of 45 graded Oregon Tech credits to be eligible for honors. For Degree Completion students, who fall into this category, honors are based on all Oregon Tech courses and transfer courses used for the degree.

Honors recognized at the graduation ceremony do not include grades from the term immediately preceding Commencement. After final grades are posted, the honors standing of some students may change. These students will be notified. A student's final honors standing will be posted on the official transcript. Summer graduates will not receive academic honors at the spring commencement.

Only past and spring honors are recognized at commencement, with an announcement and with honor cords. Summer graduates will have honors listed on their diploma and official transcripts upon completion.

Academic Term Honors

President's List (Applicable to full-time undergraduate students only)

Each term, students with a GPA of 3.70 or better are included on the President's List.

Dean's List (Applicable to full-time undergraduate students only)

Each term, students with a GPA of 3.30-3.69 are included on the Dean's List.

Honors

Special Recognition

Each spring a number of Oregon Tech graduates will be selected for membership in national honor societies. Honor society members can be identified by a distinctive honor cord worn over the shoulder at Commencement.

Alpha Chi, which selects members from baccalaureate programs, identifies its honor society graduates with a white cord. Tau Alpha Pi, which selects members from the sophomore, junior and senior classes of engineering-technology majors, identifies its graduates with a crimson cord. Lambda Phi Eta selects from juniors and seniors in Communication Studies. Members are identified by a gold cord. Lambda Nu selects from juniors and seniors in Medical Imaging. Members are identified by a cord that is green, gold and maroon. Sigma Theta Tau, who wear gold and maroon cords, includes Nursing students in the top third of the class.

Baccalaureate General Education Requirements

General Education Requirements

Oregon Tech's General Education requirements provide breadth and depth to the Oregon Tech educational experience. The requirements are designed to help students widen perspectives, explore relationships between subjects and develop critical and analytical thinking skills in areas integrated with a student's major. General education provides the core of an undergraduate university education. These courses help students make progress toward becoming educated persons and provide a foundation for lifelong learning.

Through general education at Oregon Tech, students study broad topics, principles, theories and disciplines. The courses are organized within the curriculum in such a manner that students will acquire knowledge, abilities and appreciation as integrated elements of the educational experience. In addition, general education courses teach students to communicate clearly, think critically and globally, define and solve problems within and across disciplines, calculate logically and apply scientific reasoning. No matter what their major, students will benefit from studying areas of knowledge that help them become competent, well-rounded professionals as well as well-educated human beings and citizens.

All students must complete the university general education requirements as listed in the curriculum map for the major and in this catalog. If a student holds a baccalaureate degree or higher from a recognized, accredited institution, as determined by Oregon Tech, the Oregon Tech general education requirements for the Oregon Tech baccalaureate may be substituted subject to departmental accreditation requirements.

General education credits at Oregon Tech total 55 credits and include 18 credits of Communication, 9 credits of Humanities, 12 credits of Social Science and 16 credits of Science/Math with a least 4 credits of college-level math where intermediate algebra is a prerequisite.

Technology

Specific requirements for demonstrating computer proficiency may be established by the academic department.

Transfer students entering Oregon Tech who have earned either an Associate of Arts Oregon Transfer degree (AAOT) or an Associate of Science in Business degree (ASOTB) from an Oregon community college will be considered as having met Oregon Tech's lower division general education requirements. Please see the Oregon Tech website for updated list of courses granted.

** Developmental courses, including MATH 100 and WRI 115, cannot be used for graduation.*

Baccalaureate General Education Requirements

Communication

18 credits:

- COM 111Z - Public Speaking
- WRI 121Z - Composition I
- WRI 122Z - Composition II OR WRI 227Z - Technical Writing
- Plus 6 credits from the following list:
 - COM 205 - Intercultural Comm
 - COM 218Z - Interpersonal Communication
 - COM 320 - Advanced Intercultural Comm
 - COM 347 - Negotiation & Conflict Resol'n

- COM 401 - Civil Engineering Project I
- SPE 314 - Argumentation
- SPE 321 - Small Group/Team Comm
- WRI 123 - Research Writing
- WRI 214 - Business Correspondence
- WRI 227Z - Technical Writing
- WRI 327 - Advanced Tech Writing
- WRI 328 - Style
- WRI 345 - Science Writing
- WRI 350 - Documentation Develop
- WRI 410 - Proposal & Grant Writing

Baccalaureate General Education Requirements

Humanities

9 credits selected by student or specified by a major department from the following:

- ART - Art
- HUM - Humanities
- LIT (ENG) - Literature
- MUS - Music
- PHIL - Philosophy
- Languages (second year)

Other transfer courses, defined as "humanities" by the Registrar's Office, may be used in this category. No more than three credits of activity or performance-based courses may be used in this category.

Baccalaureate General Education Requirements

Social Science

12 credits selected by student or specified by major department from the following:

- ANTH - Anthropology
- ECO - Economics
- GEOG - Geography
- HIST - History
- PSCI - Political Science
- PSY - Psychology
- SOC - Sociology

Other transfer courses, defined as "social science" by the Registrar's Office, may be used in this category.

* ANTH 101 may not be used to satisfy both Social Science and Science credits

* GEOG 105 may not be used to satisfy Social Science credits

Baccalaureate General Education Requirements

Science/Mathematics

One, four credit college-level mathematics course for which at least intermediate algebra is the course prerequisite.

Plus 12 credits selected by student or specified by major department from:

- biological sciences (BIO, CHE, ENV 111)
- mathematics (MATH)
- statistics (STAT 243Z)
- physical sciences (PHY)
- physical geography (GEOG 105) or geology (GEOL)
- physical anthropology (ANTH 101)

Other transfer courses, defined as "Science/Mathematics" by the Registrar's Office, may be used in this category. At least four credits must be completed from a laboratory-based science course in BIO, CHE, GEOG, GEOL or PHY.

Baccalaureate General Education Requirements

Baccalaureate Upper-Division Requirement

Baccalaureate students must complete a minimum of 60 credits of upper-division work before a degree will be awarded. Upper-division work is defined as 300- and 400-level classes at a bachelor's-degree-granting institution.

Bachelor of Science Degree

The Bachelor of Science degree requires the student to opt between completion of 36 credits in mathematics and science or 45 credits in mathematics, science and social science. Students placed at a higher beginning level of mathematics than is published in the curriculum of their major may choose to substitute those mathematics credits surpassed by their accelerated level of placement with electives from any department to attain the required number of general education credits required by the university for graduation.

Intercultural Studies

Students are encouraged to select at least one class from the following lists of intercultural courses. These courses also satisfy general education requirements:

- Humanities:
 - HUM 147 - West Cult in the Classical Age
 - HUM 148 - West Cult in the Medieval Age
 - HUM 149 - West Cult in the Modern Age
- Social Science:
 - ANTH 103 - Intro to Cultural Anthropology
 - GEOG 106 - Cultural Geography I
 - GEOG 107 - Cultural Geography II
 - GEOG 108 - Cultural Geography III
 - HIST 392 - Modern Asia
- Communication
 - COM 205 - Intercultural Communication

Graduate Studies

Admissions and Academic Policies

Graduate degree programs at Oregon Institute of Technology provide students with opportunities for advanced study in various disciplines. Graduates will develop the competence required for leadership roles in professional fields. Graduate education at Oregon Tech maintains an applied focus. Our mission is to integrate theory and practice.

Admission

The Office of Admissions, in conjunction with the appropriate academic department, maintains all pertinent information regarding the admission of graduate students.

Admission Requirements

To be considered for admission to a graduate program, an applicant must have a baccalaureate degree from a regionally accredited college or university, as well as a scholastic record that evidences the ability to perform satisfactory graduate work. Specifically, a student shall:

- have completed a four-year college course of study and hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association
- be in good academic standing at the last college or university attended
- have attained a grade point average of at least 3.0 on a 4.0 scale for the last 90 term (60 semester) units attempted
- have attained a grade point average of at least 3.0 on a 4.0 scale for the last 45 term hours in the major
- satisfactorily meet the professional, personal, scholastic, and other standards for graduate study
- pass qualifying examinations required by specific programs

Unusual circumstances may warrant exceptions to these criteria.

Level of Course Work

All course work applied toward the master's degree must be earned in courses designed for graduate students; these courses are generally numbered 500 and above. Oregon Tech undergraduate seniors may enroll in 500 level graduate courses for graduate credit with the approval of the student's undergraduate advisor and the department chair. Nine credits are applicable to a graduate degree. Undergraduate seniors may enroll in graduate-level courses for undergraduate credit subject to each department's policy. Oregon Tech offers some courses which are dual

listed at the 400- and 500-level. The 400-level courses apply only to an undergraduate degree, while 500-level courses apply only to a graduate degree. Students enrolled in a dual-listed 500-level course will be required to complete additional work for graduate credit. Students may audit graduate courses subject to the policy described in the General Catalog. Audited courses cannot be used to meet degree requirements.

Application as a Degree-Seeking U.S. Resident Student

Degree-seeking students must submit the following items to the Office of Admissions before the deadlines specified in the Application Deadlines section:

- an official admissions application, along with a \$50 non-refundable application fee. The application fee is waived for applicants who are currently attending Oregon Tech or who graduated from Oregon Tech within the previous two years
- official transcripts from each post-secondary educational institution attended

Individual programs may have additional requirements. Applicants must submit all required items before admission to the graduate program will be considered. Submitting the items, however, does not ensure admission. Applicants will receive official notification of admission after a review of the application by the Office of Admissions and the graduate program department.

Application as an International Degree-Seeking Graduate Student

Oregon Tech must assess the academic preparation of international students. For this purpose, international students, including those who hold U.S. visas as student exchange visitors or other non-immigrant classifications, should apply early. Official transcripts must be on file at least eight weeks before registration for the first term and, if not written in English, must be accompanied by a certified English translation.

All international applicants from countries in which English is not the native language must take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System exam (IELTS). A minimum score of 520 paper based TOEFL, 68 internet-based TOEFL or 6 IELTS is required for consideration. This requirement may be waived for some students whose primary language is English. Since the results of this test constitute part of the material reviewed for admission to graduate studies at Oregon Tech, students should arrange to have their test scores sent directly from the testing agency to the Office of Admissions well before the application deadline.

The following is an application checklist for degree-seeking international students:

1. submit the graduate application for admission with the \$50 (U.S.) application fee
2. submit the international graduate student supplement to the graduate application form (as well as the Statement of Financial Responsibility form), available from the Admissions Office
3. provide evidence of ability to meet educational expenses at Oregon Tech. The Statement of Financial Responsibility form must be completed and submitted with documentation such as official bank statements and tax returns
4. official academic transcripts of all university course work sent to Oregon Tech
5. for university course work done outside the United States, transcripts must be reviewed by an evaluation service. There are several such services that are acceptable. A "course-by-course evaluation" or a "detail report" is necessary
6. proof of proficiency in the English language. Oregon Tech requires that international graduate students submit official test scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System exam (IELTS). A minimum score of 520 paper-based TOEFL, 68 Internet-based TOEFL, or 6 IELTS is required for consideration. This requirement may be waived for some students whose primary language is English
7. students currently in the United States should submit a photocopy of the I-20 form and passport

Individual programs may have additional requirements.

Application Deadlines

Oregon Tech encourages all prospective students to submit graduate application materials six to nine months in advance of the planned enrollment date. This recommendation is especially important for international students in order to allow sufficient time for visa processing. However, applications will be accepted any time before the deadlines listed below. The recommended entrance time is fall term.

- Fall Term: April 1
- Winter Term: July 1
- Spring Term: October 1

Residency Classification

See the residency section of this catalog.

Tuition and Fees

See the tuition and fees section of this catalog.

Graduate Assistantships

Oregon Institute of Technology offers graduate assistantships, awarded on a competitive basis, to qualified graduate students based on department needs. Compensation varies with the type of service, the amount of time required for performing the service, and the academic qualifications and experience of the appointee. An applicant for a graduate assistantship must be admitted to a graduate program. Graduate departments usually award appointments and assistantships by Summer term, effective at the beginning of the next academic year. A graduate assistant application form is available from the appropriate department.

Types of Assistantships

Graduate assistantships (GAs) at Oregon Tech are either research assistantships (RAs) or teaching assistantships (TAs). Research assistantships are awarded by the faculty member administering the research grant and involve providing assistance in fulfilling the goals and objectives of the grant. Depending upon the grant, research assistantships may include additional support for summer term. If you are interested in a research assistantship, contact the faculty members responsible for the grant.

Teaching assistantships are awarded by the department and involve classroom and laboratory instruction. If you are interested in a TA, contact the individual department to determine availability.

Assistantship Offer

Assistantship notices of appointment are awarded on a term-by-term basis and renewal is dependent upon competent performance of assistantship duties, adequate academic progress, departmental needs, and the availability of funds. Assistantships may include a tuition waiver and/or a monthly stipend based upon a percentage of a full-time equivalent (FTE) salary.

Assistantship Course Load

Graduate assistants are expected to maintain full-time enrollment (nine credits). Graduate assistants not enrolled in nine credits of formal courses must supplement the course load with thesis or project credits to maintain full-time enrollment status.

Satisfactory Progress

Graduate assistants must make satisfactory progress toward a graduate degree to retain a graduate assistantship. Satisfactory progress includes:

- maintaining a 3.0 or higher grade point average
- maintaining full-time student enrollment

Failure to maintain satisfactory academic progress will result in loss of an assistantship.

Academic Policies

The Graduate Council determines graduate academic policies at Oregon Tech. Other academic policies and procedures are described and/or defined in the general policies of Oregon Tech.

Student Rights and Responsibilities

Oregon Tech encourages students to perform at a high academic level, and students are responsible for knowing degree requirements and enrolling in courses that will enable them to complete the master's program. Oregon Tech expects students to conduct themselves in a manner compatible with the university's function as an institution of higher learning. Students should acquaint themselves with regulations for the standard of work required to continue in the graduate school. For additional information, students should consult their graduate advisor.

Academic Integrity

Oregon Tech's goal is to foster an atmosphere that produces educated, literate graduates. Academic misconduct, such as cheating and plagiarism, will not be tolerated. Cheating includes, but is not limited to, the following:

- use of any unauthorized assistance in taking quizzes, tests or examinations
- dependence upon the aid of sources specifically prohibited by instructors in writing papers, preparing reports, solving problems or carrying out other assignments
- the acquisition, without permission, of tests or other academic materials belonging to a faculty member of the school

Plagiarism includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without acknowledging the source. Plagiarism occurs when a student either copies the work of another person and attempts to receive credit for that work or acquires and uses prepared material from someone who is selling academic materials. These examples are intended to provide general guidelines and are in no way comprehensive in describing academic dishonesty.

Faculty may assign specific penalties for cases of academic misconduct, including a failing grade for a test or assignment, a reduced grade for a test or assignment, or a failing grade in the course. Responding to academic dishonesty is the responsibility of the course instructor. If a student commits plagiarism or other academic dishonesty during the graduate project, the advisor, in consultation with the dean, determines the appropriate response.

All graduate students should acquaint themselves with the definitions and implications of academic misconduct as explained in Oregon Tech's student conduct code. Repercussions for a student guilty of academic conduct violations range from a warning to expulsion. Students may contest a charge of academic misconduct by following the grievance procedure outlined in the OIT catalog and the student handbook, available on the Oregon Tech Web site.

Student Records

The Registrar's Office maintains a permanent file for each graduate student. Faculty advisors will maintain a file of advising records, grade information and other correspondence pertaining to each graduate student's academic progress. For more information on student records, contact the Registrar's Office.

Enrollment Status

Full and part-time credit loads for graduate students are defined as follows:

- Full-time: 9 or more credits
- 3/4 time: 7 - 8 credits
- Half-time: 5 - 6 credits

Oregon Tech undergraduate seniors may enroll in 500-level graduate courses for graduate credit with the approval of the student's undergraduate advisor and the graduate program director.

Students who are not yet admitted to Oregon Tech may take up to one third of the graduate program credits as a non-admit student and apply them toward the graduate degree upon formal admission to the graduate program.

Oregon Tech offers some courses which are dual-listed at the 400- and 500-level. The 400-level courses apply only to an undergraduate degree, while 500-level courses apply to both undergraduate and graduate degrees. Students enrolled in a dual-listed 500-level course will be required to complete additional work to obtain graduate credit.

Continuous Enrollment for All Graduate Students

All graduate degree-seeking students must be continuously enrolled. Continuous enrollment is defined as completing, with grades assigned, a minimum of 1 hour of graduate credit every quarter.

Academic Prerequisite Deficiencies

Students who have prerequisite deficiencies for graduate studies may be required to take additional course work prior to completing their graduate studies, as determined by the graduate program director. If there are deficiencies, the director will recommend substitute courses, and these are entered on the Graduate Program Form. When students pass these courses with a B or better, they become fully qualified graduate students. Prior to completion of the listed courses, the graduate student is considered "provisionally admitted."

Academic Performance Standards

Students must maintain a cumulative GPA of 3.0 or better in all graduate work specific to the program of study to remain in good academic standing. Grades below C do not meet requirements for a graduate degree.

Graduate students earning a cumulative GPA of less than 3.0 will be placed on probation and, if no improvement is made, will be suspended from the graduate program. Conditions established for probation and suspension are listed below:

Academic Probation: Students having 9 or more attempted credit hours will be placed on academic probation for each term that their cumulative GPA falls below 3.0.

Academic Suspension: A student on probation must maintain a term GPA of 3.0 or higher to avoid academic suspension. A student will be suspended if the student's term GPA falls under 3.0 while on probation. Suspended students lose their institutional financial aid, including graduate research and teaching assistantships. A student may appeal academic suspension by following the process outlined in the Oregon Tech catalog. A successful appeal results in probation status.

Transfer Credits

Students may petition to transfer up to one third of the program graduate term hours earned at other accredited institutions and apply those credits toward an Oregon Tech graduate degree. However, each course must be consistent with the program of study planned by the student and the graduate advisor. Only grades of A and B are acceptable as transfer credit into the graduate program.

Grading Policy

Oregon Tech uses a 4.0 grading scale to evaluate student performance. Upon completion of a course or upon termination of attendance in the course, a student's performance will be graded by the instructor and reported to the Registrar's Office.

Requirements

Graduate degree academic requirements are specified by the program. The student, in conference with the graduate faculty advisor, will prepare a program of study for the graduate degree as a guide for planning an academic schedule.

Application for Graduation

To apply for graduation, the student must submit a petition for graduation to the Registrar's Office two terms in advance of the anticipated final term of work. The petition is a record of the approved program of study. To receive favorable action, candidates must meet the following requirements:

- show that course requirements for the master's degree will be satisfied before or during the final term
- maintain an overall grade point average of at least 3.0
- provide evidence of passing any qualifying or comprehensive examinations, including defense of the master's project or thesis
- obtain approval of both the student's academic advisor and department chair, or by the program director or other faculty member in the event that the student's academic advisor is the department chair

Right of Appeal

Philosophy of Policy Application

The graduate student academic grievance procedure provides a mechanism for exchanging information between student and instructor in cases of grade dispute and a safeguard against unfair grading practices. The intent is to provide an informal forum for discussing and resolving differences of opinion.

Academic Disputes Appealable by Policy

Student claims that final course grade resulted from:

1. unfair or prejudicial treatment by instructor
2. unusual or irregular procedures that impacted an individual student's grade in a disproportionate manner
3. dismissal from a professional program or externship because of failure to meet prerequisite or sequential course requirements

Note: The student should initiate appeals of final grades or professional academic standing within three weeks after distribution of final course grades or dismissal notice. The appropriate academic dean will not consider appeals after that time limit unless the student was incommunicado with the campus or unable to obtain grades after distribution because of academic assignment, or unusual events associated with grading procedure or completion of assignments made it impossible for the student to receive or appeal the grade in a timely manner.

Academic and Related Disputes Not Appealable by Policy

1. Grades assigned to tests, quizzes, homework, papers, projects, or other components of a course
2. Final grades based on failure to meet published (via syllabus) standards for the course that involves no unusual or prejudicial treatment
3. Disciplinary or other student conduct matters not specifically covered above
4. Challenges to the instructor's grading system or components thereof, as long as the system was made available to students at the beginning of the academic term

Procedure

1. Student reads policy to determine if grievance is appealable
2. Student makes appointment to discuss dispute with course instructor. Since reconciliation of the dispute at this level is in the best interests of all parties, instructors and students are urged to engage in an honest and open-minded effort to resolve the problem
3. Failing to resolve the dispute with the instructor, the student makes an appointment with the program director and department chair. The student and the instructor document the dispute in writing and bring this to the meeting. Department chair and program director should confer with instructor before consultation with the student. Department chair decides dispute based on available information.
4. If the student disagrees with the decision, s/he may request an appointment with the appropriate dean. The appropriate dean will not see students unless they have followed the preceding steps. If the course instructor is the department chair, the second level of appeal is the appropriate academic dean. The appropriate dean contacts the department chair and program director, and, when appropriate, the course instructor, to obtain information about the dispute. After consultation with the department and the student, the appropriate academic dean offers the student the choice of a summary decision or the opportunity for a hearing with the Graduate Council.

Summary Decision by Academic Dean

If the appropriate academic dean summarily decides the dispute, the grievance is terminated and the department chair, program director, instructor, and the student are notified in writing. If a grade change results, the Registrar's Office is also notified in writing.

Graduate Council Hearing

If the student elects to have the dispute referred to the Graduate Council,

1. The student must prepare a written request, summarizing the reasons for a hearing and the requested intervention (e.g., change of grade, reinstatement), with supporting documentation attached. The request is presented to the academic dean within three academic days after discussion with the dean.
2. The council schedules a hearing at the earliest time mutually available, normally within five academic days after the academic dean receives the request.
3. The department chair and program director receive a copy of the student request and supporting documentation.
4. The Graduate Council chair convenes the hearing and considers the presentations of student and instructor. Either may call witnesses to offer supporting information. The student has the right to have an advisor or attorney. The advisor may be at the student's side, and the student may consult with the advisor, but the advisor may not address or question the council.
5. The council formulates and sends a recommendation, supported by a rationale, to the academic dean. It may include a majority and minority report, if appropriate.
6. After careful consideration of the council's findings, the academic dean renders a final decision and notifies the council, department chair, program director, instructor and student. If the outcome is a grade change, the academic dean notifies the Registrar's Office.

Time Limits

Graduate students are allowed five years to complete all the requirements for a master's degree. Under extenuating circumstances, students may request an extension. The extension must be approved by the Program Director, the Department Chair, and the Associate Provost.

Campus Locations

Oregon Tech's residential campus is located in **Klamath Falls** in beautiful Southern Oregon, and is nestled on the eastern slope of the Cascade Mountains. Oregon Tech's **Portland-Metro** campus in Wilsonville, located just south of Portland, offers 21 bachelor's and master's degree programs in a state-of-the-art facility designed to provide an industry-focused, urban university experience in the heart of Oregon's "Silicon Forest". Oregon Tech also offers a growing number of **Online** programs for working professionals or returning students who are busy and ready to advance their education as quickly and conveniently as possible. Oregon Tech **Seattle** offers a Bachelor of Science in Manufacturing Engineering Technology, Mechanical Engineering, or Mechanical Engineering Technology and a Master of Science in Manufacturing Engineering Technology to Boeing employees at sites in the Puget Sound area. Oregon Tech also offers a bachelor's program in dental hygiene in **Salem** through a partnership with Chemeketa Community College.

Campus Locations

Klamath Falls

Klamath Falls

Doctorate of Physical Therapy

- Physical Therapy, DPT

Master of Science

- Applied Behavior Analysis
- Biomedical Sciences, MS
- Civil Engineering
- Marriage and Family Therapy
- Natural Resources, MS
- Renewable Energy Engineering

Master of Science/Bachelor of Science

- Electrical Engineering, BS/Renewable Energy Engineering, MS
- Electrical Engineering, BS/MSE
- Renewable Energy Engineering, BS/MS
- Renewable Energy Engineering, BS/MSE

Bachelor of Applied Science

- Technology and Management

Bachelor of Science

- Applied Mathematics
 - Applied Mathematics, option in Computational Mathematics, BS
 - Applied Mathematics, option in Physics, BS
 - Applied Mathematics, option in Statistics, BS
- Applied Psychology
- Biology-Health Sciences
 - Biology-Health Sciences, Biology Research Sciences option, BS
- Business, with options in:
 - Management
 - Marketing
- Civil Engineering
- Communication Studies
- Computer Engineering Technology
- Cybersecurity
- Data Science
- Dental Hygiene
- Diagnostic Medical Sonography
- Echocardiography
- Electrical Engineering, with emphasis in:
 - Electrical Power
 - Microelectronics
 - Renewable Energy
 - Robotics, Autonomous Systems, and Control Engineering
- Embedded Systems Engineering Technology
- Environmental Sciences
 - Environmental Sciences, option in Environmental Chemistry, BS
 - Environmental Sciences, option in Environmental Business and Economics, BS
 - Environmental Sciences, option in Environmental Policy and Governance, BS
 - Environmental Sciences, option in Recreation and Science, BS
 - Environmental Sciences, option in Water and Wetland Resources, BS
 - Environmental Sciences, option in Wildlife, Fisheries, and Natural Resources, BS
- Geomatics, with options in:
 - Geographic Information Systems
 - Surveying
- Health Care Management, with options in:
 - Administration
 - Clinical
- Health Informatics
- Information Technology
- Manufacturing Engineering Technology
- Mechanical Engineering
- Mechanical Engineering Technology
- Nuclear Medicine and Molecular Imaging Technology
- Nursing (through OHSU School of Nursing)
- Operations Management
- Population Health Management
- Professional Writing
- Radiologic Science
- Renewable Energy Engineering
- Respiratory Care
- Software Engineering Technology
- Vascular Technology

Minors

- Arts, Literature, and Philosophy (ALPs)
- Applied Mathematics
- Applied Physics

- Applied Statistics
- Biology
- Business
- Chemistry
- Coaching
- Geographic Information Systems
- Health Informatics
- Human Interaction
- Information Technology
- Innovation & Entrepreneurship
- International Business
- Medical Sociology
- Professional Writing and Technical Communication
- Psychology
- Surveying
- Sustainability

Specializations

- Entrepreneur/Small Business
- Management
- Marketing

Certificates

- Applied Behavior Analysis (Graduate)
- Ethics, Certificate
- Dispute Resolution
- Integrated Behavioral Healthcare & Medical Family Therapy, Graduate Certificate
- Magnetic Resonance Imaging (MRI)
- Picture Archiving and Communication Systems (PACS)
- Power Systems Engineering, Graduate Certificate
- Systems Engineering, Graduate Certificate

Campus Locations

Portland-Metro

Portland-Metro

Master of Science

- Applied Behavior Analysis
- Engineering - Specialties
 - Electrical Engineering
 - Embedded Engineering
 - Optical Engineering
 - Power Engineering
 - Robotics, Autonomous Systems and Control Engineering
 - Systems Engineering
- Renewable Energy Engineering

Master of Science/Bachelor of Science

- Electrical Engineering, BS/Renewable Energy Engineering, MS
- Renewable Energy Engineering

Bachelor of Applied Science

- Technology and Management

Bachelor of Science

- Business, Management option
- Cybersecurity

- Electrical Engineering, with emphasis in:
 - Electrical Power
 - Microelectronics
 - Optical Engineering
 - Renewable Energy
 - Robotics, Autonomous Systems, and Control Engineering
- Electronics Engineering Technology
- Embedded Systems Engineering Technology
- Emergency Medical Services Management (joint degree with OHSU)
- Health Informatics
- Health Care Management, Administration option
- Information Technology
- Manufacturing Engineering Technology
- Mechanical Engineering
- Mechanical Engineering Technology
- Medical Laboratory Science Department (joint degree with OHSU)
- Operations Management
- Renewable Energy Engineering
- Software Engineering Technology

Associate of Applied Science

- Emergency Medical Technology Paramedic

Minors

- Applied Mathematics
- Business
- Health Informatics
- Information Technology
- Psychology
- Surveying

Certificates

- Applied Behavior Analysis (Graduate)
- Power Systems Engineering, Graduate Certificate
- Systems Engineering, Graduate Certificate

Campus Locations

Online Learning

Online Learning

Master of Science

- Allied Health
- Applied Behavior Analysis
- Engineering - Specialties
 - Electrical Engineering
 - Embedded Engineering
 - Optical Engineering
 - Power Engineering
 - Robotics, Autonomous Systems and Control Engineering
 - Systems Engineering
- Marriage and Family Therapy
- Renewable Energy Engineering

Bachelor of Applied Science

- Technology and Management

Bachelor of Science

- Applied Psychology
- Business , with option in:
 - Management
- Dental Hygiene (degree completion)
- Diagnostic Medical Sonography (degree completion)
- Echocardiography (degree completion)
- Geomatics, with options in:
 - Geographic Information Systems
 - Surveying
- Health Care Management (degree completion), with options in:
 - Administration
 - Clinical
 - Radiologic Science
- Health Informatics
- Information Technology
- Medical Laboratory Science, Degree Completion, BS
- Operations Management
- Radiologic Science (degree completion)
- Respiratory Care (degree completion)
- Vascular Technology (degree completion)

Associate of Applied Science

- Sleep Health, with options in:
 - Clinical Sleep Health
 - Polysomnographic Technology

Minors

- Business
- Health Informatics
- Information Technology
- Psychology

Certificates

- Applied Behavior Analysis, Graduate Certificate
- Business Management Essentials, Certificate
- Business Systems Management, Certificate
- Clinical Sleep Health, Certificate
- Cultural Competency, Certificate
- Dispute Resolution, Certificate
- Ethics, Certificate
- Geographic Information Systems, Certificate
- Health Communication, Certificate
- Magnetic Resonance Imaging (MRI), Certificate
- Management Information Systems, Certificate
- Picture Archiving and Communication Systems (PACS) Certificate
- Polysomnographic Technology Certificate
- Power Systems Engineering, Graduate Certificate
- Proposal & Grant Writing, Certificate
- Social Determinants of Health, Certificate
- Systems Engineering, Graduate Certificate
- Tech-Infused Global Leadership & Management, Certificate
- Technical & Medical Writing, Certificate
- UX Writing, Certificate

Seattle at Boeing

Seattle at Boeing

Master of Science

- Manufacturing Engineering Technology

Bachelor of Science

- Manufacturing Engineering Technology
- Mechanical Engineering
- Mechanical Engineering Technology

Campus Locations

Chemeketa Community College

Chemeketa Community College Partnership

Bachelor of Science

- Dental Hygiene

Applied Computing & Geomatics Department

Gary Lomprey, *Interim Department Chair*

Professor: S. Lee

Degree Offered

- Bachelor of Science in Geomatics with options in:
 - Surveying
 - Geographic Information Systems

The department is now offering both of these degrees fully online; some courses may need to be transferred depending on current course availability. As the land surveying option prepares students to pass the Fundamentals of Surveying (FS) examination and pursue licensure as a registered Professional Land Surveyor (PLS), applicants to the online Surveying option must be a surveyor actively working in the field under the supervision of a licensed surveyor. In addition, the department chair and faculty advisor may consider an exception to the employment requirement.

Minors Offered

- Geographic Information Systems
- Surveying

Geomatics is the modern profession encompassing the disciplines of surveying, mapping, engineering, and geoscience. Geomatics employs an integrated approach to the measurement, analysis, presentation, and management of geospatial data. Geospatial data is obtained from a variety of sources including ground-based instruments, mobile mapping technologies, drones, hydrographic, and earth-orbiting satellite systems. Geospatial data is used to create a detailed but understandable picture of the Earth's physical features. This data enables the design and development of land administration systems for sustainable planning and management of the built environment. Geospatial data is a critical component of addressing climate change.

Geomatics provides the opportunity to work primarily outdoors, exclusively in an office, or in some combination of the two. Geomatics attracts individuals who enjoy mathematics, history, making maps, using advanced software and high-tech instruments. Career employment is available in rural and urban areas throughout the nation.

The United Nations has adopted its first resolution, *A Global Geodetic Reference Frame for Sustainable Development*, recognizing the importance of a globally coordinated approach to geodesy – the geomatics discipline focused on accurately measuring the shape, rotation, and gravitational field of the earth.

Students within the Geomatics Program must choose between either an option in Surveying or Geographic Information Systems (GIS). Students may, with consent of their advisor, complete both options.

Program Learning Outcomes

1. an ability to identify, formulate, and solve broadly-defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to the discipline;

2. an ability to formulate or design a system, process, procedure or program to meet desired needs;
3. an ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgement to draw conclusions;
4. an ability to communicate effectively with a range of audiences;
5. an ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts;
6. an ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Student Preparation

It is recommended that students prepare for entrance into the program by emphasizing mathematics and science in high school. Two years of algebra and one year each of geometry, trigonometry and physics are desirable prerequisites.

Bachelor of Science in Geomatics, Surveying Option

The department offers a nationally-recognized professional degree program that prepares students for employment within the geomatics profession and licensure as a Professional Land Surveyor (PLS). Students enjoy small classes taught by licensed professionals that emphasize fundamental theory and problem solving in a computer-intensive curriculum. Field laboratory experiences integrated throughout the curriculum provide practical skills, and offer extensive opportunities to prepare students to work in teams using state-of-the art technology. Upon completing the freshman year, students often have enough experience to obtain summer employment as a survey crew member.

Completion of the program qualifies graduates to take the Fundamentals of Surveying (FS) exam during the spring term of the senior year. The broad-based nature of the curriculum ensures that graduates will be prepared to fulfill both the traditional and contemporary roles of the profession.

Cooperative Education

Geomatics students may, upon completion of the freshman year, apply for student career experience programs (Pathways) with the U.S. Bureau of Land Management, Bonneville Power Administration, U.S. Forest Service, or other appropriate federal employers. Work experiences are paid and may be for three or six month periods. Students may earn two or four credits for work experience periods. A maximum of four credits may be applied toward the bachelor's degree.

Geomatics students are also eligible for the Civil Engineering Cooperative Program (CECOP), offering high-quality, paid industrial experience and related academic activities while students pursue their degree. The Oregon State Board of Examiners for Engineering and Land Surveying (OSBEELS) counts this internship time toward PLS licensure requirements.

Scholarships

Approximately 40 scholarships are available to geomatics students each year through an endowed Geomatics Department Scholarship, CLSA, PLSO, LSAW, WESTFED, NSPS, and other organizations.

Career Opportunities

The employment forecast for graduates in this field is exceptional. As an increasing number of licensed surveyors across the nation retire, a personnel shortage has been created within the geomatics profession. Graduates are prepared for a wide variety of career opportunities in the fields of surveying, engineering, construction, remote sensing, GIS, and land information management.

Accreditation

The Geomatics Program (surveying option) is accredited by the Applied and Natural Science Accreditation Commission (ANSAC) of ABET, Inc., <http://www.abet.org>. ABET is a specialized accrediting board recognized by the Council for Higher Education and/or the Secretary of the U.S. Department of Education.

Bachelor of Science in Geomatics, Geographic Information Systems (GIS) Option

Geographic Information Systems (GIS) is a systematic approach to the management, analysis, and display of geospatial information. Management of such information requires application of advanced database skills, the ability to see a project through to completion, and fundamental project management skills. The analysis of geodata sets is predicated on a firm understanding of geospatial reference/coordinate systems, topological relationships, and statistical methods. Techniques for displaying geospatial information take various forms such as maps, geographic data sets, and data models. Students graduating from this course of study will understand how to manipulate geospatial data to solve political, economic, engineering, and ecological problems and how to use and create online resources to effectively communicate their results.

Students learn in a project-based environment to manage the flow of data through the project in terms of data acquisition, processing, analysis, and presentation. Within the GIS option, students may select individual areas of focus based on independent study and/or online courses.

Career Opportunities

The list of opportunities for students in the field of GIS is continuing to show substantial growth. As our society becomes more data centered, the importance of understanding the spatial location of this data and its geospatial relationship to other data is becoming increasingly apparent. Understanding such geospatial relationships is fundamental to areas such as health care, land records management, transportation modeling, environmental engineering/science, and urban planning, to name only a few. Local, state, and federal agencies are embracing GIS more each year as these agencies realize that GIS is the appropriate tool to solve long-standing geospatial problems. Private industry is also embracing GIS since it can be used to streamline delivery and/or response routes. Both private and public entities have also realized that GIS provides an excellent decision support framework structure.

Programs

Geomatics, Geographic Information Systems (GIS) Option, BS

Overview

Program Long Title
Geomatics-option in GIS

Program Title
Geomatics-option in GIS

Department(s)
Applied Computing & Geomatics

Degree Designation
BS

Program Level
UG

CIP Code
151102

Degree Maps

Degree Map Name
Advising Guide Geomatics GIS option

Total Degree Map Credits
174 - 182

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative

Degree Requirements

A minimum of 180 term hours must be completed for the GIS option, of which 80 term hours must be in the GIS and geomatics area. A minimum of 180 term hours must be completed for the GIS option.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0
Requirement Select • ACAD110 - ETM Freshman Seminar			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 1 Progress Credits - Contact Hours 1 Clinical - Criticality No			

Requirement Select

- GIS103 - The Digital Earth

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 0 - 5

Clinical -

Criticality No

Requirement Select

- GME161 - Plane Surveying I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 4

Progress Credits -

Contact Hours 0 - 6

Clinical -

Criticality No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 4

Progress Credits -

Contact Hours 4

Clinical -

Criticality No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- CE203 - Engineering Graphics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- GME175 - Computations and Platting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- GIS205 - Mobile and Web GIS

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- GME162 - Plane Surveying II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14	0

Requirement Select

- GIS306 - Geospatial Raster Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME241 - Legal Aspects of Land Surv I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS169Z - Data Analysis Using Microsoft

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	14	0

Requirement Select

- GIS316 - Geospatial Vector Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME242 - Land Descrip & Cadastre

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select	
• BUS226Z - Introduction to Business Law	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MATH361 - Statistical Methods I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MGT345 - Engineering Economy	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• COM111Z - Public Speaking	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select	
• GIS332 - Python for Geospatial Analysis	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS145 - Intro to PC Hardware/Software

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- GIS435 - Remote Sensing II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS341 - Relational Database Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

• MATH341 - Linear Algebra I

OR

• MATH362 - Statistical Methods II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	10 - 14	0

Requirement Select

• GIS426 - Geospatial Vector Analysis II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• GIS351 - GIS for Natural Resources

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

0 - 4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

• BUS304 - Engineering Management

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- GIS446 - GIS Database Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- GME425 - Remote Sensing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME451 - Geodesy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- GME452 - Map Projections

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- GME454 - GNSS Surveying

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Lab Science General Education

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	11 - 15	0

Requirement Select

• GME468 - Geomatics Practicum

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

• GIS445 - Spatial Data Acquisition: UAVS

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

0 - 4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• WRI327 - Advanced Tech Writing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• General Business Elective

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Geomatics, Surveying Option, BS

Overview

Program Long Title

Geomatics-option in Surveying

Program Title

Geomatics-option in Surveying

Department(s)

Applied Computing & Geomatics

Degree Designation

BS

Program Level

UG

CIP Code

151102

Degree Maps

Degree Map Name

Advising Guide - Geomatics-option in Surveying

Total Degree Map Credits

181

Degree Map Effective Catalog Year

2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

1

Progress Credits

-

Contact Hours

1

Clinical

-

Criticality

No

Requirement Select

- GIS103 - The Digital Earth

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- GME161 - Plane Surveying I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- CE203 - Engineering Graphics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- GME175 - Computations and Platting

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- GME264 - Digital Design for Surveying

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- GIS205 - Mobile and Web GIS

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- GME162 - Plane Surveying II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 8

Clinical

-

Criticality

No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	15	0

Requirement Select

- GME163 - Route Surveying

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- GME241 - Legal Aspects of Land Surv I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- GME242 - Land Descrip & Cadastre

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select	
• PHY222 - General Physics w/Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• WRI227Z - Technical Writing	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	13	0

Requirement Select	
• GME372 - Subdiv'n Planning and Platting	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• MATH361 - Statistical Methods I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• BUS169Z - Data Analysis Using Microsoft	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- GIS306 - Geospatial Raster Analysis

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME343 - Boundary Surveys

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	18	0

Requirement Select

- GIS316 - Geospatial Vector Analysis

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME466 - Legal Aspects of Land Surv II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- GIS435 - Remote Sensing II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MATH341 - Linear Algebra I
- OR**
- MATH362 - Statistical Methods II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	18	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- GME351 - Constr/Engr Surveying

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• GME444 - Adjustment by Least Squares	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• GIS351 - GIS for Natural Resources	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• MGT345 - Engineering Economy	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Senior	Fall	16	Credits
			0

Requirement Select	
• GIS332 - Python for Geospatial Analysis	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• GME425 - Remote Sensing	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• GME451 - Geodesy	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	13	0

Requirement Select

- GME452 - Map Projections

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- GME454 - GNSS Surveying

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12	0

Requirement Select

- GME468 - Geomatics Practicum

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- GIS426 - Geospatial Vector Analysis II

OR

- GIS445 - Spatial Data Acquisition: UAVS

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Geographic Information Systems, Certificate

Overview

Program Long Title

Geomatics Info Systems Cert

Program Title

Geomatics Info Systems Cert

Department(s)

Applied Computing & Geomatics

Degree Designation

CERT

Program Level

UG

CIP Code

151102

Geographic Information Systems, Minor

Overview

Program Long Title

Geographic Information Systems

Program Title

Geographic Information Systems

Department(s)

Applied Computing & Geomatics

Degree Designation

MINOR

Program Level

UG

CIP Code

450799

Surveying, Minor

Overview

Program Long Title

Geomatics

Program Title

Surveying

Department(s)

Applied Computing & Geomatics

Degree Designation

MINOR

Program Level

UG

CIP Code

450799 - Geographic Information Science

Courses

COMP290 - Applied AI Fundamentals

Overview

Course Subject Code	Course Number
COMP	290

Department
Applied Computing & Geomatics

Course Description
This course provides an introduction to Artificial Intelligence (AI) with a focus on how to effectively use AI tools and techniques. Students will explore key AI concepts, including machine learning, natural language processing, and ethical considerations, while gaining hands-on experience with AI applications. The course emphasizes practical use cases, responsible AI usage, and strategies for leveraging AI in various domains.

Academic Level (Course Level)
Undergraduate

CYB107 - Seminar

Overview

Course Subject Code	Course Number
CYB	107

Department
Applied Computing & Geomatics

Academic Level (Course Level)
Undergraduate

CYB201 - Cybersecurity Fundamentals

Overview

Course Subject Code	Course Number
CYB	201

Department
Applied Computing & Geomatics

Course Description
Introduces fundamental concepts used in Cybersecurity. Topics covered include: threats, attacks, and vulnerabilities; confidentiality, integrity, and availability; common cybersecurity technologies and tools; security architecture and design principles; identity and access management; risk management; and cryptography.

Academic Level (Course Level)
Undergraduate

CYB207 - Seminar

Overview

Course Subject Code	Course Number
CYB	207

Department
Applied Computing & Geomatics

Academic Level (Course Level)
Undergraduate

CYB301 - Hacker Tools and Techniques

Overview

Course Subject Code	Course Number
CYB	301

Department
Applied Computing & Geomatics

Course Description
Introduces how “hackers” operate and the techniques, tools and processes they use to gain unauthorized access to systems, and how to best protect and defend systems from these same types of attack. Students will learn how to conduct basic security testing or “ethical hacking” to identify potential weaknesses in an organization’s network and computer systems. Students will also learn how to prepare a formal written report of their findings for management.

Academic Level (Course Level)
Undergraduate

CYB302 - Sys. Defenses & Incident Rpt.

Overview

Course Subject Code	Course Number
CYB	302

Department
Applied Computing & Geomatics

Course Description
Introduces the CIS 20 Critical Controls and the fundamental concepts of operating system hardening and other defensive strategies to secure networks and information systems. Students will also learn how to investigate suspicious activity on computer systems to determine if it has been compromised, and how to respond to security incidents and data breaches.

Academic Level (Course Level)
Undergraduate

CYB303 - Security Operations & Analysis

Overview

Course Subject Code	Course Number
CYB	303

Department

Applied Computing & Geomatics

Course Description

Introduces the concept of a Security Operations Center (SOC) and the role of a Security Analyst. Students will learn about Security Information and Event Management (SIEM) systems, Intrusion Detection Systems (IDS), log management and analysis, packet capture analysis, vulnerability analysis and patch management. Students will complete a team project during the course where they must monitor and defend systems as a group.

Academic Level (Course Level)

Undergraduate

CYB307 - Seminar

Overview

Course Subject Code	Course Number
CYB	307

Department

Applied Computing & Geomatics

Academic Level (Course Level)

Undergraduate

CYB351 - Network Security

Overview

Course Subject Code	Course Number
CYB	351

Department

Applied Computing & Geomatics

Course Description

Examines tools and techniques used for securing IP based networks, with a specific focus on Firewalls and VPNs. Topics include stateful inspection firewall basics, explicit proxy, deep-packet inspection, intrusion detection and prevention systems, network based anti-virus, email filtering, data loss prevention, application control, traffic shaping, packet capture and analysis, and SSL and IPSec VPNs.

Academic Level (Course Level)

Undergraduate

CYB407 - Seminar

Overview

Course Subject Code	Course Number
CYB	407

Department

Applied Computing & Geomatics

Academic Level (Course Level)

Undergraduate

CYB411 - Managing Risk in Info Systems

Overview

Course Subject Code	Course Number
CYB	411

Department

Applied Computing & Geomatics

Course Description

Focuses on risk assessment and risk management processes as applied to information systems and organizational computing environments. Students evaluate how confidentiality, integrity, and availability are protected within complex systems and conduct structured qualitative and quantitative risk assessments. Topics include risk identification and analysis, risk treatment strategies (mitigation, transfer, acceptance, and avoidance), disaster recovery and business continuity planning, security program governance, and security awareness. The course emphasizes the development of formal risk assessment documentation and risk management plans aligned with industry standards and professional practice.

Academic Level (Course Level)

Undergraduate

CYB412 - Security and Privacy Laws, E&C

Overview

Course Subject Code	Course Number
CYB	412

Department

Applied Computing & Geomatics

Course Description

Explores the legal and regulatory landscape as applied to information security and privacy. National and international privacy and data protection laws are examined along with industry based security and privacy standards. Ethical standards for information management and security are also discussed in depth. Basic legal topics such as jurisdiction, civil and criminal codes, and contracts are also covered.

Academic Level (Course Level)

Undergraduate

CYB413 - Cybersecurity Mgmt & Ldshp

Overview

Course Subject Code	Course Number
CYB	413

Department

Applied Computing & Geomatics

Course Description

Focus on the management aspects of Cybersecurity. Students will learn about the various roles and responsibilities in a security organization, and how security is integral to both the strategic and tactical management of an organization. Students will examine common administrative controls in detail, and learn to develop effective security policies and strategies necessary for a successful security program.

Academic Level (Course Level)

Undergraduate

CYB441 - Managing Risk in Info Systems

Overview

Course Subject Code	Course Number
CYB	441

Department

Applied Computing & Geomatics

Course Description

Focus on the risk assessment and analysis processes as they are applied to information systems .. Details of how confidentiality, integrity and availability are maintained in an organization's complex information systems are explored. Topics covered include quantitative and qualitative risk analysis, risk mitigation/ transference/ acceptance, disaster recovery and business continuity planning, security program management, and security awareness training.

Academic Level (Course Level)

Undergraduate

GIS103 - The Digital Earth

Overview

Course Subject Code	Course Number
GIS	103

Department

Applied Computing & Geomatics

Course Description

Introduction to the digital representation of the features and attributes of our natural world. Concepts, vocabulary, and use of GIS and GPS, and how these systems help solve geospatial problems. Integration of GPS data into GIS. Acquisition of GIS data via "smart phones".

Academic Level (Course Level)

Undergraduate

GIS107 - Seminar

Overview

Course Subject Code	Course Number
GIS	107

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GIS134 - Geographic Info Systems

Overview

Course Subject Code	Course Number
GIS	134

Department

Applied Computing & Geomatics

Course Description

Coordinate systems. Creating, editing, and querying feature and attribute data. Symbolizing, classifying, and labeling features. Tabular relationships. Introduction to elements of map design, Shapefile-KML and CAD-GIS data conversion. Use of raster data, analyzing raster surfaces. Use of UAS (drone) data. Use of web-based GIS applications and services. Extensive use of ArcGIS™ software. Examples from a variety of disciplines.

Academic Level (Course Level)

Undergraduate

GIS205 - Mobile and Web GIS

Overview

Course Subject Code	Course Number
GIS	205

Department

Applied Computing & Geomatics

Course Description

Theory and operation of GPS. Use of GPS and smart phones for field data collection. Creation and use of apps for data collection via smart phones. Web mapping. Real-time GIS. Creation of 3D scenes. Extensive use and creation of web-based GIS applications and services.

Academic Level (Course Level)

Undergraduate

GIS207 - Seminar

Overview

Course Subject Code	Course Number
GIS	207

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GIS306 - Geospatial Raster Analysis

Overview

Course Subject Code	Course Number
GIS	306

Department

Applied Computing & Geomatics

Course Description

Manipulation and storage of raster data. Measurement scales. Map algebra. Georeferencing raster datasets. Least-cost path and corridor modeling techniques. Distance, surface and density mapping techniques. Viewshed and hydrologic analyses. Processing of UAS (drone) data. Prerequisite: GIS 134

Academic Level (Course Level)

Undergraduate

GIS307 - Seminar

Overview

Course Subject Code	Course Number
GIS	307

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GIS316 - Geospatial Vector Analysis

Overview

Course Subject Code	Course Number
GIS	316

Department

Applied Computing & Geomatics

Course Description

This course provides the knowledge and skills to investigate the spatial patterns resulting from social and physical processes on the Earth. Essential theoretical concepts of quantitative geography are examined, including mapping the most and least, mapping density, finding what's inside, finding what's nearby, mapping change, understanding data distribution, and measuring geographic distribution.

Academic Level (Course Level)

Undergraduate

GIS332 - Python for Geospatial Analysis

Overview

Course Subject Code	Course Number
GIS	332

Department

Applied Computing & Geomatics

Course Description

Customizing geoprocessing workflows with Python. Working with lists, and dictionaries. String manipulation. Branching. Error handling. Working with geometries. Use of cursors to access and manipulate spatial and non-spatial data. Tool creation.

Academic Level (Course Level)

Undergraduate

GIS351 - GIS for Natural Resources

Overview

Course Subject Code	Course Number
GIS	351

Department

Applied Computing & Geomatics

Course Description

This course explores GIS applications in natural resource management, focusing on spatial analysis for conservation, land use, and wildfire risk. Students will collect field data using GIS applications, perform spatial modeling, and develop GIS products for environmental assessment and land management decisions.

Academic Level (Course Level)

Undergraduate

GIS407 - Seminar

Overview

Course Subject Code	Course Number
GIS	407

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GIS426 - Geospatial Vector Analysis II

Overview

Course Subject Code	Course Number
GIS	426

Department

Applied Computing & Geomatics

Course Description

Advanced geospatial analysis. Spatial adjustment techniques. Extensive use of subtypes, domains, validation rules, and cardinalities. Use and creation of directed and undirected networks for geospatial analysis. Routing. Conflation. Quantitative assessment of geographic patterns and distributions. Geostatistics.

Academic Level (Course Level)

Undergraduate

GIS432 - Customizing the GIS Environ II

Overview

Course Subject Code	Course Number
GIS	432

Department

Applied Computing & Geomatics

Course Description

Creation and management of Add-Ins. Hosting feature and geoprocessing services. Introduction to the server environment and Portal for ArcGIS. Developing mobile GIS applications.

Academic Level (Course Level)

Undergraduate

GIS435 - Remote Sensing II

Overview

Course Subject Code	Course Number
GIS	435

Department

Applied Computing & Geomatics

Course Description

This course explores how remote sensing systems provide and analyze geospatial information. Recent developments in Earth observation, such as imaging radar, LiDAR, and hyperspectral sensors, are increasing the wealth of information generated from remotely sensed data sources.

Academic Level (Course Level)

Undergraduate

GIS445 - Spatial Data Acquisition: UAVS

Overview

Course Subject Code	Course Number
GIS	445

Department

Applied Computing & Geomatics

Course Description

This course covers UAV-based geospatial data acquisition, including flight planning, data collection, and processing using Pix4D, QGroundControl, Drone2Map, and ArcGIS Pro. Students gain hands-on experience with UAV photogrammetry and LIDAR, culminating in a project applying UAV data to real-world geospatial challenges.

Academic Level (Course Level)

Undergraduate

GIS446 - GIS Database Development

Overview

Course Subject Code	Course Number
GIS	446

Department

Applied Computing & Geomatics

Course Description

Advanced geodatabase design. Import and export of XML. Extensive use and creation of relationship classes. Study, use, design, and creation of data models. Design and creation of user interfaces of data entry. This course is a Capstone experience for the GIS option.

Academic Level (Course Level)

Undergraduate

GIS456 - GIS Web Services & Management

Overview

Course Subject Code	Course Number
GIS	456

Department

Applied Computing & Geomatics

Course Description

Implementation of a GIS. Definition of information products. Discussion of the server-client relationship. Server site configuration and administration. Sharing GIS content on the web. Building web applications and services.

Academic Level (Course Level)

Undergraduate

GIS526 - Geospatial Vector Analysis II

Overview

Course Subject Code	Course Number
GIS	526

Department

Applied Computing & Geomatics

Course Description

This course aims to provide students with the essential skills and knowledge to find suitable locations, rate suitable locations, model paths, model flow, model interaction, and build networks.

Academic Level (Course Level)

Graduate

GIS535 - Remote Sensing II

Overview

Course Subject Code	Course Number
GIS	535

Department

Applied Computing & Geomatics

Course Description

This course explores how remote sensing systems provide geospatial information that is relevant, accurate, timely, accessible, available in an appropriate format, and cost-effective. Recent developments in Earth observation, such as imaging radar, LiDAR, and hyperspectral sensors, are increasing the wealth of information that can be generated from remotely sensed data sources. Consequently, numerous new GIS applications that rely on advanced remotely sensed data sources have emerged at local, regional and global scales.

Academic Level (Course Level)

Graduate

GME107 - Seminar

Overview

Course Subject Code	Course Number
GME	107

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GME134 - Geographic Info Systems

Overview

Course Subject Code	Course Number
GME	134

Department

Applied Computing & Geomatics

Academic Level (Course Level)

Undergraduate

GME161 - Plane Surveying I

Overview

Course Subject Code	Course Number
GME	161

Department

Applied Computing & Geomatics

Course Description

Fundamental concepts of plane surveying including theory of measurements, systematic and random errors. Distance and angle measurement using total stations and differential leveling. Calculation of bearings, azimuths, coordinates, area and traverse adjustments. Introduction to horizontal and vertical curve computations.

Academic Level (Course Level)

Undergraduate

GME162 - Plane Surveying II

Overview

Course Subject Code	Course Number
GME	162

Department

Applied Computing & Geomatics

Course Description

Digital theodolites and data collectors, instrument testing and observational error analysis. Theory of leveling. Solar observation and computation. E.D.M. use and calibration. Field labs including solar observations, traversing, leveling and horizontal curve layout. Introduction to COGO software.

Academic Level (Course Level)

Undergraduate

GME163 - Route Surveying

Overview

Course Subject Code	Course Number
GME	163

Department

Applied Computing & Geomatics

Course Description

Laboratory intensive project overview including horizontal and vertical control for preliminary location and construction surveys for a secondary road. Instruction in basic elements of horizontal and vertical route alignment and layout. Determination of earthwork quantities. CAD drafting of plan, profile and cross-sections.

Academic Level (Course Level)

Undergraduate

GME175 - Computations and Platting

Overview

Course Subject Code	Course Number
GME	175

Department

Applied Computing & Geomatics

Course Description

Coordinate geometry concepts with emphasis on solutions to standard surveying computations. Introduction to calculator and Excel spreadsheet computations. Introduction to map composition and platting using industry standard software.

Academic Level (Course Level)

Undergraduate

GME207 - Seminar

Overview

Course Subject Code	Course Number
GME	207

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GME241 - Legal Aspects of Land Surv I

Overview

Course Subject Code	Course Number
GME	241

Department

Applied Computing & Geomatics

Course Description

Statute law, common law, and legal principles relating to land boundaries. Each student will be required to use the county law library to research assigned cases.

Academic Level (Course Level)

Undergraduate

GME242 - Land Descrip & Cadastre

Overview

Course Subject Code	Course Number
GME	242

Department

Applied Computing & Geomatics

Course Description

Real property descriptions and land record systems. Emphasis on interpreting and writing land descriptions, and introduction to researching records in various Land Information Systems.

Academic Level (Course Level)

Undergraduate

GME264 - Digital Design for Surveying

Overview

Course Subject Code	Course Number
GME	264

Department

Applied Computing & Geomatics

Course Description

Use of Carlson software to solve and plot assignments covering traverse calculations, horizontal and vertical curve alignments, profiles and earthwork volumes. Hand calculations will be made to supplement the computer solutions.

Academic Level (Course Level)

Undergraduate

GME307 - Seminar

Overview

Course Subject Code	Course Number
GME	307

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GME343 - Boundary Surveys

Overview

Course Subject Code	Course Number
GME	343

Department

Applied Computing & Geomatics

Course Description

Planning, organizing, calculating and applying field procedures for boundary and cadastral surveys. Writing deed descriptions; researching public record systems relative to property boundaries.

Academic Level (Course Level)

Undergraduate

GME351 - Constr/Engr Surveying

Overview

Course Subject Code	Course Number
GME	351

Department

Applied Computing & Geomatics

Course Description

Organizing, planning and estimating costs for construction and engineering surveying projects. Field projects related to construction, layout of engineering works and site mapping.

Academic Level (Course Level)

Undergraduate

GME372 - Subdiv'n Planning and Platting**Overview**

Course Subject Code	Course Number
GME	372

Department

Applied Computing & Geomatics

Course Description

Land use planning; governmental regulations as applied to subdivisions; subdivision planning, computations and preparation of subdivision plots.

Academic Level (Course Level)

Undergraduate

GME395 - Cooperative Field Experience**Overview**

Course Subject Code	Course Number
GME	395

Department

Applied Computing & Geomatics

Course Description

An approved work program related to geomatics practice involving full-time meaningful activity. The employer, type of work and level of difficulty must be approved by the Geomatics Co-op Coordinator prior to the work period. Progress reports are prepared by the student during the work period and submitted for review. A comprehensive written report is required at the end of each co-op period. A co-op period may be three months for 2 credits or six months for 4 credits. A tuition fee is required for credits earned by co-op work experience. Prerequisites: Completed freshman year and two terms residence

Academic Level (Course Level)

Undergraduate

GME396 - Cooperative Field Practice**Overview**

Course Subject Code	Course Number
GME	396

Department

Applied Computing & Geomatics

Course Description

Three month, two credit hour version of GME 395 and GME 495.

Academic Level (Course Level)

Undergraduate

GME407 - Seminar**Overview**

Course Subject Code	Course Number
GME	407

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GME425 - Remote Sensing**Overview**

Course Subject Code	Course Number
GME	425

Department

Applied Computing & Geomatics

Course Description

Photogrammetry and remote sensing preparation for FS exam. UAS (drone) technology overview. UAS flights to obtain imagery and process using Pix4d software to create DSMs, orthomosaics, and other products. Overview of high-resolution satellite imagery applications and commercial aerial mapping imagery.

Academic Level (Course Level)

Undergraduate

GME444 - Adjustment by Least Squares**Overview**

Course Subject Code	Course Number
GME	444

Department

Applied Computing & Geomatics

Course Description

Theory of the least squares method and error propagation; variances and co-variances of observed, derived and adjusted quantities. Modeling of geomatics problems using different techniques of least squares. Linearization and iteration of nonlinear equations. Adjustment validation using hypothesis testing.

Academic Level (Course Level)

Undergraduate

GME451 - Geodesy

Overview

Course Subject Code	Course Number
GME	451

Department

Applied Computing & Geomatics

Course Description

Size and shape of the earth. Geometry of the reference ellipsoid. Spherical, ellipsoidal and local coordinate systems. Coordinate transformations in 2-D and 3-D. Datums and datum conversion. Reduction of field observations to the ellipsoid. The geoid, orthometric heights, and leveling.

Academic Level (Course Level)

Undergraduate

GME452 - Map Projections

Overview

Course Subject Code	Course Number
GME	452

Department

Applied Computing & Geomatics

Course Description

Overview of map projections used in cartography, and conformal map projections used in the geomatics profession. Emphasis on state plane coordinate systems and local map projections. Extensive use of Excel for analysis and computations.

Academic Level (Course Level)

Undergraduate

GME454 - GNSS Surveying

Overview

Course Subject Code	Course Number
GME	454

Department

Applied Computing & Geomatics

Course Description

Study of the theory and operation of the Global Positioning System and other Global Navigation Satellite Systems. Design of GPS networks in accordance with current standards and specifications. Laboratory exercises introduce the student to a variety of GNSS applications.

Academic Level (Course Level)

Undergraduate

GME466 - Legal Aspects of Land Surv II

Overview

Course Subject Code	Course Number
GME	466

Department

Applied Computing & Geomatics

Course Description

Evidence, professional liability, written and unwritten transfers of land ownership and title interests. A term paper is required of each student.

Academic Level (Course Level)

Undergraduate

GME468 - Geomatics Practicum

Overview

Course Subject Code	Course Number
GME	468

Department

Applied Computing & Geomatics

Course Description

Students design and complete a Geomatics project. Students demonstrate ability to work independently. Projects are under supervision of faculty members and comply with any related state statutes and local ordinances. Surveying option students are required to have registered for, or take, the NCEES FS examination to receive a passing course grade.

Academic Level (Course Level)

Undergraduate

GME495 - Cooperative Field Experience

Overview

Course Subject Code	Course Number
GME	495

Department

Applied Computing & Geomatics

Course Description

An approved work program related to the geomatics practice involving full-time meaningful activity. The employer, type of work and level of difficulty must be approved by the Geomatics Co-Op Coordinator prior to the work period and submitted for review. A comprehensive written report is required at the end of each co-op period. A co-op period may be three months for 2 credits or six months for 4 credits. A tuition fee is required for credits earned by co-op work experience. Prerequisites: Completed freshman year and two terms residence

Academic Level (Course Level)

Undergraduate

GME496 - Cooperative Field Practice

Overview

Course Subject Code	Course Number
GME	496

Department

Applied Computing & Geomatics

Course Description

Three month, two credit hour version of GME 395 and GME 495.

Academic Level (Course Level)

Undergraduate

GME497 - CFedS

Overview

Course Subject Code	Course Number
GME	497

Department

Applied Computing & Geomatics

Course Description

Provides academic credit for licensed professional land surveyors who successfully completed the rigorous BLM Certified Federal Surveyor (CFedS) examination. Prerequisite: Successful completion of the CFedS examination

Academic Level (Course Level)

Undergraduate

MIS107 - Seminar

Overview

Course Subject Code	Course Number
MIS	107

Department

Applied Computing & Geomatics

Academic Level (Course Level)

Undergraduate

MIS118 - Intro to Programming in C#

Overview

Course Subject Code	Course Number
MIS	118

Department

Applied Computing & Geomatics

Course Description

An introduction to basic computer programming concepts in the C# programming language. Topics include algorithms, simple data types, conditional and iterative structures, functions and procedures, and code documentation.

Academic Level (Course Level)

Undergraduate

MIS145 - Intro to PC Hardware/Software

Overview

Course Subject Code	Course Number
MIS	145

Department

Applied Computing & Geomatics

Course Description

An introduction to PC hardware and software that prepares students as an entry-level PC technician. The course covers topics including: PC system components, peripheral devices, data storage, networking, printing, mobile devices, operating system installation and management, file management, basic data security, and troubleshooting process.

Academic Level (Course Level)

Undergraduate

MIS207 - Seminar

Overview

Course Subject Code	Course Number
MIS	207

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MIS218 - Intermediate Programming in C#

Overview

Course Subject Code	Course Number
MIS	218

Department

Applied Computing & Geomatics

Course Description

Intermediate level object-oriented programming in the C# language with an emphasis on structured design, user interface design and error processing. Introduction to advanced language elements and program structures to integrate data stored in database systems into simple business applications.

Academic Level (Course Level)

Undergraduate

MIS225 - Digital Marketing

Overview

Course Subject Code	Course Number
MIS	225

Department

Applied Computing & Geomatics

Course Description

The role of the Internet and related technologies in modern business and e-commerce. Hands on course for creating dynamic web pages using cloud-based development platforms. Emphasizes both paid and owned digital marketing, search engine optimization, website analytics, and design principles to create effective marketing strategies.

Academic Level (Course Level)

Undergraduate

MIS240 - Linux Fundamentals

Overview

Course Subject Code	Course Number
MIS	240

Department

Applied Computing & Geomatics

Course Description

Introduces the fundamental concepts of Linux operating systems. Topics include components and functions of an operating system, installing and configuring Linux operating systems, file systems, permissions, process and thread management, commands, utilities, text editing, shell programming and text processing utilities.

Academic Level (Course Level)

Undergraduate

MIS251 - Networking Fundamentals

Overview

Course Subject Code	Course Number
MIS	251

Department

Applied Computing & Geomatics

Course Description

Introduction to voice and data networking concepts and technologies, including network types, common network standards, network interface cards, wired and wireless network components, IP addressing and subnetting, network protocols, basic network security, and troubleshooting basic network issues.

Academic Level (Course Level)

Undergraduate

MIS255 - Health Informatics Cpts & Pret

Overview

Course Subject Code	Course Number
MIS	255

Department

Applied Computing & Geomatics

Course Description

The discipline of health informatics is introduced, including history, knowledge of health informatics, data management, vocabularies, standards and tools as applied in the support of health care delivery. The course provides foundation knowledge and understanding of the impact of information technology in the health care industry and vice versa. Particular attention is paid to the design, usage and acceptance of information technology applications. This course introduces students to the concepts and practices of health informatics.

Academic Level (Course Level)

Undergraduate

MIS273 - Systems Administration I

Overview

Course Subject Code	Course Number
MIS	273

Department

Applied Computing & Geomatics

Course Description

Introduces the fundamental skills required to install and manage a Windows Server. Topics covered include installing and configuring Active Directory, domain controllers, DNS, users and group definition, print queues, network roles and services and application servers.

Academic Level (Course Level)

Undergraduate

MIS285 - Python Programming

Overview

Course Subject Code	Course Number
MIS	285

Department

Applied Computing & Geomatics

Course Description

Introduction to the fundamentals of programming with the Python programming language. Topics covered include basic data types, control structures, regular expressions, input/output, and textual analysis. Focus on creating simple programs and scripts.

Academic Level (Course Level)

Undergraduate

MIS307 - Seminar

Overview

Course Subject Code	Course Number
MIS	307

Department

Applied Computing & Geomatics

Academic Level (Course Level)

Undergraduate

MIS311 - Intro to Systems Analysis

Overview

Course Subject Code	Course Number
MIS	311

Department

Applied Computing & Geomatics

Course Description

Introduction to state-of-the-art business information systems. Acquiring, processing and distributing information in a technological environment. The MIS organization, its place in business, key trends and implications. Introduction to computer hardware. Introduction to System Development Life Cycle.

Academic Level (Course Level)

Undergraduate

MIS312 - Systems Analysis I

Overview

Course Subject Code	Course Number
MIS	312

Department

Applied Computing & Geomatics

Course Description

Planning and Analysis phases of Systems Development Life Cycle. Focuses on software development life cycles; entity relationships, data flow diagrams; prototyping and other forms of data or system modeling. Designing, selecting and installing new systems for end users. Includes cost/benefit and value added evaluations.

Academic Level (Course Level)

Undergraduate

MIS334 - Business Analytics

Overview

Course Subject Code	Course Number
MIS	334

Department

Applied Computing & Geomatics

Course Description

Overview of business analytics, the value of data in decision making through analysis. Students will evaluate data quality, cleansing, statistical interpretation and data visualization. Develop measurement tools and metrics to address key business questions and evaluate implementation.

Academic Level (Course Level)

Undergraduate

MIS341 - Relational Database Design I

Overview

Course Subject Code	Course Number
MIS	341

Department

Applied Computing & Geomatics

Course Description

A comprehensive study of SQL and TSQL using the SQL Server relational database management system. Hands-on training will include the use of TSQL, SQL Server Management Studio, database creation, CLR, data queries, view definitions and use operators and functions, triggers, calculations, indexing, cursors and data manipulation.

Academic Level (Course Level)

Undergraduate

MIS344 - Business Intelligence

Overview

Course Subject Code	Course Number
MIS	344

Department

Applied Computing & Geomatics

Course Description

Develop analytic solutions to gain functional understanding of Business Intelligence to solve business problems. Covers the development of Crystal Reports and Dash-boarding tools to develop Reporting and interface solutions for business.

Academic Level (Course Level)

Undergraduate

MIS345 - Health Care Info Systms Mgmt

Overview

Course Subject Code	Course Number
MIS	345

Department

Applied Computing & Geomatics

Course Description

Information Systems within healthcare organizations are examined. Business, clinical, and healthcare delivery processes are identified as they relate to data acquisition and information systems. Key issues confronting design, organization and management of healthcare systems are identified, examined, and solutions are explored and developed.

Academic Level (Course Level)

Undergraduate

MIS351 - Networking II

Overview

Course Subject Code	Course Number
MIS	351

Department

Applied Computing & Geomatics

Course Description

Covers intermediate-level network design and implementation topics utilizing Cisco networking technologies. Students will learn the fundamentals of 1Pv4 and 1Pv6 routing and Ethernet switching. Students will also learn to configure essential network services such as NAT, and DHCP, as well as basic network security services.

Academic Level (Course Level)

Undergraduate

MIS352 - Routing and Switching II

Overview

Course Subject Code	Course Number
MIS	352

Department

Applied Computing & Geomatics

Course Description

Covers intermediate-level network design and implementation topics utilizing Cisco networking technologies. Students will learn about dynamic IPv4 and IPv6 routing protocols, including: OSPF, EIGRP and BGP. More advanced network design topics are also covered including redundancy, scalability, performance and manageability.

Academic Level (Course Level)

Undergraduate

MIS357 - Info & Comm Sysys in Hlth Care

Overview

Course Subject Code	Course Number
MIS	357

Department

Applied Computing & Geomatics

Course Description

Addresses the role of computer-based information and communications systems in patient care and health care administration, including hands-on experience with the acquisition, storage and use of information in the electronic medical record systems such as PACS, lab and pharmacy systems and computerized provider order entry (CPOE).

Academic Level (Course Level)

Undergraduate

MIS365 - Cloud Computing

Overview

Course Subject Code	Course Number
MIS	365

Department

Applied Computing & Geomatics

Course Description

Introduces the technologies and services that enable cloud computing, different types of cloud computing services (SaaS, PaaS, DaaS, and IaaS), deployment models (Public, Private, and Hybrid) and the security and legal issues associated with cloud computing.

Academic Level (Course Level)

Undergraduate

MIS390 - Co-op Field Experience

Overview

Course Subject Code	Course Number
MIS	390

Department

Applied Computing & Geomatics

Course Description

An approved work program related to the student's field of specialization for a continuous three-month or six-month period. The employer type, level, and difficulty of the particular job must be approved by the student's advisor prior to the employment period. A written comprehensive report of activities must be submitted during the following term of residence. Prerequisites: All MIS 100 and 200 level courses.

Academic Level (Course Level)

Undergraduate

MIS407 - Seminar

Overview

Course Subject Code	Course Number
MIS	407

Department

Applied Computing & Geomatics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MIS441 - Big Data

Overview

Course Subject Code	Course Number
MIS	441

Department

Applied Computing & Geomatics

Course Description

Advanced application of data best practices. Evaluating the big data ecosystem and when big data systems are best utilized in comparison to relational data models. Develop an understanding of big data concepts, model design and implementation and sustainability through a big data platform. Emphasis will be on utilizing the big data platform to provide information to solve business problems.

Academic Level (Course Level)

Undergraduate

MIS442 - Adv Web App Programming

Overview

Course Subject Code	Course Number
MIS	442

Department

Applied Computing & Geomatics

Course Description

Construct graphical end-user interfaces for scalable, high performance Internet applications. Building, testing, debugging and deploying interactive Internet applications that use an enterprise level Database Management System. Develops experience with the Systems Development Life Cycle (SDLC) for web/database integration for application development. Develop understand and application of Software as a Service (SaaS). For graduate credit, students will participate in a field placement project working with companies such as the BLM to create a working application demonstrating mastery of the subject material.

Academic Level (Course Level)

Undergraduate

MIS446 - Data Mining

Overview

Course Subject Code	Course Number
MIS	446

Department

Applied Computing & Geomatics

Course Description

Defining the project cycle of data mining through data collection, analysis and assessment. Classification, Clustering, Association, Regression, Forecasting, Sequence Analysis and Deviation Analysis are applied to the project life cycle of data mining applications.

Academic Level (Course Level)

Undergraduate

MIS480 - Capstone Experience

Overview

Course Subject Code	Course Number
MIS	480

Department

Applied Computing & Geomatics

Course Description

Synthesize program concepts in applied, research, internship or other project capstone experience. Demonstrate core business concepts, stakeholder collaboration, decision-support tools, research skills, delivering professional written report and presentation. Repeatable but cannot be taken simultaneously. One term only per internship site.

Academic Level (Course Level)

Undergraduate

MIS490 - Co-op Field Experience

Overview

Course Subject Code	Course Number
MIS	490

Department

Applied Computing & Geomatics

Course Description

An approved work program related to the student's field of specialization for a continuous three-month or six-month period. the employer type, level, and difficulty of the particular job must be approved by the student's advisor prior to the employment period. a written comprehensive report of activities must be submitted during the following term of residence.

Academic Level (Course Level)

Undergraduate

MIS495 - Senior Project Selection

Overview

Course Subject Code	Course Number
MIS	495

Department

Applied Computing & Geomatics

Course Description

Selection of the senior project capstone project concept that meets industry demands and stakeholders requirement. Prerequisites: MIS 312 and MGT 335 with a C or better or Instructors Consent.

Academic Level (Course Level)

Undergraduate

MIS496 - Senior Project Management

Overview

Course Subject Code	Course Number
MIS	496

Department

Applied Computing & Geomatics

Course Description

Focuses on project management. Includes best known industry practices, as well as planning, organizing and managing resources to bring about successful completion of specific project goals and objectives. Produces formal proposal for Senior Project.

Academic Level (Course Level)

Undergraduate

MIS497 - Senior Project II

Overview

Course Subject Code	Course Number
MIS	497

Department

Applied Computing & Geomatics

Course Description

Senior project students will plan, develop, and carry through to completion a management information systems project for a client they select. Formal proposal, progress reports and project demonstration/presentation. The instructor serves as the student's consultant.

Academic Level (Course Level)

Undergraduate

MIS498 - Senior Project III

Overview

Course Subject Code	Course Number
MIS	498

Department

Applied Computing & Geomatics

Course Description

Senior project students plan, develop, and complete a project for a client or an independent research project. Periodic progress reports and presentations required. Instructor functions as a consultant. Deliver final project.

Academic Level (Course Level)

Undergraduate

Applied Mathematics Department

Applied Mathematics Department

Kenneth Davis, *Department Chair*

Professors: D. Deb, J. Fischer, T. Fogarty, D. Hammond, C. Negoita, R. Paul, J. Reid, T. Torres

Associate Professors: K. Davis

Assistant Professors: P. Melland, J. Smith, A. Whiteley

General Education

Courses offered by the Department of Applied Mathematics are designed to satisfy the needs of majors and non-majors interested in mathematics primarily as part of a broad technical education. A major emphasis is on development of skills required to solve applied problems.

Success in mathematics requires that entering students begin their study in the course which best matches their ability and background. Accordingly, all entering students must pass a placement examination at the appropriate level before being allowed to register for their initial mathematics course.

Degrees Offered

- Bachelor of Science in Applied Mathematics

- Option in Computational Mathematics
- Option in Statistics
- Option in Physics
 - Bachelor of Science in Data Science

Minors Offered

- Applied Mathematics
- Applied Statistics

Applied Mathematics

The Applied Mathematics program at Oregon Institute of Technology provides a comprehensive and dynamic education, preparing students to apply mathematical principles to solve real-world challenges across various industries. The program offers three specialized tracks to tailor the learning experience to individual interests and career goals:

Computational Mathematics, which focuses on the development and application of algorithms, simulations, and numerical methods to address complex computational problems;

Statistics, which equips students with advanced skills in data analysis, statistical modeling, and predictive analytics; and

Physics, where students explore the intersection of mathematics and physical sciences to model, analyze, and solve problems in fields like mechanics, thermodynamics, and quantum physics.

The program is designed to build a strong foundation in both theory and practical application, providing students with the tools to succeed in a wide range of careers in technology, research, finance, and more. With hands-on learning opportunities and strong industry connections, graduates are well-equipped to thrive in a data-driven, problem-solving world.

Program Learning Outcomes

Graduates will be able to:

1. Apply mathematical concepts and principles to perform computations
2. Apply mathematics to solve problems
3. Create, use and analyze graphical representations of mathematical relationships
4. Communicate mathematical knowledge and understanding
5. Apply technology tools to solve problems
6. Perform abstract mathematical reasoning
7. Learn independently

Career Opportunities

Upon completing the requirements for the Applied Mathematics degree students will be prepared for a variety of jobs in industry including numerical modeling, signal processing, data analysis, and many others. The degree also provides students a solid foundation to further their education by entering a Masters or Ph.D. program in Mathematics or Applied Mathematics.

Student Preparation

Students entering the Applied Mathematics Program from high school should have a minimum of two years of algebra, one year of pre-calculus, one year of geometry, and two years of physical science (physics or chemistry preferred). Additional courses in mathematics, science, English and computer programming will be very helpful. Students entering the Applied Mathematics Program by transfer are requested to contact the Mathematics Department concerning transfer of technical course work.

Data Science

Data scientists use computation and applied mathematics to extract insights from data. In addition to technical duties, they work as part of a team, must communicate effectively, and account for ethical and context-specific considerations. The B.S. in Data Science degree at Oregon Tech prepares students for these roles by combining coursework from five departments: Applied Mathematics (the program host), Computer Systems Engineering Technology, Communication, Management and Geomatics.

A key element of the program is extensive hands-on experience. In their junior year, students work in small teams to design or implement applications of material from previous classes. In their senior year, each student completes a capstone project to develop a data driven solution for an outside group, such as a local business or national organization.

The mathematical and programming skills gained in the program enable students to go beyond off-the-shelf solutions for machine learning and data processing. Students are introduced to advanced methods for large and/or complex data, such as time-series, geospatial or text. A special emphasis is placed on using transparent statistical methods, in which assumptions for mathematical models can be clearly communicated to and understood by a non-technical audience who are then better equipped to rate the value of conclusions draw from such models.

After graduation, students are ready for immediate employment as data scientists or for advanced coursework.

Program Learning Outcomes

Graduates will have the technical skills necessary to gain actionable insights from data, the ability to effectively communicate these insights as a member of an interdisciplinary team, and the necessary foundation in ethics, mathematics, and computer science to thrive in the evolving field of data science.

Graduates will:

- 1. Be prepared for the professional practice of data science or acceptance into a graduate program,
- 2. Have an appropriate foundation in mathematics, statistics, and computer science in order to thrive in an evolving field,
- 3. Be able to identify and incorporate ethical considerations in their work,
- 4. Be able to identify, collect and analyze the data necessary for actionable insights, and
- 5. Be able to effectively communicate findings.

Career Opportunities

Data scientists work in a wide variety of contexts. For example, a data scientist might help design a survey to inform the marketing strategy for a new product, analyze data from electronic health records or gather large amounts of data from websites or government databases.

Graduates may obtain employment under a variety of job titles, which may include data scientist, data analyst, business intelligence analyst, research analyst, and statistician.

Many people currently working as data scientists hold advanced degrees but this trend may change as undergraduate programs begin to produce graduates with appropriate skill sets.

Student Preparation and Admissions

Students must meet the standard Oregon Tech admissions requirements. Transfer students must arrange for official transcripts from each college and university attended to be sent to Oregon Tech and are requested to contact the Applied Mathematics Department concerning transfer of technical course work.

Program Curriculum

Students looking to work within a specific context or apply for a specific graduate program should work closely with their advisor to choose a relevant application for their senior year project and to pursue an appropriate minor or other additional coursework.

Programs

Applied Mathematics, BS

Overview

Program Long Title

Applied Mathematics

Program Title

Applied Mathematics

Department(s)

Applied Mathematics

Degree Designation

BS

Program Level

UG

CIP Code

270304

Applied Mathematics, Minor

Overview

Program Long Title

Applied Mathematics

Program Title

Applied Mathematics

Department(s)

Applied Mathematics

Degree Designation

MINOR

Program Level

UG

CIP Code

270304

Applied Statistics, Minor

Overview

Program Long Title

Applied Statistics

Program Title

Applied Statistics

Department(s)

Applied Mathematics

Degree Designation

MINOR

Program Level

UG

CIP Code

270304

Courses

DSAI201 - Intro to Data Science

Overview

Course Subject Code

DSAI

Course Number

201

Department

Applied Mathematics

Course Description

A general overview of the field of data science. An introduction to data storage, data types, descriptive statistics, and visualization. Basic relational database structure and data retrieval. Report generation. An introduction to programming logic for data scientists.

Academic Level (Course Level)

Undergraduate

DSAI211 - Data Science Methods

Overview

Course Subject Code

DSAI

Course Number

211

Department

Applied Mathematics

Course Description

Retrieval, cleaning, transformation, and preparation of data for analysis. An introduction to Bayesian statistics and maximum likelihood estimation with an emphasis on computational efficiency for big datasets. Ethics.

Academic Level (Course Level)

Undergraduate

DSAI405 - Modern Methods in Data Science

Overview

Course Subject Code

DSAI

Course Number

405

Department

Applied Mathematics

Course Description

A selection of topics from modern data science techniques with a focus on relevant applied problems.

Academic Level (Course Level)

Undergraduate

DSAI441 - Supervised Machine Learning

Overview

Course Subject Code

DSAI

Course Number

441

Department

Applied Mathematics

Course Description

An introduction to machine learning with an emphasis on statistical theory and application. Supervised models for categorical and numerical outcomes will be introduced. Model selection, feature selection, assessment, and validation methods will be emphasized throughout the course.

Academic Level (Course Level)

Undergraduate

DSAI442 - Unsupervised Learning

Overview

Course Subject Code	Course Number
DSAI	442

Department

Applied Mathematics

Course Description

An introduction to unsupervised learning methods with a focus on application. Models for clustering, dimensionality reduction, anomaly detection, and association rule learning. Statistical and deep learning models will be explored.

Academic Level (Course Level)

Undergraduate

DSAI443 - Deep Learning

Overview

Course Subject Code	Course Number
DSAI	443

Department

Applied Mathematics

Course Description

This course studies deep learning, including designing and training neural networks for independent, sequential, text, and image data. Perceptron and feed-forward convolutional, recursive, and transformer networks will be introduced and applied to a variety of tasks.

Academic Level (Course Level)

Undergraduate

DSAI444 - Reinforcement Learning

Overview

Course Subject Code	Course Number
DSAI	444

Department

Applied Mathematics

Course Description

Mathematical and computational theory and methods of reinforcement learning. Model free, model based, and deep methods will be explored and applied.

Academic Level (Course Level)

Undergraduate

MATH070 - Elementary Algebra

Overview

Course Subject Code	Course Number
MATH	070

Department

Applied Mathematics

Course Description

For students whose preparation contains no algebra background or whose placement examination scores do not qualify for entry into Intermediate Algebra. The topics covered stress the fundamental properties of algebra, solving equations, and manipulating algebraic fractions. Credits earned apply for enrollment (eligibility) but do not apply toward a degree. An additional fee is required above regular tuition. Prerequisite: MATH 20 with grade "C" or better or equivalent.

Academic Level (Course Level)

Undergraduate

MATH097 - Algebra Review

Overview

Course Subject Code	Course Number
MATH	097

Department

Applied Mathematics

Course Description

Structured review for students whose Math Placement score may not reflect an accurate evaluation or students who want a refresher but who do not require a math placement. The course has individualized directed study using a comprehensive programmed instructional technology. Course is graded P/NP.

Academic Level (Course Level)

Undergraduate

MATH100 - Intermediate Algebra**Overview**

Course Subject Code	Course Number
MATH	100

Department

Applied Mathematics

Course Description

Fundamentals of algebra, linear and quadratic equations, systems of equations, inequalities, functions and graphs, radicals and exponents, and stated problems. (May not be used for graduation credit.)

Academic Level (Course Level)

Undergraduate

MATH101 - Accelerated Algebra**Overview**

Course Subject Code	Course Number
MATH	101

Department

Applied Mathematics

Course Description

An accelerated algebra course with topics ranging from Elementary Algebra (MATH 70) to College Algebra (MATH 111). For entering students with good high-school algebra backgrounds. All students will start in Elementary Algebra, and may receive credit for one of MATH 70, MATH 100, or MATH 111, depending on individual level of achievement. An additional self-support course fee is required.

Academic Level (Course Level)

Undergraduate

MATH105Z - Math in Society**Overview**

Course Subject Code	Course Number
MATH	105Z

Department

Applied Mathematics

Course Description

An exploration of present-day applications of mathematics focused on developing numeracy. Major topics include quantitative reasoning and problem-solving strategies, probability and statistics, and financial mathematics; these topics are to be weighted approximately equally. This course emphasizes mathematical literacy and communication, relevant everyday applications, and the appropriate use of current technology.

Academic Level (Course Level)

Undergraduate

MATH107 - Seminar**Overview**

Course Subject Code	Course Number
MATH	107

Department

Applied Mathematics

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MATH110 - Applied Math: Natural Sciences**Overview**

Course Subject Code	Course Number
MATH	110

Department

Applied Mathematics

Course Description

MATH 110 focuses applications of algebra and trigonometry used in non-calculus introductory chemistry, and physics. These require computational skills including scientific notation, accuracy with units. Polynomials, exponential, logarithmic, trigonometric functions with period, amplitude, phase shifts and wavelength are included.

Academic Level (Course Level)

Undergraduate

MATH111A - College Algebra

Overview

Course Subject Code	Course Number
MATH	111A

Department
Applied Mathematics

Course Description
For students requiring MATH 111 but desiring to learn the material at a slower pace. MATH 111 content covered upon completion of MATH 111A and MATH 111B.

Academic Level (Course Level)
Undergraduate

MATH111Z - Precalculus I: Functions

Overview

Course Subject Code	Course Number
MATH	111Z

Department
Applied Mathematics

Course Description
A course primarily designed for students preparing for trigonometry or calculus. This course focuses on functions and their properties, including polynomial, rational, exponential, logarithmic, piecewise-defined, and inverse functions. These topics will be explored symbolically, numerically, and graphically in real-life applications and interpreted in context. This course emphasizes skill building, problem solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of present-day technology.

Academic Level (Course Level)
Undergraduate

MATH112Z - Precalculus II: Trigonometry

Overview

Course Subject Code	Course Number
MATH	112Z

Department
Applied Mathematics

Course Description
A course primarily designed for students preparing for calculus and related disciplines. This course explores trigonometric functions and their applications as well as the language and measurement of angles, triangles, circles, and vectors. These topics will be explored symbolically, numerically, and graphically in real-life applications and interpreted in context. This course emphasizes skill building, problem solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of present-day technology.

Academic Level (Course Level)
Undergraduate

MATH207 - Seminar

Overview

Course Subject Code	Course Number
MATH	207

Department
Applied Mathematics

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MATH251 - Differential Calculus

Overview

Course Subject Code	Course Number
MATH	251

Department
Applied Mathematics

Course Description
Theory, computational techniques and applications of the derivative.

Academic Level (Course Level)
Undergraduate

MATH251Z - Differential Calculus

Overview

Course Subject Code	Course Number
MATH	251Z

Department
Applied Mathematics

Course Description
This course explores limits, continuity, derivatives, and their applications for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology.

Academic Level (Course Level)
Undergraduate

MATH252 - Integral Calculus

Overview

Course Subject Code	Course Number
MATH	252

Department
Applied Mathematics

Course Description
Computational techniques for and applications of the definite and indefinite integrals.

Academic Level (Course Level)
Undergraduate

MATH252Z - Integral Calculus

Overview

Course Subject Code	Course Number
MATH	252Z

Department
Applied Mathematics

Course Description
This course explores Riemann sums, definite integrals, and indefinite integrals for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology.

Academic Level (Course Level)
Undergraduate

MATH253 - Sequences and Series

Overview

Course Subject Code	Course Number
MATH	253

Department
Applied Mathematics

Course Description
Indeterminate forms and improper integrals. Infinite sequences and series, convergence, power series. Taylor series and applications. This course replaces MATH 254.

Academic Level (Course Level)
Undergraduate

MATH253P - Multi/Vector Calc

Overview

Course Subject Code	Course Number
MATH	253P

Department
Applied Mathematics

Academic Level (Course Level)
Undergraduate

MATH253Z - Calculus: Sequences and Series

Overview

Course Subject Code	Course Number
MATH	253Z

Department
Applied Mathematics

Course Description
This course explores real-valued sequences and series, including power and Taylor series. Topics include convergence and divergence tests and applications. These topics will be explored graphically, numerically, and symbolically. This course emphasizes abstraction, problem-solving, reasoning, communication, connections with other disciplines, and the appropriate use of technology.

Academic Level (Course Level)
Undergraduate

MATH254 - Vector Calculus I

Overview

Course Subject Code	Course Number
MATH	254

Department
Applied Mathematics

Course Description
Vectors, vector functions, and curves in two and three dimensions. Surfaces, partial derivatives, gradients, and directional derivatives. Multiple integrals using rectangular and other coordinate systems. Physical and geometric applications.

Academic Level (Course Level)
Undergraduate

MATH307 - Seminar

Overview

Course Subject Code	Course Number
MATH	307

Department
Applied Mathematics

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MATH310 - Mathematical Structures

Overview

Course Subject Code	Course Number
MATH	310

Department
Applied Mathematics

Course Description
Introduction to proof and mathematical abstraction. Topics include logical statements, sets, set operations, functions, and relations.

Academic Level (Course Level)
Undergraduate

MATH311 - Introduction to Real Analysis

Overview

Course Subject Code	Course Number
MATH	311

Department
Applied Mathematics

Course Description
A one quarter stand-alone course on topics in real analysis, covering properties of real numbers, completeness axiom, continuity, convergence of sequences and series of real numbers, convergence of sequences and series of functions. Emphasis will be placed on proofs.

Academic Level (Course Level)
Undergraduate

MATH315 - History of Mathematics

Overview

Course Subject Code	Course Number
MATH	315

Department
Applied Mathematics

Course Description
This course will explore major themes in mathematics and their development throughout history from cultures around the world. The course will address different perspectives on mathematics and how it influenced the growth of the field and the cultures it was developed in.

Academic Level (Course Level)
Undergraduate

MATH321 - Appl Diff Equation I

Overview

Course Subject Code	Course Number
MATH	321

Department
Applied Mathematics

Course Description
The first in a two term sequence on the solutions of ordinary differential equations. Introduction to differential equations, first and second order equations with applications.

Academic Level (Course Level)
Undergraduate

MATH322 - Appl Diff Equation II

Overview

Course Subject Code	Course Number
MATH	322

Department
Applied Mathematics

Course Description
The second in a two quarter sequence on the solutions of ordinary differential equations. Introduction to systems of equations, the Laplace transform and series solutions.

Academic Level (Course Level)
Undergraduate

MATH342 - Linear Algebra II

Overview

Course Subject Code	Course Number
MATH	342

Department
Applied Mathematics

Course Description
A continuation of the topics of MATH 341 to the setting of abstract vector spaces. Includes the study of orthogonality, inner spaces, eigenvalues and eigenvectors, matrix decompositions and a more advanced study of linear transformations.

Academic Level (Course Level)
Undergraduate

MATH327 - Discrete Mathematics

Overview

Course Subject Code	Course Number
MATH	327

Department
Applied Mathematics

Course Description
Introduction to proof and mathematical abstraction. Topics include sets, set operations, functions, relations, sequences, series, recurrence relations, mathematical induction, equivalence relations. Must have passed MATH 252, or be of junior standing and have taken MATH 111, both with a "C" or better.

Academic Level (Course Level)
Undergraduate

MATH346 - Number Theory

Overview

Course Subject Code	Course Number
MATH	346

Department
Applied Mathematics

Course Description
A proof-based course in the theory of integers, including divisibility, primes, Euclid's Algorithm, Euler's Theorem, and an introduction to algebraic structures. The course also includes applications of number theory such as RSA encryption.

Academic Level (Course Level)
Undergraduate

MATH341 - Linear Algebra I

Overview

Course Subject Code	Course Number
MATH	341

Department
Applied Mathematics

Course Description
The study of vectors and matrices in Euclidean space, their geometric interpretations and application to systems of equations. Includes linear independence of vectors, basis and dimension, introduction to linear transformations, eigenvalues and eigenvectors, diagonalization, determinants.

Academic Level (Course Level)
Undergraduate

MATH347 - Fundmtls of Abstract Algebra

Overview

Course Subject Code	Course Number
MATH	347

Department
Applied Mathematics

Course Description
Introduction to group theory and algebraic structures with applications.

Academic Level (Course Level)
Undergraduate

MATH354 - Vector Calculus II

Overview

Course Subject Code	Course Number
MATH	354

Department

Applied Mathematics

Course Description

Review of vector functions, space curves, gradients, and directional derivatives. Introduction to vector analysis: vector fields, divergence, curl, line integrals, surface integrals, conservation fields, and the theorems of Gauss, Green and Stokes with application to force, work, mass and charge.

Academic Level (Course Level)

Undergraduate

MATH361 - Statistical Methods I

Overview

Course Subject Code	Course Number
MATH	361

Department

Applied Mathematics

Course Description

Descriptive statistics, experimental design, introduction to probability, common probability distributions, random variables, sampling distributions, hypothesis testing and confidence intervals for means using one or two samples, simple linear regression.

Academic Level (Course Level)

Undergraduate

MATH362 - Statistical Methods II

Overview

Course Subject Code	Course Number
MATH	362

Department

Applied Mathematics

Course Description

Review of inferential statistics, analysis of variance one factor and two factor, simple and multiple regression, analysis of categorical data using tests and confidence intervals for proportions and chi-square tests, correlation, goodness of fit, non-parametric tests. Data sets used will come from various fields including: business, psychology, biology, environmental science, engineering, manufacturing and communication.

Academic Level (Course Level)

Undergraduate

MATH371 - Finite Math/Calc I

Overview

Course Subject Code	Course Number
MATH	371

Department

Applied Mathematics

Course Description

Linear functions, matrices, linear programming, mathematics of finance, derivatives and their applications. The integral and its applications, and calculus of several variables. (MATH 371 cannot be used for graduation credit by students who have taken MATH 251).

Academic Level (Course Level)

Undergraduate

MATH372 - Finite Math/Calc II

Overview

Course Subject Code	Course Number
MATH	372

Department
Applied Mathematics

Course Description
Linear functions, matrices, linear programming, mathematics of finance, derivatives and their applications. The integral and its applications and calculus of several variables. (MATH 372 cannot be used for graduation credit by students who have taken MATH 251).

Academic Level (Course Level)
Undergraduate

MATH407 - Seminar

Overview

Course Subject Code	Course Number
MATH	407

Department
Applied Mathematics

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MATH421 - Applied Partial Diff Equations

Overview

Course Subject Code	Course Number
MATH	421

Department
Applied Mathematics

Course Description
The first course in a three quarter sequence in applied partial differential equations. Modeling physical systems using differential equations, classifying differential equations and introduction to the methods of solving partial differential equations (separation of variables, Fourier series, transform methods).

Academic Level (Course Level)
Undergraduate

MATH422 - Applied Partial Diff Equatns II

Overview

Course Subject Code	Course Number
MATH	422

Department
Applied Mathematics

Course Description
The second course in a three quarter sequence in applied partial differential equations. Introduction to solution techniques using eigenvalues and Eigen functions. Presentation of Eigen functions which form orthogonal bases such as Bessel functions and Legendre polynomials.

Academic Level (Course Level)
Undergraduate

MATH423 - Applied Partial Diff Equ III

Overview

Course Subject Code	Course Number
MATH	423

Department
Applied Mathematics

Course Description
The third course in a three term sequence. Applications of linear and weakly nonlinear partial differential equations. Analytical solution techniques for parabolic, elliptic, and hyperbolic equations. Green's functions, integral methods, shocks, and the method of characteristics.

Academic Level (Course Level)
Undergraduate

MATH451 - Numerical Methods I

Overview

Course Subject Code	Course Number
MATH	451

Department
Applied Mathematics

Course Description
Computer applications of matrix methods, iterative solutions of equations, and systems of equations, polynomial interpolation and curve fitting, numerical differentiation and integration. Prerequisites: Programming language.

Academic Level (Course Level)
Undergraduate

MATH452 - Numerical Methods II

Overview

Course Subject Code	Course Number
MATH	452

Department
Applied Mathematics

Course Description
Numerical solution of ordinary differential equations. Numerical solution of initial-value problems using Runge-Kutta methods and linear multistep methods; introduction to boundary value problems. Analysis of stability, accuracy, and implementation of methods.

Academic Level (Course Level)
Undergraduate

MATH453 - Numerical Methods III

Overview

Course Subject Code	Course Number
MATH	453

Department
Applied Mathematics

Course Description
Numerical solution of partial differential equations. Numerical solution of boundary value problems and initial-boundary value problems using finite difference and finite element methods. Analysis of stability, accuracy, and implementation of methods.

Academic Level (Course Level)
Undergraduate

MATH465 - Mathematical Statistics

Overview

Course Subject Code	Course Number
MATH	465

Department
Applied Mathematics

Course Description
Counting techniques, probability, discrete and continuous random variables and distribution functions, joint probability distributions; expected value, variance and covariance; decision making.

Academic Level (Course Level)
Undergraduate

STAT243Z - Elementary Statistics I

Overview

Course Subject Code	Course Number
STAT	243Z

Department
Applied Mathematics

Course Description
A first course in statistics focusing on the interpretation and communication of statistical concepts. Introduces exploratory data analysis, descriptive statistics, sampling methods and distributions, point and interval estimates, hypothesis tests for means and proportions, and elements of probability and correlation. Technology will be used when appropriate.

Academic Level (Course Level)
Undergraduate

STAT331 - Data Visualization and Dashboards

Overview

Course Subject Code	Course Number
STAT	331

Department
Applied Mathematics

Course Description
This course explores data visualization methods and best practices, with an emphasis on creating professional graphics and their characteristics. Students will create visualization tools using the R and Python programming languages based on user interface and experience principles.

Academic Level (Course Level)
Undergraduate

STAT332 - Statistical Analysis of Network

Overview

Course Subject Code	Course Number
STAT	332

Department
Applied Mathematics

Course Description
This course focuses on the analysis of network data including social, organizational, and scientific contexts. Topics include statistical measures, visualizations, partitions, and node-level analysis. Network facilitation of communication, coordination, and diffusion will be discussed.

Academic Level (Course Level)
Undergraduate

STAT397 - Junior Project III

Overview

Course Subject Code	Course Number
STAT	397

Department
Applied Mathematics

Course Description
Selection of a senior project that incorporates techniques from computer science, mathematics, statistics, and management. The project may be in one of the following three categories: application to another discipline, algorithmic/computational or theoretical.

Academic Level (Course Level)
Undergraduate

STAT395 - Junior Project I

Overview

Course Subject Code	Course Number
STAT	395

Department
Applied Mathematics

Course Description
Team-based applications of data science with an emphasis on workflow and reproducible results.

Academic Level (Course Level)
Undergraduate

STAT407 - Seminar

Overview

Course Subject Code	Course Number
STAT	407

Department
Applied Mathematics

Academic Level (Course Level)
Undergraduate

STAT412 - Regression & Times Series

Overview

Course Subject Code	Course Number
STAT	412

Department
Applied Mathematics

Course Description
Examines methods of analysis for time series data including visualization, decomposition, modeling, and forecasting methods. Topics include traditional and modern modeling strategies and techniques, hyperparameter tuning, metrics, validation, and applications to other problems applying sequential data and forecasting.

Academic Level (Course Level)
Undergraduate

STAT396 - Junior Project II

Overview

Course Subject Code	Course Number
STAT	396

Department
Applied Mathematics

Course Description
Team-based applications of data science with an emphasis on workflow and reproducible results.

Academic Level (Course Level)
Undergraduate

STAT414 - Stat Methods in Epidemiology

Overview

Course Subject Code	Course Number
STAT	414

Department

Applied Mathematics

Course Description

Examines the methods used in epidemiologic research, including the design of epidemiologic studies and the collecting and analysis of epidemiological data.

Academic Level (Course Level)

Undergraduate

STAT495 - Senior Project I

Overview

Course Subject Code	Course Number
STAT	495

Department

Applied Mathematics

Course Description

Research and write a statistical analysis plan for the senior project. This project incorporates techniques from computer science, mathematics, statistics, and management and may be in one of the following three categories: application to another discipline, algorithmic/computational or theoretical.

Academic Level (Course Level)

Undergraduate

STAT496 - Senior Project II

Overview

Course Subject Code	Course Number
STAT	496

Department

Applied Mathematics

Course Description

Implementation of a statistical analysis plan for the senior project. This project incorporates techniques from computer science, mathematics, statistics, and management and may be in one of the following three categories: application to another discipline, algorithmic/computational or theoretical.

Academic Level (Course Level)

Undergraduate

STAT497 - Senior Project III

Overview

Course Subject Code	Course Number
STAT	497

Department

Applied Mathematics

Course Description

Presentation and results from senior project. This project incorporates techniques from computer science, mathematics, statistics, and management and may be in one of the following three categories: application to another discipline, algorithmic/computational or theoretical.

Academic Level (Course Level)

Undergraduate

STAT505 - Biostatistics I

Overview

Course Subject Code	Course Number
STAT	505

Department

Applied Mathematics

Course Description

This course focuses on the introduction of statistics and application of statistical methods to data most often seen by medical practitioners and researchers. This course provides an introduction to the collection and analysis of public health and health care data. Elements of statistical inference, probability distributions, sampling, confidence intervals, and estimation of means and rates are reviewed with emphasis on application and critical interpretation of the results.

Academic Level (Course Level)

Graduate

STAT515 - Epidemiology I

Overview

Course Subject Code	Course Number
STAT	515

Department

Applied Mathematics

Course Description

This course will serve as an introduction to the basic principles of epidemiology and the measures used in epidemiology, epidemiologic study design and analysis, and other topics that are important to an introductory understanding of epidemiology.

Academic Level (Course Level)

Graduate

Behavioral Sciences Department

Dawn Bailey, *Department Chair*

- Dawn Bailey, *Program Director, MS Applied Behavior Analysis*
- Kevin Garrett, *Program Director & Clinical Director, MS Marriage and Family Therapy*
- Alishia Huntoon, *Program Director, Extern Coordinator, and Curriculum Coordinator, BS Applied Psychology*

Professors: D. Bailey, A. Huntoon, T. Petersen

Associate Professors: K. Garrett

Assistant Professor: A. Chastain, E. Clint, A. Fink-Armold

Degrees Offered

Bachelor of Science:

- Applied Psychology
- Applied Psychology Online

Master of Science:

- Applied Behavior Analysis
- Marriage and Family Therapy

Minors Offered

- Psychology

Graduate Certificates Offered

- Applied Behavior Analysis
- Health Innovation
- Integrated Behavioral Healthcare and Medical Family Therapy

General Education

BSC offers psychology courses that meet the social sciences general education requirements for all students. In addition, these classes meet the lower-division requirements for college transfer students in many pre-professional programs. Our programs work closely with community partners to provide applied learning experiences for our students.

Department Goals and Objectives

1. To provide coursework in the behavioral sciences to prepare students for employment in a rapidly changing global market.
2. To provide course offerings in psychology, that prepares students to enter the workplace or graduate programs successfully.
3. To prepare Applied Behavior Analysis students for certification and licensure and subsequent practice

4. To prepare Applied Behavior Analysis students for certification and licensure and subsequent practice
5. To assist students in developing critical thinking and problem-solving abilities, and to develop scientific knowledge and inquiry skills.
6. To assist students in developing the ethical decision-making skills necessary for helping professionals.
7. To prepare students to be responsible citizens and lifelong learners.

Applied Behavior Analysis

Degree Offered

Master of Science in Applied Behavior Analysis (MS_ABA)

Certificate Offered

Applied Behavior Analysis Graduate Certificate

Master of Science Applied Behavior Analysis

Oregon's first master's degree in applied behavior analysis, the MS-ABA curriculum focuses on providing a rigorous and thorough foundation in the science of behavior analysis. Students will be prepared to apply the principles of behavior analysis with diverse populations and in a wide variety of settings. Oregon Tech's MS-ABA prepares students to meet national certification and Oregon licensure requirements.

Courses are taught on the Klamath Falls and Portland-Metro campuses and are available to students everywhere via Zoom (a synchronous videoconferencing program). The use of Zoom technology provides an alternative to fully online, asynchronous programs for students in all areas of the state who prefer the real-time, face-to-face educational experience.

Applied Behavior Analysis

Applied Behavior Analysis (ABA) is an evidence-based, data-driven, systematic approach to intervention. Practitioners of ABA apply principles of reinforcement and focus on applications that improve the quality of life for individuals. Behavior analysts provide services in a variety of settings including schools, clinics, rehabilitation settings, residential facilities, social service

agencies, mental health facilities, businesses, and client homes. They work with diverse populations including individuals and families affected by autism, developmental and intellectual disabilities, brain injury, mental health, geriatrics, child abuse, and neglect.

Program Mission

The mission of the MS-ABA program is to enable students to become effective and ethical behavior analysts. Students will be prepared to apply principles of behavior analysis to enhance the lives of individuals across a wide variety of settings. The program emphasizes a foundation in theory, concepts, and principles, development of basic behavior analytic skills, and an emphasis on professional and ethical responsibilities.

Program Objectives

1. To produce competent graduates who can work effectively and ethically across settings and with diverse populations
2. To enable students to obtain the knowledge and skills necessary for immediate employment in ABA and/or further graduate study in ABA and related areas
3. To prepare students for national certification and Oregon licensure as behavior analysts

Program Learning Outcomes

1. Students will understand the history and philosophy of behaviorism and basic theoretical approaches to understanding behavior.
2. Students will demonstrate competence in understanding how principles of behavior are discovered and described in the context of basic research.
3. Students will use technical terminology to explain and provide examples of the characteristics, concepts, principles, and processes of behavior analysis.
4. Students will demonstrate an understanding of, and ability to conduct behavioral assessments and functional behavioral analyses (FBA), and identify strengths and limitations of assessments and FBAs.
5. Students will demonstrate competence in the measurement of behavior, data collection, data analysis, and graphic representation.
6. Students will demonstrate competence in single-subject research designs and will identify and describe the advantages, disadvantages, and ethical considerations of research designs.
7. Students will critically evaluate research, analyze, and apply research findings to the practice of applied behavior analysis.
8. Students will explain the fundamental elements of behavioral interventions including behavior change strategies, procedures and systems, including identification of scientific evidence and methods for ensuring effective implementation and maintenance of behavioral programs.
9. Students will demonstrate an understanding of the legal constraints and ethical guidelines as pertinent to behavioral research and practice.

10. Students will demonstrate an understanding of the roles, functions, and responsibilities of professional behavior analysts, including relationships with professional organizations, and maintaining professional credentials.
11. Students will demonstrate the professional skills essential to developing professional and therapeutic relationships, set goals, maintain boundaries, evaluate client outcome, terminate treatment, and collaborate with other professionals.
12. Students will demonstrate competent oral and written communication.

Licensure and Certification

MS-ABA prepares students to meet national certification and Oregon licensure requirements. The program includes the Association of Behavior Analysis-International (ABAI) verified course sequence (VCS) and practicum experience that meets national certification requirements for supervised experience

BCBA course sequence: the Association for Behavior Analysis-International has verified these courses as meeting the coursework requirements for eligibility to take the Board Certified Behavior Analyst® exam. (Applicants will have to meet additional requirements to qualify)

Admissions

In order to ensure that students have the necessary preparation for success in the MS-ABA program, applicants must meet the Oregon Tech requirements for admission as well as the MS-ABA program specific requirements.

Applicants to the MS-ABA program at Oregon Tech shall meet the following requirements:

- Bachelor's Degree: Bachelor's degree from an accredited four-year institution in Psychology or a related field.
- GPA: Overall undergraduate GPA of 3.0 on a 4.0 scale and 3.0 for the last 90 quarter credits (60 semester) credits of coursework.
- Undergraduate Coursework: A grade of B or better in General Psychology, Research Methods, and Statistics.
- Academic Standing: Be in good academic standing at last college or university attended.
- Personal Statement and Resume: Applicants will be required to write a statement that addresses career goals and relevance to the program, evidence of aptitude for graduate work and evidence of potential for success in the field.
- Reference Letters: Applicants to the program will be required to provide three letters of reference (at least one academic and one professional) that address the applicant's preparation, abilities, and character.
- Background Check: Due to the sensitive nature of this program in regard to work with children and/or vulnerable populations, applicants must pass a criminal background check such as that conducted by the Oregon Department of Human Services (DHS).
- The department and university can grant conditional admission to candidates not meeting all of the minimum requirements.

Applied Behavior Analysis Graduate Certificate

Program Learning Outcomes

Upon completion of the Certificate in Applied Behavior Analysis, students will be able to:

1. Explain and provide examples of basic characteristics, principles, processes, and concepts of Applied Behavior Analysis
2. Select, design, and use appropriate methods to measure behavior
3. Display and interpret behavioral data in various formats
4. Evaluate behavioral interventions using appropriate experimental designs
5. Identify and describe the advantages, disadvantages, and ethical considerations of behavior analytic experimental designs
6. Read and interpret behavior analytic literature
7. Describe the major methods for conducting behavioral assessments and functional analyses, including strengths and limitations
8. Explain the fundamental elements of behavioral interventions including behavior change strategies, procedures and systems, including identification of scientific evidence
9. Describe methods for ensuring effective implementation and management of behavioral programs
10. Describe and provide examples of the ethical and professional responsibilities of behavior analysts and apply the BACB® Ethics Code for Behavior Analysts

Marriage and Family Therapy

Degree Offered

- Master of Science in Marriage and Family Therapy (MS MFT)

Certificate Offered

- Graduate Certificate in Integrated Behavioral Healthcare and Medical Family Therapy

Program Overview

The MFT Program at Oregon Tech is a full-time mental health graduate program with specialized training in systems, families, and relationships. A part-time option is also available. Students are admitted to the program to begin coursework each fall. The MFT Program takes 2.75 years to successfully complete; part-time opportunities are available upon request. A year-long practicum experience begins in June and is completed during the past four terms of the program. Courses are offered nights, weekends, and days in a variety of modalities, including: face-to-face in person, face-to-face via video conferencing, blended, and fully online.

Rural Mental Health Care: Mental healthcare needs in rural areas, like in southern Oregon, provide unique challenges that require unique approaches. MFT students develop the expertise and skills required to excel as rural mental healthcare providers.

Integrated Behavioral Healthcare and Medical Family Therapy: Medical health and mental health often influence one another. These not only affect the patient, but the patient's partner and family system as well. The MFT Program has embedded Integrated Behavioral Healthcare and Medical Family Therapy courses into the curriculum to help graduates develop the knowledge and skills required to become indispensable leaders in medical family therapy, who often work in medical settings closely and collaboratively with medical personnel. Those who graduate from the MS MFT Program earn a Graduate Certificate in Integrated Behavioral Healthcare and Medical Family Therapy.

Substance Use, Addiction, and Recovery: Mental health and addiction frequently co-exist. The MFT Program has embedded addiction courses within the curriculum to train competent trauma-informed, systemic clinicians who have a strong foundation in addiction and recovery.

Program Mission Statement

Oregon Tech's Master of Science in Marriage and Family Therapy (MS MFT) program prepares graduates to become skilled Marriage and Family Therapists with multicultural competence, expertise in rural mental health care, medical family therapy and substance use disorders and addictions treatment.

In strong collaboration with local child and family service organizations, health care and mental health care providers, the MS MFT program supports and strengthens mental health care and child and family services in the under-served rural areas that are in southern Oregon.

Program Objectives

1. Teach foundational knowledge related to human development, basic counseling skills, MFT theories and interventions, assessment and diagnosing, cultural humility, rural mental health care, and research.
2. Train trauma-informed and culturally competent marriage and family therapists.
3. Teach the integration of mental health and addiction and recovery in the etiology and treatment of co-occurring disorders.
4. Train marriage and family therapists in Integrated Behavioral Healthcare and Medical Family Therapy practices.

Civil Engineering Department

Civil engineers design infrastructure—transportation networks, bridges, buildings, dams, communities, and water and waste management systems—for the enhancement of human welfare and protection of our environment. Oregon Tech's freshman-to-master's Civil Engineering program equips students to meet industry and societal needs identified by the American Society of Civil Engineers (ASCE).

Degrees Offered

- Bachelor of Science in Civil Engineering (BSCE)
- Master of Science in Civil Engineering (MSCE)

Career Opportunities

Upon completing the core curriculum, civil engineering students have a solid foundation in structural, transportation, water resources, and geotechnical engineering. Upper division students can target specific disciplinary areas with specialized technical electives. Graduates have career opportunities with consulting firms, government agencies, heavy construction contractors and industry. They are also very successful in passing the Fundamentals of Engineering exam, paving the way for professional licensure as a civil engineer.

Geotechnical engineering involves the design and construction of projects built on, in, or with earth materials. These projects include, but are not limited to, foundations for structures, earthen embankments, dams, landfills, and underground structures. In addition, geotechnical engineers predict the performance and behavior of the earthen materials due to changes imposed by other engineered systems.

Structural engineering involves the planning, analysis and design of buildings, bridges and other structures using the principal construction materials of wood, steel, concrete and masonry. Graduates are familiar with current codes and standards, and methods of analysis and design.

Transportation engineering is concerned with the planning, design, construction, operation, safety, performance, and evaluation of transportation systems and facilities, such as urban streets, highways, bicycle and pedestrian facilities, and public transit.

Water resources engineering addresses the spectrum of water issues including supply, transport, use, and discharge, and is at the junction of efforts to provide sustainable human and natural environments, in compliance with regulatory mandates. Graduates have opportunities in planning, design, and operation of hydraulic and water resource projects, floodplain management, or resource management issues.

Civil engineering graduates may consider a dual degree in environmental sciences to expand career opportunities with a broad spectrum of government agencies, consulting firms, and industry.

A minor in geomatics allows graduates to obtain professional licensure as both a land surveyor and civil engineer.

Mission Statement

The mission of the Oregon Tech Civil Engineering program is to prepare students for professional practice. To be prepared to practice as professionals, engineers must be able to act responsibly and ethically, understand their limits and the limits of the tools they use, communicate effectively, work well in teams, and, amid the changing landscape of the field of civil engineering, be able to pursue graduate-level education.

Objectives

The alumni from the BSCE program at Oregon Tech should be able to:

- Practice in civil engineering or a related field.
- Pursue advanced or continuing education in civil engineering or a related field.
- Act as responsible, effective and ethical citizens.
- Understand and effectively communicate the realistic constraints of civil engineering.
- Perform effectively in a multi-disciplinary environment.

Students enjoy a close relationship with full-time faculty with advanced engineering degrees, many of whom are also licensed professionals with many years of practical experience. Course offerings promote education in the application of theory relevant to our civil engineering technical areas, engineering design, and principles of sustainable development. These concepts are emphasized and integrated throughout the curriculum in a sequential manner.

Early in the curriculum, elements of the creative design process are introduced as students complete first-year design projects. To ensure graduates become responsible, effective citizens and begin building a foundation for lifelong learning, students are required to satisfy Oregon Tech general education requirements in communication, humanities, social sciences, and science/mathematics.

While most first-year and sophomore courses are intended to provide a solid background in mathematics, communications, and basic sciences, lower-division engineering mechanics and civil engineering courses engage students with more foundational topics in engineering and professional practice.

In their third year of study, students develop a broad civil engineering knowledge base. Third-year courses include core topics in geotechnical, structural, transportation, and water resources engineering.

In the fourth year, students are required to complete an intensive, two-term, engineering design project. This effort is focused on a professional-quality civil engineering design with real-world context and includes essential elements of technical communications and group dynamics. The design project also involves realistic constraints including cost and sustainability considerations, socioeconomic concerns, aesthetic choices and ethical deliberations. Fourth-year students also take technical electives and prepare for the FE examination as a step toward licensure as professional engineers. In this year, BS-seeking students complete their undergraduate degree requirements while concurrent (BS/MS) degree-seeking students begin their selected program of graduate-level coursework, which may include a graduate project or thesis.

Finally, in the optional fifth year, concurrent students complete BS and MS coursework and their choice of additional coursework, an individual graduate project, or thesis.

Program Learning Outcomes

Upon graduating from the BSCE program, students will have an ability to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

Student Preparation

Students interested in civil engineering should emphasize mathematics and science in high school. Two years of algebra and one year each of geometry, trigonometry, chemistry and physics are preferred. Additional courses in mathematics and computer-aided drafting are desirable. .

Accreditation

The Civil Engineering Program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org;

Graduation Requirements

All courses listed in the curriculum for the current catalog year must be completed to be eligible for graduation, unless a student has already completed the requirements for a category that has changed. When changes are made to the curriculum, students who entered the program under a previous catalog will work with their academic advisors to transition to meet the requirements of the current catalog. A final grade of "C" or better must be earned in all math and science courses and those with CE, ENGR, GIS, and GME prefixes as well as all listed prerequisites for these courses.

The Bachelor of Science degree in Civil Engineering requires a minimum of 180 credits and students must maintain a 2.0 GPA to be eligible for graduation.

For the concurrent bachelor's and master's degrees in Civil Engineering, a minimum of 225 credits must be completed. Students must earn a 3.0 GPA by the end of the third year for progression to the fourth and fifth years of study.

The Master of Science in Civil Engineering requires completing 45 credits of approved graduate work. Students must maintain a 3.0 graduate-level GPA with a final grade of "C" or better in all graduate courses.

Programs

Civil Engineering, BS/MS

Overview

Program Long Title

Civil Engineering

Program Title

Civil Engineering

Department(s)

Civil Engineering

Degree Designation

BS

Program Level

UG

CIP Code

140801

Degree Maps

Degree Map Name

Advising Guide - Civil Engineering

Total Degree Map Credits

226

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

This map shows required courses for the degree and recommended terms to take each course (*the term sequence is subject to change depending on transfer courses, AP/IB/CLEP credit, and course availability*).

Notes

a No more than 3 credits of Humanities courses may be skill- or performance based.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- CE101 - Intro to Civil Engineering I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

- CHE221Z - General Chemistry I
- AND CHE227Z - General Chemistry I Lab

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

5

Progress Credits

-

Contact Hours

7

Clinical

-

Criticality

No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	18	0

Requirement Select

- CE102 - Intro to Civil Engineering II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- **AND** CHE228Z - General Chemistry II Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

• CE203 - Engineering Graphics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

• Lab Science General Education

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

Yes

Requirement Select

• MATH251Z - Differential Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

Yes

Requirement Select

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

Yes

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

• CE222 - Civil Engineering Materials

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- GME161 - Plane Surveying I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- CE211 - CE Mechanics: Statics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 7

Clinical

-

Criticality

No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHY222 - General Physics w/Calculus
- OR**
- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	13	0

Requirement Select

- CE213 - CE Mechanics:Strength Material

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE205 - Computational Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- CE311 - Intro to Geotechnical Engr

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

• CE318 - CE Mechanics: Fluids

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• CE331 - Structural Analysis

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• MATH361 - Statistical Methods I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	17	0

Requirement Select

• CE308 - Princ of Professional Practice

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• CE341 - Elementary Structural Design

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

5

Progress Credits

-

Contact Hours

0 - 7

Clinical

-

Criticality

No

Requirement Select

• CE351 - Intro to Transportation Engr

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- CE371 - Closed Conduit Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

- CE312 - Earth Pressures & Foundations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CE354 - Traffic Engineering

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- CE374 - Hydrology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE442 - Adv Reinforced Concrete Design
- OR**
- CE444 - Intermediate Steel Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Fourth Year	Required Coursework	44	0

Requirement Select

- CE401 - Civil Engineering Project I
- **AND** COM401 - Civil Engineering Project I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 11
Clinical	-
Criticality	No

Requirement Select

- CE402 - Civil Engineering Project II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- CE405 - Sustainability & Infrastruct

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CE501 - Civil Engr Graduate Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- WRI521 - Writing at the Grad Level

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Civil Engineering Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Civil Engineering Graduate Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	12
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- 400 Level Math Course

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Fifth Year	Required Coursework	41	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CE590 - Civil Engineering Grad Project
- OR**
- CE595 - Graduate Thesis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- Civil Engineering Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	12
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Civil Engineering Graduate Technical Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

Area

Actual Credits

Progress Credits

Contact Hours

Clinical

Criticality

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Civil Engineering, BS

Overview

Program Long Title

Civil Engineering

Program Title

Civil Engineering

Department(s)

Civil Engineering

Degree Designation

BS

Program Level

UG

CIP Code

140801

Degree Maps

Degree Map Name

Advising Guide - Civil Engineering

Total Degree Map Credits

180

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

This map shows required courses for the degree and recommended terms to take each course (the term sequence is subject to change depending on transfer courses, AP/IB/CLEP credit, and course availability).

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- CE101 - Intro to Civil Engineering I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

Area

Actual Credits

Progress Credits

Contact Hours

Clinical

Criticality

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Requirement Select

- CHE221Z - General Chemistry I
- AND** CHE227Z - General Chemistry I Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- CE102 - Intro to Civil Engineering II

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- AND** CHE228Z - General Chemistry II Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

• WRI122Z - Composition II

OR

• WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

• CE203 - Engineering Graphics

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

• Lab Science General Education

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• MATH251Z - Differential Calculus

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- CE222 - Civil Engineering Materials

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GME161 - Plane Surveying I

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- CE211 - CE Mechanics: Statics

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus
- OR**
- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	13	0

Requirement Select

- CE205 - Computational Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- CE213 - CE Mechanics:Strength Material

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- CE311 - Intro to Geotechnical Engr

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- CE318 - CE Mechanics: Fluids

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE331 - Structural Analysis

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	17	0

Requirement Select

- CE308 - Princ of Professional Practice

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CE341 - Elementary Structural Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- CE351 - Intro to Transportation Engr

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE371 - Closed Conduit Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

- CE312 - Earth Pressures & Foundations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CE354 - Traffic Engineering

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- CE374 - Hydrology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE442 - Adv Reinforced Concrete Design
- OR**
- CE444 - Intermediate Steel Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Full Year	43	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CE401 - Civil Engineering Project I
- **AND** COM401 - Civil Engineering Project I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 11
Clinical	-
Criticality	No

Requirement Select

- CE402 - Civil Engineering Project II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- CE405 - Sustainability & Infrastruct

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Technical Electives
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Communication Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Overview

Program Long Title
Dual Civil Eng/Env Sciences

Program Title
Dual Civil Eng/Env Sciences

Department(s)
Civil Engineering

Degree Designation
BS

Program Level

UG

CIP Code

140899

Civil Engineering, MS

Overview

Program Long Title
Civil Engineering

Program Title
Civil Engineering

Department(s)
Civil Engineering

Degree Designation
MS

Program Level

GR

CIP Code

140801

141 / 727

Courses

ACAD110 - ETM Freshman Seminar

Overview

Course Subject Code	Course Number
ACAD	110

Department
Civil Engineering

Course Description
This course provides first-year students in Engineering, Technology, and Management (ETM) with essential tools, resources, and strategies to navigate their academic journey successfully. The seminar will focus on personal and professional development, teamwork, time management, career planning, and academic success strategies while introducing students to the unique opportunities and challenges of the ETM fields.

Academic Level (Course Level)
Undergraduate

CE101 - Intro to Civil Engineering I

Overview

Course Subject Code	Course Number
CE	101

Department
Civil Engineering

Course Description
Introduces the student to civil engineering with a focus on academic success, professional development, ethics, communication, and creative problem-solving techniques, engineering tools, and design concepts. A team-based laboratory experience introduces students to multiple sub-disciplines of civil engineering.

Academic Level (Course Level)
Undergraduate

CE102 - Intro to Civil Engineering II

Overview

Course Subject Code	Course Number
CE	102

Department
Civil Engineering

Course Description
Students will be introduced to a civil engineering focused design process through a team-based design project. Emphases will be placed on project management, documentation, presentation, and problem-solving.

Academic Level (Course Level)
Undergraduate

CE107 - Seminar

Overview

Course Subject Code	Course Number
CE	107

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CE203 - Engineering Graphics

Overview

Course Subject Code	Course Number
CE	203

Department
Civil Engineering

Course Description
Graphical communication in civil engineering using computer-aided drafting and design software. Includes development of drawings related to civil engineering projects such as roads, subdivisions and buildings, development of scaled plots and reading of engineering drawings.

Academic Level (Course Level)
Undergraduate

CE205 - Computational Methods

Overview

Course Subject Code	Course Number
CE	205

Department
Civil Engineering

Course Description
Solve applied problems involving formulas, functions, summation and iteration using Excel and VBA. Use built-in functions and graphing capabilities.

Academic Level (Course Level)
Undergraduate

CE207 - Seminar

Overview

Course Subject Code	Course Number
CE	207

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CE211 - CE Mechanics: Statics

Overview

Course Subject Code	Course Number
CE	211

Department
Civil Engineering

Course Description
Fundamental principles of mechanics of rigid bodies that don't experience an acceleration. Topics include analysis of external forces and reactions, internal forces and moments, rigid body equilibrium, and centroids & moments of inertia.

Academic Level (Course Level)
Undergraduate

CE213 - CE Mechanics:Strength Material

Overview

Course Subject Code	Course Number
CE	213

Department
Civil Engineering

Course Description
Internal stresses, and deformations of structural members and systems subjected to forces. Analysis of determinate and indeterminate systems with different geometries and material properties. Stability considerations

Academic Level (Course Level)
Undergraduate

CE222 - Civil Engineering Materials

Overview

Course Subject Code	Course Number
CE	222

Department
Civil Engineering

Course Description
Study of the engineering properties of soil as well as portland cement and asphaltic concretes. Field and laboratory testing methods for classifying soil. Mix design of concretes.

Academic Level (Course Level)
Undergraduate

CE307 - Seminar

Overview

Course Subject Code	Course Number
CE	307

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CE308 - Princ of Professional Practice

Overview

Course Subject Code	Course Number
CE	308

Department

Civil Engineering

Course Description

Civil engineering professional practice topics including project acquisition, development, management and delivery. Business in civil engineering including ethics, economics, leadership, communication and legal matters. Current and emerging trends in practice.

Academic Level (Course Level)

Undergraduate

CE318 - CE Mechanics: Fluids

Overview

Course Subject Code	Course Number
CE	318

Department

Civil Engineering

Course Description

Fundamental properties of fluids, fluid statics and pressure variation, flow characterization, momentum and forces due to fluid motion, energy of fluids in motion, and flow in conduits. Emphasis on civil engineering applications of fluid mechanics principles.

Academic Level (Course Level)

Undergraduate

CE311 - Intro to Geotechnical Engr

Overview

Course Subject Code	Course Number
CE	311

Department

Civil Engineering

Course Description

Soil permeability, seepage, filters, effective stress, consolidation, settlement, shear strength, slope stability, stresses in soils, and stresses under loaded areas. Includes laboratory testing.

Academic Level (Course Level)

Undergraduate

CE331 - Structural Analysis

Overview

Course Subject Code	Course Number
CE	331

Department

Civil Engineering

Course Description

Structural loads according to ASCE 7. Analysis of statically determinate trusses and frames. Shear and moment diagrams, deflections, and influence lines for statically determinate structures. Analysis of statically indeterminate structures by force and displacement methods. Software applications emphasized in labs.

Academic Level (Course Level)

Undergraduate

CE312 - Earth Pressures & Foundations

Overview

Course Subject Code	Course Number
CE	312

Department

Civil Engineering

Course Description

Analysis and design of shallow footings, deep foundations include piles, caissons and earth retaining structures design. Use of computer applications for design of these structures.

Academic Level (Course Level)

Undergraduate

CE341 - Elementary Structural Design

Overview

Course Subject Code	Course Number
CE	341

Department

Civil Engineering

Course Description

Fundamentals of structural element design: emphasis on structural steel, reinforced concrete, and timber beams and short columns as well as reinforced masonry lintels and walls due to gravity loads. Labs include construction, material and destructive testing, and software applications.

Academic Level (Course Level)

Undergraduate

CE351 - Intro to Transportation Engr

Overview

Course Subject Code	Course Number
CE	351

Department
Civil Engineering

Course Description
Introduction to the design, planning, operation, management and maintenance of transportation systems with a focus on the highway and railway modes. Principles of planning multi-modal transportation systems, layout of roadways, traffic flow modeling and capacity analyses.

Academic Level (Course Level)
Undergraduate

CE354 - Traffic Engineering

Overview

Course Subject Code	Course Number
CE	354

Department
Civil Engineering

Course Description
Principles of traffic engineering and operation, traffic engineering studies, signalized intersection design, traffic analysis software.

Academic Level (Course Level)
Undergraduate

CE371 - Closed Conduit Design

Overview

Course Subject Code	Course Number
CE	371

Department
Civil Engineering

Course Description
Population and factors influencing water supply demands, fire flows, peaking factors and storage requirements. Flows in pressure pipe systems, pipe networks analysis and design techniques. Estimation of wastewater flows including I/I considerations. Gravity-fed collection system design, construction and maintenance.

Academic Level (Course Level)
Undergraduate

CE374 - Hydrology

Overview

Course Subject Code	Course Number
CE	374

Department
Civil Engineering

Course Description
Study of the hydrologic cycle, measurement of rainfall, runoff and streamflow. Curve fitting, hydrographic analysis, statistical analyses of extreme flows, flood routing and storage capacity. Runoff modeling and design of hydrologic structures and systems.

Academic Level (Course Level)
Undergraduate

CE401 - Civil Engineering Project I

Overview

Course Subject Code	Course Number
CE	401

Department
Civil Engineering

Course Description
First term of a two-term sequence integrating civil engineering design, group dynamics and technical communications. Students receive two credit hours in civil engineering (CE 401) and three credit hours in communication for general education (COM 401).

Academic Level (Course Level)
Undergraduate

CE402 - Civil Engineering Project II

Overview

Course Subject Code	Course Number
CE	402

Department
Civil Engineering

Course Description
Second term of a two-term sequence integrating civil engineering design, group dynamics and technical communications. Students receive four credit hours in civil engineering (CE 402) and three credit hours in communication for general education (COM 402).

Academic Level (Course Level)
Undergraduate

CE403 - FE Exam Preparation

Overview

Course Subject Code	Course Number
CE	403

Department

Civil Engineering

Course Description

Lectures and problem work sessions to help civil engineering students successfully pass the fundamentals of engineering (FE) exam. Topics covered include mathematics, ethics, economics, statics, dynamics, solid mechanics, materials, fluid mechanics, hydraulics, hydrologic systems, structures, geotechnical, transportation, environmental, construction, and surveying.

Academic Level (Course Level)

Undergraduate

CE405 - Sustainability & Infrastruct

Overview

Course Subject Code	Course Number
CE	405

Department

Civil Engineering

Course Description

Integrating sustainability concepts and key social, economic and environmental issues and processes relevant to civil engineering. Sustainable design practices in each civil engineering sub-discipline will be studied and existing and proposed infrastructure projects will be evaluated.

Academic Level (Course Level)

Undergraduate

CE407 - Seminar

Overview

Course Subject Code	Course Number
CE	407

Department

Civil Engineering

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CE412 - Seismic Engineering

Overview

Course Subject Code	Course Number
CE	412

Department

Civil Engineering

Course Description

This course describes basic geotechnical earthquake engineering in terms of seismology, strong ground motions, dynamic soil properties, ground response analysis and liquefaction. This course also provides an introduction to the engineering practice of seismic design and analysis of buildings and non-building structures.

Academic Level (Course Level)

Undergraduate

CE424 - Advanced Soil Mechanics

Overview

Course Subject Code	Course Number
CE	424

Department

Civil Engineering

Course Description

Evaluation of strength parameters and compressibility of soils; elastic analysis of stress and strain; techniques of forecasting foundation settlement; slope stability analysis using software.

Academic Level (Course Level)

Undergraduate

CE432 - Struc Loading & Lateral Forces

Overview

Course Subject Code	Course Number
CE	432

Department

Civil Engineering

Course Description

Gravity loads (dead, live, roof live, and snow) and lateral loads (wind and seismic) according to ASCE 7 and Oregon Structural Specialty Cod. Introduction and design of basic lateral force resisting systems and gravity elements with software applications as appropriate.

Academic Level (Course Level)

Undergraduate

CE433 - Structural Matrix Analysis

Overview

Course Subject Code	Course Number
CE	433

Department
Civil Engineering

Course Description
Static analysis of determinate and indeterminate structures using the direct stiffness method with heavy emphasis on computer models and solutions. Students will design and develop their own structural analysis program.

Academic Level (Course Level)
Undergraduate

CE434 - Advanced Solid Mechanics

Overview

Course Subject Code	Course Number
CE	434

Department
Civil Engineering

Course Description
Three-dimensional stress and strain, failure theories, elasticity and plasticity, curved beams, beams on elastic foundations, un-symmetric bending and shear centers.

Academic Level (Course Level)
Undergraduate

CE435 - Structural Dynamics

Overview

Course Subject Code	Course Number
CE	435

Department
Civil Engineering

Course Description
Analysis of single degree of freedom structural systems to harmonic and general loading. Free vibrating and forced vibration of multiple degree of freedom systems, modal superposition, earthquake engineering, current IBC methods.

Academic Level (Course Level)
Undergraduate

CE439 - Highway Bridge Rating

Overview

Course Subject Code	Course Number
CE	439

Department
Civil Engineering

Course Description
Introduction to bridge types, bridge design philosophies and bridge rating procedures. Load rating of short-span highway bridges using AASHTO provisions and ODOT procedures. Software applications.

Academic Level (Course Level)
Undergraduate

CE442 - Adv Reinforced Concrete Design

Overview

Course Subject Code	Course Number
CE	442

Department
Civil Engineering

Course Description
Design, analysis, and detailing of reinforced concrete elements, including: T-beams, doubly-reinforced beams, continuous beams, shear walls, slender columns, slabs, footings, and moment frames. Seismic resistance and the development, anchorage, and splicing of steel reinforcement are introduced.

Academic Level (Course Level)
Undergraduate

CE444 - Intermediate Steel Design

Overview

Course Subject Code	Course Number
CE	444

Department
Civil Engineering

Course Description
Design of structural steel tension members, frameworks, composite beams, and bolted and welded connections. Application of the AISC Steel Construction Manual structural stability provisions and software applications.

Academic Level (Course Level)
Undergraduate

CE447 - Masonry Design

Overview

Course Subject Code	Course Number
CE	447

Department

Civil Engineering

Course Description

Analysis and design of masonry beams, walls and columns using computer solutions with emphasis on lateral design considerations. Prerequisite: Better and gravity elements with software applications as appropriate

Academic Level (Course Level)

Undergraduate

CE448 - Timber Design

Overview

Course Subject Code	Course Number
CE	448

Department

Civil Engineering

Course Description

Analysis and design of simple (determinate) timber beams, columns, trusses and connections using dimensioned lumber, plywood and laminated members, with an emphasis on lateral force design. Computer solutions introduced.

Academic Level (Course Level)

Undergraduate

CE449 - Bridge Design

Overview

Course Subject Code	Course Number
CE	449

Department

Civil Engineering

Course Description

Design and analysis of short and medium-span highway bridge superstructures including reinforced concrete, slab bridges, steel deck girder bridges, and prestressed concrete bridges. Software applications.

Academic Level (Course Level)

Undergraduate

CE450 - Transportation Structures

Overview

Course Subject Code	Course Number
CE	450

Department

Civil Engineering

Course Description

Design and analysis of common transportation structures including culverts, sign structures, light poles, and railings according to current AASHTO provisions and ODOT procedures. Software applications.

Academic Level (Course Level)

Undergraduate

CE455 - Bicycle & Pedestrian Transport

Overview

Course Subject Code	Course Number
CE	455

Department

Civil Engineering

Course Description

Design and operational concepts in the engineering design of bicycle and pedestrian facilities in on-road and shared path locations. Specific topics include basic geometric design, intersection and signalization considerations, and amenities supporting non-motorized modes.

Academic Level (Course Level)

Undergraduate

CE456 - Pavement Engineering

Overview

Course Subject Code	Course Number
CE	456

Department

Civil Engineering

Course Description

Hot mixed asphalt materials testing and mixture design. Methods of manufacture, transport, and placement of rigid and flexible pavements. Structural design of rigid and flexible pavements. Pavement rehabilitation and management.

Academic Level (Course Level)

Undergraduate

CE458 - Transportation Safety Analysis

Overview

Course Subject Code	Course Number
CE	458

Department
Civil Engineering

Course Description
Safety concepts in highway engineering including highway design, operation, and maintenance, as well as human factors, statistical analysis, traffic control and public policy.

Academic Level (Course Level)
Undergraduate

CE481 - Environmental Engineering I

Overview

Course Subject Code	Course Number
CE	481

Department
Civil Engineering

Course Description
Introduction to environmental engineering principles, fundamental concepts and supporting calculations. Physical, chemical and biological elements of the natural environment. Environmental impacts of anthropogenic activities. Control and pollution prevention technologies. Legal and regulatory framework governing environmental management.

Academic Level (Course Level)
Undergraduate

CE499 - Independent Studies

Overview

Course Subject Code	Course Number
CE	499

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CE501 - Civil Engr Graduate Seminar

Overview

Course Subject Code	Course Number
CE	501

Department
Civil Engineering

Course Description
Civil Engineering graduate students will meet regularly with faculty members to share progress on their graduate project selection and report writing. Advisor consent required.

Academic Level (Course Level)
Graduate

CE507 - Seminar

Overview

Course Subject Code	Course Number
CE	507

Department
Civil Engineering

Academic Level (Course Level)
Graduate

CE512 - Seismic Engineering

Overview

Course Subject Code	Course Number
CE	512

Department
Civil Engineering

Course Description
This course describes basic geotechnical earthquake engineering in terms of seismology, strong ground motions, dynamic soil properties, ground response analysis and liquefaction. This course also provides an introduction to the engineering practice of seismic design and analysis of buildings and non-building structures

Academic Level (Course Level)
Graduate

CE524 - Advanced Soil Mechanics

Overview

Course Subject Code	Course Number
CE	524

Department
Civil Engineering

Course Description
Evaluation of strength parameters and compressibility of soils; elastic analysis of stress and strain; techniques of forecasting foundation settlement; slope stability analysis using software.

Academic Level (Course Level)
Graduate

CE533 - Structural Matrix Analysis

Overview

Course Subject Code	Course Number
CE	533

Department
Civil Engineering

Course Description
Static analysis of determinate and indeterminate structures using the direct stiffness method with heavy emphasis on computer models and solutions. Students will design and develop their own structural analysis program.

Academic Level (Course Level)
Graduate

CE534 - Advanced Solid Mechanics

Overview

Course Subject Code	Course Number
CE	534

Department
Civil Engineering

Course Description
Three-dimensional stress and strain, failure theories, elasticity and plasticity, curved beams, beams on elastic foundations, unsymmetric bending and shear centers.

Academic Level (Course Level)
Graduate

CE535 - Structural Dynamics

Overview

Course Subject Code	Course Number
CE	535

Department
Civil Engineering

Course Description
Analysis of single degree of freedom structural systems to harmonic and general dynamic loading. Free vibrating and forced vibration of multiple degree of freedom systems, modal superposition, earthquake engineering, current IBC methods.

Academic Level (Course Level)
Graduate

CE539 - Highway Bridge Rating

Overview

Course Subject Code	Course Number
CE	539

Department
Civil Engineering

Course Description
Introduction to bridge types, bridge design philosophies and bridge rating procedures. Load rating of short-span highway bridges using AASHTO provisions and ODOT procedures. Software applications.

Academic Level (Course Level)
Graduate

CE549 - Bridge Design

Overview

Course Subject Code	Course Number
CE	549

Department
Civil Engineering

Course Description
Design and analysis of short and medium-span highway bridge superstructures including reinforced concrete slab bridges, steel deck girder bridges, and prestressed concrete girder bridges. Software applications.

Academic Level (Course Level)
Graduate

CE550 - Transportation Structures

Overview

Course Subject Code	Course Number
CE	550

Department
Civil Engineering

Course Description
Design and analysis of common transportation structures including culverts, sign structures, light poles, and railings according to current AASHTO provisions and ODOT procedures. Software applications.

Academic Level (Course Level)
Graduate

CE558 - Transportation Safety Analysis

Overview

Course Subject Code	Course Number
CE	558

Department
Civil Engineering

Course Description
Safety concepts in highway engineering including highway design, operation, and maintenance, as well as human factors statistical analysis, traffic control and public policy.

Academic Level (Course Level)
Graduate

CE555 - Bicycle & Pedestrian Transport

Overview

Course Subject Code	Course Number
CE	555

Department
Civil Engineering

Course Description
Design and operational concepts in the engineering design of bicycle and pedestrian facilities in on-road and shared path locations. Specific topics include basic geometric design, intersection and signalization considerations, and amenities supporting non-motorized modes.

Academic Level (Course Level)
Graduate

CE590 - Civil Engineering Grad Project

Overview

Course Subject Code	Course Number
CE	590

Department
Civil Engineering

Course Description
Research and preparation pertaining to the master's project. Advisor consent required.

Academic Level (Course Level)
Graduate

CE556 - Advanced Pavement Design

Overview

Course Subject Code	Course Number
CE	556

Department
Civil Engineering

Course Description
This course covers advanced topics in the design and analysis of pavement materials and structures.

Academic Level (Course Level)
Graduate

CE595 - Graduate Thesis

Overview

Course Subject Code	Course Number
CE	595

Department
Civil Engineering

Course Description
Research and preparation pertaining to the master's thesis.

Academic Level (Course Level)
Graduate

CE599 - Independent Studies

Overview

Course Subject Code	Course Number
CE	599

Department
Civil Engineering

Course Description
Offers individualized study at an advanced level in areas of Civil Engineering not considered in other courses to meet special interests or program requirements. Students must complete term deliverables indicated by the instructor. Offered for variable credit, based on the student's accomplishments.

Academic Level (Course Level)
Graduate

CIV107 - Seminar

Overview

Course Subject Code	Course Number
CIV	107

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CIV201 - Sustainable Civil Engr I

Overview

Course Subject Code	Course Number
CIV	201

Department
Civil Engineering

Academic Level (Course Level)
Undergraduate

CIV207 - Seminar

Overview

Course Subject Code	Course Number
CIV	207

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CIV307 - Seminar

Overview

Course Subject Code	Course Number
CIV	307

Department
Civil Engineering

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CIV358 - Project Management

Overview

Course Subject Code	Course Number
CIV	358

Department
Civil Engineering

Course Description
Basic project management principles and practices for engineering projects. Topics include basic management principles, delivery methods, bidding, procurement, costs, planning, scheduling, controlling, and allocation of resources. Gantt charts, CPM, and PERT discussed. Concepts applied using currently available computer software.

Academic Level (Course Level)
Undergraduate

CIV407 - Seminar

Overview

Course Subject Code	Course Number
CIV	407

Department

Civil Engineering

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

Communication Department

Franny Howes, *Department Chair*

Professors: K. Brown, A. Fultz, F. Howes, A. Lancaster, K. Lundgren M. Schnackenberg

Associate Professor: R. Richards

Assistant Professors: E. Grimshaw, X. Sheng

Senior Instructors: A. McCracken, M. Scheidegger

Instructor: J. Burden

The Bachelor of Science in Communication Studies allows students flexibility in designing a program that fits their life and career goals. Students choose core courses and elective from areas such as technical, organizational, and interpersonal communication. In addition, students build a career foundation by completing a *focused sequence of electives*.

Program Learning Outcomes

Upon graduating, Communication Studies graduates should be able to:

1. Demonstrate critical and innovative thinking.
2. Display competence in oral, written, and visual communication.
3. Apply communication theories.
4. Understand opportunities in the field of communication.
5. Use current technology related to the communication field.
6. Respond effectively to cultural communication differences.
7. Communicate ethically.
8. Demonstrate positive group communication exchanges.

Career Opportunities

The Communications Studies program prepares students for careers in areas such as organizational communication, new communication technologies, education, human resources, law, speech language pathology, public relations, sales, and dispute resolution; it also prepares students for graduate-level study.

Professional Writing

The Professional Writing (PWR) professions serve content areas and technical fields. Housed in the Department of Communication, the PWR B.S. degree program includes core courses in theory and practice of writing and style, in addition to electives in digital text creation, interactive media, management, mathematics, communication, and health sciences. Students choose one of three emphases: Scientific and Technical Writing, Digital Media, or Writing in Organizations.

The PWR program begins with a foundation of writing and style, along with communication theories and application. Graduates will gain competence in the domains of visual and text creation, audience analysis, rhetorical theory, research methods, statistics, and group and team communication. The applied content includes large project creation and management, portfolio work, digital media production, and broad applications of communication skills. The program is designed to integrate written skills with technical knowledge, and courses in technical specialties are required. This program is interdisciplinary and expects students to create a curriculum that matches a specific career path.

Program Learning Outcomes

Upon graduating, Professional Writing graduates should be able to:

1. Design and create documents appropriate for professional and consumer audiences using a variety of industry-standard tools
2. Use accepted rhetorical, linguistic and design theories to craft user- and reader-centered documents
3. Demonstrate professionally-appropriate practice in working with clients/stakeholders and teammates
4. Demonstrate professionally-appropriate ethical reasoning, including awareness intellectual property in the creation and management of documents
5. Analyze their position within the fields of publishing, technical communication, professional writing, and allied disciplines.
6. Manage the production of complex, large-scale projects and their related documentation

Career Opportunities

Professional writers use their advanced written communication skills to synthesize information and span boundaries between technical experts, decision-makers, and the public. They work in a broad range of settings, including the public sector, high tech corporations, entertainment, education, design firms, and more.

General Education Courses

To ensure that Oregon Tech's graduates are skilled communicators, the Communication Department provides writing, speech, and communication courses to satisfy general education requirements. Students in other majors should consult the general education and degree requirements in their major departments.

Student Preparation

All students who plan to study at Oregon Tech should enroll in writing and speech classes during their high school years to better benefit from the university's communication courses. Students applying to the Communication Studies Program should have especially strong reading and writing skills. It is important to have a well-rounded college preparation background, including courses in math, sciences, and general education.

Programs

Communication Studies, BS

Overview

Program Long Title
Communication Studies

Program Title
Communication Studies

Department(s)
Communication

Degree Designation
BS

Program Level
UG

CIP Code
090100

Degree Maps

Degree Map Name
Advising Guide - Communication Studies

Total Degree Map Credits
184

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
The Bachelor of Science in Communication Studies requires 188 credits. All major courses, general education communication courses, and focused sequence of electives courses must be completed with a grade of “C” or higher.

Notes:

1.

There is no guarantee of externships for Communication Studies majors. The best externship experiences are often those identified and arranged by students. Extern credits vary each term but 12 credits are required to complete the degree.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	17	0

Requirement Select

- COM104 - Intro to Communication Studies

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 3
Clinical -
Criticality No

Requirement Select

- COM115 - Intro to Mass Communication

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 3
Clinical -
Criticality No

Requirement Select

- COM135 - Communication Software

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 5
Clinical -
Criticality No

Requirement Select

- COM218Z - Interpersonal Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WR121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- COM105 - Intro to Communication Theory

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM205 - Intercultural Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective Credits
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	16	0

Requirement Select

- ART215 - Design Arts and Aesthetics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM106 - Introduction to Comm Research

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM109 - Intro to Communication Tech

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- COM216 - Essen of Grammar & Punctuation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM326 - Communication Research

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

-

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- COM237 - Intro to Visual Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM248 - Digital Media Production

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- JOUR211 - Intro to Journalism

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective Credit
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MATH111Z - Precalculus I: Functions
OR
- STAT243Z - Elementary Statistics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- COM255 - Communication Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM276 - Democracy and Media

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- General Business Elective

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

-

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- COM301 - Rhetorical Theory & Applicatn

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM325 - Gender and Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective (WRI or PWR)
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division Focused Sequence Elective (Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- COM345 - Organization Comm I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE314 - Argumentation

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Upper Division Focused Sequence Electives (Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division General Elective (Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- COM347 - Negotiation & Conflict Resol'n

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM358 - Communication and the Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Upper Division Focused Sequence Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division Writing Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

- COM309 - Communication Tech in Use

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- COM420 - Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 15
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

-

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- COM420 - Externship

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 15
Clinical	-
Criticality	No

Requirement Select

- Upper Division Focused Sequence Elective (Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- COM420 - Externship

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 15

Clinical

-

Criticality

No

Requirement Select

- COM424 - Capstone Course

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Upper Division Focused Sequence Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Math/Science General Education

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Professional Writing, BS

Overview

Program Long Title

Professional Writing

Program Title

Professional Writing

Department(s)

Communication

Degree Designation

BS

Program Level

UG

CIP Code

231303

Degree Maps

Degree Map Name
Advising Guide - Professional Writing

Total Degree Map Credits
185

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	17	0

Requirement Select

- COM115 - Intro to Mass Communication

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

- Requirement Select**
- MATH111Z - Precalculus I: Functions
- OR**
- STAT243Z - Elementary Statistics I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

- Requirement Select**
- PWR101 - Intro to Professional Writing

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

- Requirement Select**
- WRI121Z - Composition I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM135 - Communication Software

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	12	0

Requirement Select

- JOUR211 - Intro to Journalism

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective (Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	16	0

Requirement Select

- COM109 - Intro to Communication Tech

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PWR102 - Intro to Web Authoring

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ART215 - Design Arts and Aesthetics
- OR**
- ART226 - Digital Photography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- COM216 - Essen of Grammar & Punctuation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM256 - Public Relations
- OR**
- PWR215 - Writing in the Public Interest

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Emphasis Elective Credit
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- COM237 - Intro to Visual Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM248 - Digital Media Production

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PWR330 - User Research

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Emphasis Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	17	0

Requirement Select

- COM218Z - Interpersonal Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM255 - Communication Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI328 - Style

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- COM301 - Rhetorical Theory & Applicatn
OR
- SPE321 - Small Group/Team Communication

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- WRI420 - Document Design

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- PWR355 - Project Management for Writers

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE314 - Argumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI415 - Technical Editing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- COM358 - Communication and the Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI410 - Proposal & Grant Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI350 - Documentation Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Emphasis Elective Credit
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- COM345 - Organization Comm I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PWR499 - Internship in Prof. Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	1 - 9
Clinical	-
Criticality	No

Requirement Select

- Science Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Emphasis Elective Credit
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	18	0

Requirement Select

- PWR499 - Internship in Prof. Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	1 - 9
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Com Department Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division Com Department Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Emphasis Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	18	0

Requirement Select

- COM424 - Capstone Course

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- PWR499 - Internship in Prof. Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

1 - 9

Clinical

-

Criticality

No

Requirement Select

- Upper Division Com Department Elective Credit (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Upper Division Emphasis Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Major Credits

0

Total Minor Credits

0

Total Elective Credits

0

Proposal & Grant Writing, Certificate

Overview

Program Long Title
Proposal & Grant Writing Cert

Program Title
Proposal & Grant Writing Cert

Department(s)
Communication

Degree Designation
CERT

Program Level

UG

CIP Code

231303

Health Communication, Certificate

Overview

Program Long Title
Health Communication Cert

Program Title
Health Communication Cert

Department(s)
Communication

Degree Designation
CERT

Program Level	CIP Code
UG	090100

Dispute Resolution, Certificate

Overview

Program Long Title
Dispute Resolution Certificate

Program Title
Dispute Resolution Certificate

Department(s)
Communication

Degree Designation
CERT

Program Level	CIP Code
UG	302801

Technical & Medical Writing, Certificate

Overview

Program Long Title
Technical Medical Writing Cert

Program Title
Technical Medical Writing Cert

Department(s)
Communication

Degree Designation
CERT

Program Level	CIP Code
UG	231303

UX Research & Design, Certificate

Overview

Program Long Title
UX Research & Design Cert

Program Title
UX Research & Design Cert

Department(s)
Communication

Degree Designation
CERT

Program Level	CIP Code
UG	231303

UX Writing, Certificate

Overview

Program Long Title
UX Writing Cert

Program Title
UX Writing Cert

Department(s)
Communication

Degree Designation
CERT

Program Level	CIP Code
UG	231303

Human Interaction, Minor

Overview

Program Long Title
Human Interaction

Program Title
Human Interaction

Department(s)
Communication

Degree Designation
MINOR

Program Level	CIP Code
UG	090100

Professional Writing and Technical Communication, Minor

Overview

Program Long Title
Professional Wri & Tech Comm

Program Title
Professional Wri & Tech Comm

Department(s)
Communication

Degree Designation
MINOR

Program Level	CIP Code
UG	231303

Courses

ACAD101 - Student Success Sem

Overview

Course Subject Code	Course Number
ACAD	101

Department
Communication

Course Description
A course to facilitate the success of first year students at OIT. Emphasis on faculty-student and student-student interactions. Includes academic resources, campus services, the learning process, communication skills, health and wellness issues. May also include academic skills and career planning.

Academic Level (Course Level)
Undergraduate

ACAD107 - ACAD Seminar

Overview

Course Subject Code	Course Number
ACAD	107

Department
Communication

Course Description
Hours and subject will vary each term.

Academic Level (Course Level)
Undergraduate

ACAD207 - Seminar

Overview

Course Subject Code	Course Number
ACAD	207

Department
Communication

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACAD307 - Seminar

Overview

Course Subject Code	Course Number
ACAD	307

Department
Communication

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACAD407 - Seminar

Overview

Course Subject Code	Course Number
ACAD	407

Department
Communication

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACAD507 - Seminar

Overview

Course Subject Code	Course Number
ACAD	507

Course Long Title
Seminar

Department
Communication

Academic Level (Course Level)
Graduate

COM000 - Communication Elective

Overview

Course Subject Code	Course Number
COM	000

Department
Communication

Academic Level (Course Level)
Undergraduate

COM100Z - Introduction to Communication

Overview

Course Subject Code	Course Number
COM	100Z

Department
Communication

Course Description
COMM 100z is a survey course offering an overview of the communication discipline that emphasizes the development of best communication practices in different contexts.

Academic Level (Course Level)
Undergraduate

COM104 - Intro to Communication Studies

Overview

Course Subject Code	Course Number
COM	104

Department
Communication

Course Description
Introduces Communication Studies. Principles and applications developed in context of career exploration, interpersonal, group, organizational, and technical communication. Includes history and structure of communication field, career paths, research skills and role of technology. Required for COM majors.

Academic Level (Course Level)
Undergraduate

COM105 - Intro to Communication Theory

Overview

Course Subject Code	Course Number
COM	105

Department
Communication

Course Description
Introduces basic theories and concepts in the Communication discipline. Acquaints students with major theories fundamental to communication research and to communication interactions including interpersonal, organizational, media and intercultural.

Academic Level (Course Level)
Undergraduate

COM106 - Introduction to Comm Research

Overview

Course Subject Code	Course Number
COM	106

Department

Communication

Course Description

Introduces research in the communication discipline. Students find and analyze quantitative, qualitative and critical research. Introduces communication research as a process composed of methods, data-gathering, analysis, conclusions.

Academic Level (Course Level)

Undergraduate

COM107 - Seminar

Overview

Course Subject Code	Course Number
COM	107

Department

Communication

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

COM109 - Intro to Communication Tech

Overview

Course Subject Code	Course Number
COM	109

Department

Communication

Course Description

Introduction to the use of communication technology. Emphasis on the use of various communication technologies including social media, instant messaging, and visual communication technologies. Features projects using technology to effectively communicate to various audiences.

Academic Level (Course Level)

Undergraduate

COM111Z - Public Speaking

Overview

Course Subject Code	Course Number
COM	111Z

Department

Communication

Course Description

COMM 111z emphasizes developing communication skills by examining and demonstrating how self-awareness, audience, content, and occasion influence the creation and delivery of speeches and presentations.

Academic Level (Course Level)

Undergraduate

COM115 - Intro to Mass Communication

Overview

Course Subject Code	Course Number
COM	115

Department

Communication

Course Description

Provides an introduction to mass media. Focuses on understanding how media operate with emphasis on contemporary social, economic, political, cultural and ethical issues.

Academic Level (Course Level)

Undergraduate

COM135 - Communication Software

Overview

Course Subject Code	Course Number
COM	135

Department

Communication

Course Description

Techniques for coordinated use of office software, including word processing (style definitions, template creations, graphic use), data analysis (function use, custom functions, data importation) and presentation (master style definitions, visual effects, dynamic content creation) software, and cross-application functions.

Academic Level (Course Level)

Undergraduate

COM205 - Intercultural Communication

Overview

Course Subject Code	Course Number
COM	205

Department

Communication

Course Description

Introduces basic theories and concepts of intercultural communication. Builds understanding and skills enabling students to analyze intercultural interactions and develop and practice effective communication strategies.

Academic Level (Course Level)

Undergraduate

COM207 - Seminar

Overview

Course Subject Code	Course Number
COM	207

Department

Communication

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

COM215 - Creativity in Comm

Overview

Course Subject Code	Course Number
COM	215

Department

Communication

Course Description

Define and learn how personal and group creativity can be enhanced. Study the lives of creative individuals in the arts, sciences, and industry. Individual and group exercises designed to enhance the creative process.

Academic Level (Course Level)

Undergraduate

COM216 - Essen of Grammar & Punctuation

Overview

Course Subject Code	Course Number
COM	216

Department

Communication

Course Description

Involves learning basic and advanced grammar and punctuation to provide a firm foundation for any type of writing.

Academic Level (Course Level)

Undergraduate

COM218Z - Interpersonal Communication

Overview

Course Subject Code	Course Number
COM	218Z

Department

Communication

Course Description

COMM218Z increases the knowledge and use of competent communication skills to better understand oneself, others, and the role of communication in interpersonal relationships.

Academic Level (Course Level)

Undergraduate

COM237 - Intro to Visual Communication

Overview

Course Subject Code	Course Number
COM	237

Department

Communication

Course Description

Introduces theory and rhetoric through several perspectives: personal, historical, technical, ethical, cultural, and critical. Emphasizes relationships between form/content, word/image, and societal role of visual communication.

Academic Level (Course Level)

Undergraduate

COM248 - Digital Media Production

Overview

Course Subject Code	Course Number
COM	248

Department

Communication

Course Description

Study of the technical aspects of digital media design and production. Hands-on experience in creating and editing video and audio. Production of video and audio for specific contexts.

Academic Level (Course Level)

Undergraduate

COM255 - Communication Ethics

Overview

Course Subject Code	Course Number
COM	255

Department

Communication

Course Description

Examines typical communication situations involving ethics. Provides methodologies for critically evaluating ethical situations. Uses case approach with emphasis on application.

Academic Level (Course Level)

Undergraduate

COM256 - Public Relations

Overview

Course Subject Code	Course Number
COM	256

Department

Communication

Course Description

Introduces history and practice of public relations; emphasizes practical accomplishment of public relations campaigns. Topics: internal/external audiences, brochures, press releases, internal documents, pitches, issue management, and project design, execution. Service learning course.

Academic Level (Course Level)

Undergraduate

COM276 - Democracy and Media

Overview

Course Subject Code	Course Number
COM	276

Department

Communication

Course Description

Provides introduction to ownership/structure of media, politics, objectives, and links to the corporate and national economy. Introduces project analysis through ownership, sourcing, flak, advertising, ideology filters.

Academic Level (Course Level)

Undergraduate

COM301 - Rhetorical Theory & Applicatn

Overview

Course Subject Code	Course Number
COM	301

Department

Communication

Course Description

Introduces rhetorical theories and applications to personal, business and industrial settings. Focuses on evolution of rhetoric. Examines rhetorical effects on individual, group and mass communication.

Academic Level (Course Level)

Undergraduate

COM307 - Seminar

Overview

Course Subject Code	Course Number
COM	307

Department

Communication

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

COM309 - Communication Tech in Use

Overview

Course Subject Code	Course Number
COM	309

Department
Communication

Course Description
Advanced use of communication technology. Emphasis on the use of communication technology to achieve specific communication goals. Features a large project using multiple communication technologies to reach specific audiences.

Academic Level (Course Level)
Undergraduate

COM320 - Advanced Intercultural Comm

Overview

Course Subject Code	Course Number
COM	320

Department
Communication

Course Description
Builds on theories from COM 205. Focuses on analyzing intercultural interactions in specific work contexts, for example health care, education, social services, business and technology.

Academic Level (Course Level)
Undergraduate

COM325 - Gender and Communication

Overview

Course Subject Code	Course Number
COM	325

Department
Communication

Course Description
Introduces basic theories and concepts of culturally-derived gendered communication patterns and behaviors. Builds understanding and skills enabling students to analyze those patterns and behaviors in order to develop and practice effective communication strategies.

Academic Level (Course Level)
Undergraduate

COM326 - Communication Research

Overview

Course Subject Code	Course Number
COM	326

Department
Communication

Course Description
Introduction to research methods and design. Design of both quantitative and qualitative research. Emphasis on communication based methodologies: focus groups, directed interviews, and ethnomethodologies. Includes a research project and written and oral research reports.

Academic Level (Course Level)
Undergraduate

COM336 - Nonverbal Communication

Overview

Course Subject Code	Course Number
COM	336

Department
Communication

Course Description
Nonlinguistic aspects of human communication. Examines the relationships between nonverbal and verbal communication behavior and nonverbal communication skill. Topics include space, distance, environment, touch, gesture, facial expression and gaze as communication.

Academic Level (Course Level)
Undergraduate

COM345 - Organization Comm I

Overview

Course Subject Code	Course Number
COM	345

Department
Communication

Course Description
Studies communication in organizations, including message movement, exchange and interpretation, identification of variables, roles and patterns influencing communication in organizations.

Academic Level (Course Level)
Undergraduate

COM346 - Health Communication

Overview

Course Subject Code	Course Number
COM	346

Department

Communication

Course Description

Overview of interpersonal, social, and cultural issues in health communication, including family interaction, roles of patients and caregivers, communication in health organizations and the role of media.

Academic Level (Course Level)

Undergraduate

COM358 - Communication and the Law

Overview

Course Subject Code	Course Number
COM	358

Department

Communication

Course Description

Issues involved in establishing legal parameters within which professional communicators work. Evolving interpretations of the first amendment, balancing conflicting first amendment claims, libel, limits of a free press, prior restraint, licensing and regulation.

Academic Level (Course Level)

Undergraduate

COM347 - Negotiation & Conflict Resol'n

Overview

Course Subject Code	Course Number
COM	347

Department

Communication

Course Description

Examines theories and strategies for conduct of conflict and negotiation across contexts. Topics: destructive conflict cycles, confronting/managing conflict, social/psychological aspects, conflict analysis, causes, and promoting constructive conflict.

Academic Level (Course Level)

Undergraduate

COM365 - Electronic Comm & Society

Overview

Course Subject Code	Course Number
COM	365

Department

Communication

Course Description

Explores the Internet as a mediator of human communication and its effect on society. Topics include: social media, informatics, entertainment/workplace contexts, and the convergence of technology as a global village.

Academic Level (Course Level)

Undergraduate

COM348 - Facilitation

Overview

Course Subject Code	Course Number
COM	348

Department

Communication

Course Description

Provides experience leading small groups through deliberative processes including participatory decision making and conflict resolution. Provides theoretical and practical understanding of facilitation focusing on building skills in group leadership.

Academic Level (Course Level)

Undergraduate

COM401 - Civil Engineering Project I

Overview

Course Subject Code	Course Number
COM	401

Department

Communication

Course Description

First term of two-term sequence integrating civil engineering design, group dynamics and technical communications. Students receive three credit hours in civil engineering design (CE 401) and three credit hours in communication for general education (COM 401). Students will be introduced to a major civil engineering project, prepare a professional engineering proposal and function effectively in engineering design teams. Formal written proposal and oral presentation of the proposal are required. Prerequisite: Civil Engineering advisor consent

Academic Level (Course Level)

Undergraduate

COM407 - Seminar

Overview

Course Subject Code	Course Number
COM	407

Department

Communication

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

COM420 - Externship

Overview

Course Subject Code	Course Number
COM	420

Department

Communication

Course Description

(Hours to be arranged each term). Students work in applied settings in their emphasis under the supervision of an on-site mentor. Regular contact with extern advisor. Written externship reports required. Senior standing required.

Academic Level (Course Level)

Undergraduate

COM421 - Senior Project I

Overview

Course Subject Code	Course Number
COM	421

Department

Communication

Course Description

Allows students to initiate research on a significant capstone project in the communication field. Focuses on development of a proposal and presentation. Senior standing required.

Academic Level (Course Level)

Undergraduate

COM422 - Senior Project II

Overview

Course Subject Code	Course Number
COM	422

Department

Communication

Course Description

Continues work of COM 421, focusing on project research methodologies.

Academic Level (Course Level)

Undergraduate

COM423 - Senior Project III

Overview

Course Subject Code	Course Number
COM	423

Department

Communication

Course Description

Focuses on completion of project, including final documentation and presentation.

Academic Level (Course Level)

Undergraduate

COM424 - Capstone Course

Overview

Course Subject Code	Course Number
COM	424

Department

Communication

Course Description

Communication Studies majors complete a significant research project that bridges education with future profession or graduate school. Students collaboratively produce a project or portfolio reflecting strong critical thinking and application of communication theory and practice. Project topics vary by instructor. Senior standing required.

Academic Level (Course Level)

Undergraduate

COM425 - Mediation

Overview

Course Subject Code	Course Number
COM	425

Department

Communication

Course Description

Prepares students to mediate in public and private settings. Covers conflict management strategies, processes and issues including gender and cultural awareness.

Academic Level (Course Level)

Undergraduate

COM426 - Mediation Practicum

Overview

Course Subject Code	Course Number
COM	426

Department

Communication

Course Description

Mediation practice and observation with experienced mediators through the Klamath Mediation Center. Students will progress from observation, to co-mediation, and finally, mediation of real disputes. Builds on the theoretical insights and practice of COM 425.

Academic Level (Course Level)

Undergraduate

COM437 - Comm Training & Devpmt

Overview

Course Subject Code	Course Number
COM	437

Department

Communication

Course Description

Prepares students to facilitate communication skills workshops and differentiate between organizational structure and communication training needs. Topics include: audience analysis, learning theory, curriculum design, presentation skills, classroom dynamics and assessment.

Academic Level (Course Level)

Undergraduate

COM445 - Organiz'l Communication II

Overview

Course Subject Code	Course Number
COM	445

Department

Communication

Course Description

Examines organizational communication systems and the design of communication audit procedures. Synoptic reports of findings and recommendations.

Academic Level (Course Level)

Undergraduate

COM446 - Communication & Leadership

Overview

Course Subject Code	Course Number
COM	446

Department

Communication

Course Description

Explores the relationship between communication and leadership within organizations and the development and application of communication competencies associated with effective leadership.

Academic Level (Course Level)

Undergraduate

JOUR107 - Seminar

Overview

Course Subject Code	Course Number
JOUR	107

Department
Communication

Academic Level (Course Level)
Undergraduate

JOUR407 - Seminar

Overview

Course Subject Code	Course Number
JOUR	407

Department
Communication

Academic Level (Course Level)
Undergraduate

JOUR207 - Seminar

Overview

Course Subject Code	Course Number
JOUR	207

Department
Communication

Academic Level (Course Level)
Undergraduate

PWR101 - Intro to Professional Writing

Overview

Course Subject Code	Course Number
PWR	101

Department
Communication

Course Description
Introduction to the skills and tools necessary for a carrier in writing. Collaborative writing, editing, common genres, giving and receiving professional feedback. Exploration of scientific and technical, digital, and organizational writing to prepare students to choose a major track.

Academic Level (Course Level)
Undergraduate

JOUR211 - Intro to Journalism

Overview

Course Subject Code	Course Number
JOUR	211

Department
Communication

Academic Level (Course Level)
Undergraduate

PWR102 - Intro to Web Authoring

Overview

Course Subject Code	Course Number
PWR	102

Department
Communication

Academic Level (Course Level)
Undergraduate

JOUR307 - Seminar

Overview

Course Subject Code	Course Number
JOUR	307

Department
Communication

Academic Level (Course Level)
Undergraduate

PWR206 - Social Media

Overview

Course Subject Code	Course Number
PWR	206

Department

Communication

Course Description

Strategies for integrating social media and digital marketing as part of professional writing. Practical steps, techniques, and best practices geared toward integrating social media and digital programs into business, personal, and artistic communication.

Academic Level (Course Level)

Undergraduate

PWR215 - Writing in the Public Interest

Overview

Course Subject Code	Course Number
PWR	215

Department

Communication

Course Description

Emphasizes professional writing needs for nonprofit and community stakeholders. Focuses on analyzing particular rhetorical situations and using appropriate rhetorical strategies to produce multiple issue-focused documents in various genres. Culminates in professional portfolio for prospective client.

Academic Level (Course Level)

Undergraduate

PWR220 - Interaction Design

Overview

Course Subject Code	Course Number
PWR	220

Department

Communication

Course Description

Explores the design of the interaction between users and products, including visual, audio, and interactive media. Workshops focus on choosing appropriate format and delivery mechanisms using the five dimensions of interaction: words, visual representation, physical objects or space, time, and behavior.

Academic Level (Course Level)

Undergraduate

PWR306 - Writing for the Health Prof.

Overview

Course Subject Code	Course Number
PWR	306

Department

Communication

Course Description

Emphasizes professional writing needs of health professionals. Focuses on analyzing particular rhetorical situations and using appropriate rhetorical strategies to produce multiple issue-focused documents in various genres. Culminates in simulated outreach project requiring transition of expert medical content for non-expert audiences.

Academic Level (Course Level)

Undergraduate

PWR320 - Content Strategy

Overview

Course Subject Code	Course Number
PWR	320

Department

Communication

Course Description

Advanced practice in documentation writing, information architecture and modular writing. Students will learn industry-standard writing practices and gain proficiency in content management and writing for re-use.

Academic Level (Course Level)

Undergraduate

PWR325 - Usability Testing

Overview

Course Subject Code	Course Number
PWR	325

Department
Communication

Course Description
Applied research methods for assessing information systems from a user-centered design perspective. Focus on usability testing and its various techniques, including think-aloud protocol, performance testing, lab and field testing, moderated and unmoderated testing, face-to-face and remote testing.

Academic Level (Course Level)
Undergraduate

PWR330 - User Research

Overview

Course Subject Code	Course Number
PWR	330

Department
Communication

Course Description
Applied research methods for developing interfaces, documents, and applications. Planning, testing, and revising a user experience. User analytics, field methods, interviewing, focus groups, usability testing, and other workplace practices for inquiry into users and audiences.

Academic Level (Course Level)
Undergraduate

PWR355 - Project Management for Writers

Overview

Course Subject Code	Course Number
PWR	355

Department
Communication

Course Description
Focuses on project planning, management, and assessment for large-scale communication (print and electronic) projects. Introduces the theory and practices of audience-, organization-, and process-based approaches to content strategy.

Academic Level (Course Level)
Undergraduate

PWR407 - Seminar

Overview

Course Subject Code	Course Number
PWR	407

Department
Communication

Academic Level (Course Level)
Undergraduate

PWR426 - Design Thinking in TPC

Overview

Course Subject Code	Course Number
PWR	426

Department
Communication

Course Description
Employs design thinking methods and approach to solving problems in technical and professional communication (TPC). Focus on a creative, flexible and iterative process that fosters innovation through five stages: empathy, define, ideate, prototype, and test.

Academic Level (Course Level)
Undergraduate

PWR499 - Internship in Prof. Writing

Overview

Course Subject Code	Course Number
PWR	499

Department
Communication

Course Description
Students work in applied settings in their emphasis and under the supervision of an on-site mentor. Regular contact with extern advisor required. Written externship reports required. Writing proficiency exam must be passed before starting internship.

Academic Level (Course Level)
Undergraduate

SPE107 - Seminar

Overview

Course Subject Code	Course Number
SPE	107

Department
Communication

Academic Level (Course Level)
Undergraduate

SPE207 - Seminar

Overview

Course Subject Code	Course Number
SPE	207

Department
Communication

Academic Level (Course Level)
Undergraduate

SPE307 - Seminar

Overview

Course Subject Code	Course Number
SPE	307

Department
Communication

Academic Level (Course Level)
Undergraduate

SPE314 - Argumentation

Overview

Course Subject Code	Course Number
SPE	314

Department
Communication

Academic Level (Course Level)
Undergraduate

SPE321 - Small Group/Team Communication

Overview

Course Subject Code	Course Number
SPE	321

Department
Communication

Course Description
Provides instruction and experience in decision making through group processes designed to develop competent team leaders and participants. Participation in and evaluation of a variety of group communication exercises.

Academic Level (Course Level)
Undergraduate

SPE407 - Seminar

Overview

Course Subject Code	Course Number
SPE	407

Department
Communication

Academic Level (Course Level)
Undergraduate

WRI107 - Seminar

Overview

Course Subject Code	Course Number
WRI	107

Department
Communication

Academic Level (Course Level)
Undergraduate

WRI121Z - Composition I

Overview

Course Subject Code	Course Number
WRI	121Z

Department

Communication

Course Description

WRI 121Z engages students in the study and practice of critical thinking, reading, and writing. The course focuses on analyzing and composing across varied rhetorical situations and in multiple genres. Students will apply key rhetorical concepts flexibly and collaboratively throughout their writing and inquiry processes.

Academic Level (Course Level)

Undergraduate

WRI122Z - Composition II

Overview

Course Subject Code	Course Number
WRI	122Z

Department

Communication

Course Description

WRI 122Z builds on concepts and processes emphasized in WRI 121Z, engaging with inquiry, research, and argumentation in support of students' development as writers. The course focuses on composing and revising in research-based genres through the intentional use of rhetorical strategies. Students will find, evaluate, and interpret complex material, including lived experience; use this to frame and pursue their own research questions; and integrate material purposefully into their own compositions.

Academic Level (Course Level)

Undergraduate

WRI207 - Seminar

Overview

Course Subject Code	Course Number
WRI	207

Department

Communication

Academic Level (Course Level)

Undergraduate

WRI214 - Business Correspondence

Overview

Course Subject Code	Course Number
WRI	214

Department

Communication

Course Description

Focuses on theories and strategies governing written correspondence. Designed to equip the student to perform effectively in a variety of business writing situations; major emphasis on practical applications.

Academic Level (Course Level)

Undergraduate

WRI216 - Public Relations Writing

Overview

Course Subject Code	Course Number
WRI	216

Department

Communication

Course Description

Students will be introduced to the basics of writing and designs public relations communication, including press releases, newsletters, brochures, and other written public relations communication tactics.

Academic Level (Course Level)

Undergraduate

WRI225 - Writing Nonfiction

Overview

Course Subject Code	Course Number
WRI	225

Department

Communication

Course Description

Study of strategies for nonfiction composition. Both creation of text and analysis of existing texts to apply the principles of effective nonfiction prose. Practical steps, techniques, and best practices geared toward analyzing, creating, organizing, revising effective nonfiction prose for publication. Significant amount of time spent writing and editing.

Academic Level (Course Level)

Undergraduate

WRI227Z - Technical Writing

Overview

Course Subject Code	Course Number
WRI	227Z

Department

Communication

Course Description

WRI 227Z introduces students to producing instructive, informative, and persuasive technical/professional documents aimed at well-defined and achievable outcomes. The course focuses on presenting information using rhetorically appropriate style, design, vocabulary, structure, and visuals. Students can expect to gather, read, and analyze information and to learn a variety of strategies for producing accessible, usable, reader-centered deliverable documents that are clear, concise, and ethical.

Academic Level (Course Level)

Undergraduate

WRI305 - Writing for the Marketplace

Overview

Course Subject Code	Course Number
WRI	305

Department

Communication

Course Description

Designed to introduce the basics of professional writing- fiction, personal experience, and technical articles, etc. for publication, including marketing and manuscript preparation. Each student must submit at least one article or story (8 pages or more) for publication during the term.

Academic Level (Course Level)

Undergraduate

WRI307 - Seminar

Overview

Course Subject Code	Course Number
WRI	307

Department

Communication

Academic Level (Course Level)

Undergraduate

WRI325 - Advanced Composition

Overview

Course Subject Code	Course Number
WRI	325

Department

Communication

Course Description

Advanced writing in varied topics specific to disciplines and realistic assignments in professional writing. 30 to 40 pages of formal writing required with several long pieces designed for publication. Open to advanced students in a variety of majors.

Academic Level (Course Level)

Undergraduate

WRI327 - Advanced Tech Writing

Overview

Course Subject Code	Course Number
WRI	327

Department

Communication

Course Description

Processes involved in technical writing and methods of preparing technical data; offers a variety of writing problems to provide opportunities for the student to develop precision in statement and in graphic presentation.

Academic Level (Course Level)

Undergraduate

WRI328 - Style

Overview

Course Subject Code	Course Number
WRI	328

Department

Communication

Course Description

Focuses on developing strategies for diagnosing, analyzing, and revising clarity using the technical vocabulary of style. Approaches style as a rhetorical concern dependent on audience and other aspects of the situation. Applicable to both research and professional/technical writing.

Academic Level (Course Level)

Undergraduate

WRI345 - Science Writing

Overview

Course Subject Code	Course Number
WRI	345

Department

Communication

Course Description

Processes and strategies involved in communicating scientific information to professional and lay audiences, including: topic, hypothesis, and experimental method description; literature review strategies; writing and project management strategies; visual display of quantitative data.

Academic Level (Course Level)

Undergraduate

WRI410 - Proposal & Grant Writing

Overview

Course Subject Code	Course Number
WRI	410

Department

Communication

Course Description

Provides theory and skills in proposal writing for seeking funding from public and private agencies and for preparing proposals in business and industrial settings. Focuses on the process of preparing proposals, including analyzing audiences, conducting research, organizing, writing, and editing.

Academic Level (Course Level)

Undergraduate

WRI350 - Documentation Development

Overview

Course Subject Code	Course Number
WRI	350

Department

Communication

Course Description

Provides students with basic tools for preparing documentation. Focuses on usability of documentation and includes planning and scheduling, audience evaluation, use of appropriate examples and illustrations, style, editing technique, organization and research.

Academic Level (Course Level)

Undergraduate

WRI415 - Technical Editing

Overview

Course Subject Code	Course Number
WRI	415

Department

Communication

Course Description

Focuses on the role of the technical editor in business and industry. Examines the publishing process, the dynamics of the editor/writer relationship, and mechanics and techniques of proofreading and copyediting. Provides considerable practice in copyediting and proofreading manuscripts.

Academic Level (Course Level)

Undergraduate

WRI407 - Seminar

Overview

Course Subject Code	Course Number
WRI	407

Department

Communication

Academic Level (Course Level)

Undergraduate

WRI420 - Document Design

Overview

Course Subject Code	Course Number
WRI	420

Department

Communication

Course Description

Applies publishing and graphic arts principles to the preparation of professional publications and oral presentation materials. Includes typography, design principles, the use of graphical elements, and integration of text and graphics.

Academic Level (Course Level)

Undergraduate

WRI507 - Seminar

Overview

Course Subject Code	Course Number
WRI	507

Department

Communication

Academic Level (Course Level)

Graduate

WRI510 - Grant Proposal Writing

Overview

Course Subject Code	Course Number
WRI	510

Department

Communication

Course Description

This Provides theory and skills in proposal writing for seeking funding from public and private agencies and for preparing proposals in business and industrial settings. Focuses on the process of preparing proposals, including analyzing audiences, conducting research, organizing, writing, and editing.

Academic Level (Course Level)

Graduate

WRI521 - Writing at the Grad Level

Overview

Course Subject Code	Course Number
WRI	521

Department

Communication

Course Description

Focuses on developing graduate-level writing and research skills with emphasis on field-appropriate academic style, conventions, and research literacy. Culminates in synthesis of professional and academic sources into a substantive literature review.

Academic Level (Course Level)

Graduate

Computer Systems Eng Tech Department

Calvin Caldwell, *Department Chair*

Professors: S. Andrei, T. Breedlove, C. Caldwell, D. Lynn

Associate Professors: P. Howard, T. Scevers, C. Heiner

Assistant Professors: G. Drouant, G. Jang, F. Karakaya, P. Nguyen

Instructors: P. Barua

Degree Offered

- Bachelor of Science in Computer Engineering Technology

Students who complete the curriculum requirements in Computer Engineering Technology will be knowledgeable in the theory and applications of both computer hardware and software.

Career Opportunities

Work in the field of computer engineering technology includes: application specific integrated circuit development, firmware development, embedded systems design, software development, testing and applications of technology.

Computer Engineering Technology graduates will be involved in development of hardware, software and embedded applications that adapt digital logic and computer systems to solve problems in a wide range of industries from industrial manufacturing to consumer electronics. In addition, they may be involved in product testing and qualification or in application engineering, customer support, sales and public relations.

The curriculum provides the depth and breadth of technical capability necessary for an engineer. The graduate is qualified to assume a responsible position in business or industry. Graduates may be responsible for the development, use and the maintenance of computing systems, and for the supervision of personnel.

New careers are constantly evolving in both the hardware and software branches of this field. A diversified study allows the graduate to quickly adapt to changing market conditions.

Mission

The mission of the Computer Engineering Technology (CET) Degree program in the Computer Systems Engineering Technology (CSET) Department at Oregon Institute of Technology is to provide an excellent education incorporating industry-relevant, applied laboratory-based design and analysis to our students. The program is to serve a constituency consisting of its graduates, employers in the high-technology industry and the members of our IAB. Major components of the CET program's mission in the CSET department are to:

- educate computer engineering technology students to meet current and future industrial challenges;
- promote a sense of scholarship, leadership and professional service among our graduates;
- enable students to create, develop, and disseminate knowledge for the applied engineering environment;
- expose students to a cross-disciplinary educational program;
- provide high tech industry employers with graduates in the computer engineering technology profession

Program Learning Outcomes

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. an ability to function effectively as a member as well as a leader on technical teams.

Programs

Computer Engineering Technology, BS

Overview

Program Long Title
Computer Engineering Tech

Program Title
Computer Engineering Tech

Department(s)
Computer Systems Eng Tech

Degree Designation
BS

Program Level
UG

CIP Code
151201

Degree Maps

Degree Map Name
Advising Guide - Computer Engineering Tech

Total Degree Map Credits
184

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- CST116 - C++ Programming I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST162 - Digital Logic I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	18	0

Requirement Select

- CST126 - C++ Programming II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST130 - Computer Organization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- CST120 - Embedded C

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST131 - Computer Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST136 - OOP with C++

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- CST133 - Digital Logic II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST134 - Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- CST250 - Computer Assembly Lang

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- CST204 - Intro to Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST231 - Digital Systems Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE221 - Circuits I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH253 - Sequences and Series

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- EE223 - Circuits II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST240 - Linux Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MATH253Z - Calculus: Sequences and Series
OR
- MATH465 - Mathematical Statistics
OR
- MATH341 - Linear Algebra I
OR
- MATH321 - Appl Diff Equation I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- CST337 - Embedded System Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CST315 - Embedded Sensor Inter & I/O

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST371 - Embedded Systems Development I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- CST331 - Microproc Periph Interfacing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CST372 - Embedded Systems Develop II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select	
• CST351 - Digital Systems Design II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• CST373 - Embedded Systems Develop III	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• CST374 - Embedded Project Proposal	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select	
• PHY223 - General Physics w/Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• WRI327 - Advanced Tech Writing	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	12	0

Requirement Select

- CST418 - Data Comm & Networks

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST471 - Embedded Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved Technical Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	13	0

Requirement Select

- CST344 - Interm Computer Arch

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST472 - Embedded Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics
- OR**
- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved Technical Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST473 - Embedded Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- CST442 - Adv Comp Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Data Science, BS

Overview

Program Long Title

Data Science

Program Title

Data Science

Department(s)

Computer Systems Eng Tech

Degree Designation

BS

Program Level

UG

CIP Code

303001

Degree Maps

Degree Map Name

Advising Guide - Data Science

Total Degree Map Credits

183

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

This map shows required courses for the degree and recommended terms to take each course *(the term sequence is subject to change depending on transfer courses, AP/IB/CLEP credit, and course availability)*.

Degree Required courses and recommended terms during which they should be taken:

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	14	0

Requirement Select

- DSAI201 - Intro to Data Science

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

205 / 727

Requirement Select	
• COM111Z - Public Speaking	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Freshman	Winter	14	Credits
			0

Requirement Select	
• CST116 - C++ Programming I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• GIS134 - Geographic Info Systems	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- CST126 - C++ Programming II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	15	0

Requirement Select

- CST136 - OOP with C++

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• MATH252Z - Integral Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Lab Science General Education	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• Communication Electives	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select	
• MATH254 - Vector Calculus I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• CST211 - Data Structures	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• CST236 - Engr. for Quality Software	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select

- DSAI211 - Data Science Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Upper Division Writing Elective

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	16	0

Requirement Select

- MATH341 - Linear Algebra I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH451 - Numerical Methods I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MATH465 - Mathematical Statistics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- STAT331 - Data Visualization and Dashboa

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- GIS316 - Geospatial Vector Analysis

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- DSAI405 - Modern Methods in Data Science

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS334 - Business Analytics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- STAT332 - Statistical Analysis of Networ

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- MATH342 - Linear Algebra II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH362 - Statistical Methods II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- STAT412 - Regression & Times Series

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- General Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	18	0

Requirement Select

- DSAI441 - Supervised Machine Learning

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CST324 - Database Systems and Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHIL355 - Ethics and Philosophy of AI

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- General Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- MATH327 - Discrete Mathematics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- DSAI442 - Unsupervised Learning

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- DSAI443 - Deep Learning

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- General Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- CST475 - Big-Data Analysis

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

5

Clinical

-

Criticality

No

Requirement Select

- DSAI444 - Reinforcement Learning

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- General Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- MATH or CST Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Dual Computer/Software Engineering Technology

Overview

Program Long Title
Dual Compute/Software Eng Tech

Program Title
Dual Compute/Software Eng Tech

Department(s)
Computer Systems Eng Tech

Degree Designation
BS

Program Level CIP Code
UG 151299

Embedded Systems Engineering Technology, BS

Overview

Program Long Title
Embedded Systems Eng Tech

Program Title
Embedded Systems Eng Tech

Department(s)
Computer Systems Eng Tech

Degree Designation
BS

Program Level CIP Code
UG 151299

Degree Maps

Degree Map Name
Advising Guide - Embedded Systems Eng Tech

Total Degree Map Credits
185

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- CST116 - C++ Programming I

Course Requirement Group
Course Requirement Group - (Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 0 - 6
Clinical -
Criticality No

Requirement Select

- CST162 - Digital Logic I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- CST126 - C++ Programming II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- CST130 - Computer Organization

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- CST120 - Embedded C

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST131 - Computer Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST136 - OOP with C++

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- CST133 - Digital Logic II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST134 - Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- CST250 - Computer Assembly Lang

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST276 - Software Design Pattern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- CST204 - Intro to Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST231 - Digital Systems Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE221 - Circuits I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- CST211 - Data Structures

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST240 - Linux Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- CST315 - Embedded Sensor Inter & I/O

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST337 - Embedded System Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CST371 - Embedded Systems Development I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- CST347 - Real Time Embedded Op Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST372 - Embedded Systems Develop II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH465 - Mathematical Statistics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	18	0

Requirement Select

- CST373 - Embedded Systems Develop III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- CST374 - Embedded Project Proposal

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- CST417 - Embedded Networking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- CST455 - System on a Chip Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST471 - Embedded Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- CST456 - Embedded System Testing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST472 - Embedded Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- WRI350 - Documentation Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics
- OR**
- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST466 - Embedded System Security

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST473 - Embedded Senior Project

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- CST Upper Division Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Software Engineering Technology, BS

Overview

Program Long Title
Software Engineering Tech

Program Title
Software Engineering Tech

Department(s)
Computer Systems Eng Tech

Degree Designation
BS

Program Level

UG

CIP Code

151204

Degree Maps

Degree Map Name

Advising Guide - Software Engineering Tech

Total Degree Map Credits

181

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

Notes: One CST upper division elective course may be exchanged for an upper division MATH or STAT course.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- CST116 - C++ Programming I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- CST162 - Digital Logic I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- CST126 - C++ Programming II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- CST130 - Computer Organization

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- CST120 - Embedded C

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST131 - Computer Architecture

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST136 - OOP with C++

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- CST250 - Computer Assembly Lang

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• CST276 - Software Design Pattern	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• MATH252Z - Integral Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• WRI227Z - Technical Writing	
OR	
• WRI122Z - Composition II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	Credits
0			

Requirement Select	
• CST211 - Data Structures	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• MATH341 - Linear Algebra I	
OR	
• MATH253Z - Calculus: Sequences and Series	
OR	
• MATH254 - Vector Calculus I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• CST236 - Engr. for Quality Software	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- CST223 - Concepts of Programming Lang

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- CST238 - GUI Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH327 - Discrete Mathematics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CST240 - Linux Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	18	0

Requirement Select

- CST229 - Introduction to Grammars

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST316 - JR Team-Based Proj Dev I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST324 - Database Systems and Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group** (Lab Science Elective should**(Free Text)** be 200 level or higher)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- CST320 - Compiler Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST326 - JR Team-Based Proj Dev II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI350 - Documentation Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group (Lab Science Elective should****(Free Text)** be 200 level or higher)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- CST334 - Project Proposal

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- CST336 - JR Team-Based Proj Dev III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CST352 - Operating Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group (Lab Science Elective should****(Free Text)** be 200 level or higher)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- CST412 - Senior Development Proj

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- CST415 - Computer Networks

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division CST Technical Elective (Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- CST422 - Sr Development Project

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR**
- MATH465 - Mathematical Statistics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics
- OR**
- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CST432 - Senior Development Proj

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Upper Division CST Technical Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Upper Division CST Technical Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Courses

CST000 - CST Elective

Overview

Course Subject Code	Course Number
CST	000

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST107 - Seminar

Overview

Course Subject Code	Course Number
CST	107

Department

Computer Systems Eng Tech

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CST116 - C++ Programming I

Overview

Course Subject Code	Course Number
CST	116

Department

Computer Systems Eng Tech

Course Description

Computer concepts and problem solving methods using C++ programming language. Topics include: algorithms, simple data types, conditional and iterative structures, function definition, structured programming and documentation. Cannot be taken for graduation credit if student has completed MIS 116.

Academic Level (Course Level)

Undergraduate

CST120 - Embedded C

Overview

Course Subject Code	Course Number
CST	120

Department

Computer Systems Eng Tech

Course Description

C programming concepts for embedded platforms such as cross-compilation, storage classes, dynamic memory allocation, bitwise operations and masking. Embedded systems topics such as I/O ports, interrupts, timers and hardware interfacing will also be explored.

Academic Level (Course Level)

Undergraduate

CST126 - C++ Programming II

Overview

Course Subject Code	Course Number
CST	126

Department

Computer Systems Eng Tech

Course Description

Solving complex problems using advanced features of the C++ language. Topics include function usage, pointer data type, dynamic memory allocation, string manipulation, and structure and union data types. Emphasis is on structured program design techniques. Cannot be taken for graduation credit if student has completed MIS 126.

Academic Level (Course Level)

Undergraduate

CST130 - Computer Organization

Overview

Course Subject Code	Course Number
CST	130

Department

Computer Systems Eng Tech

Course Description

Introduces computer elements, organization, and instruction sets. Computer arithmetic, ALU, Registers, Datapath, memory and Control unit functions. Course includes laboratory.

Academic Level (Course Level)

Undergraduate

CST131 - Computer Architecture

Overview

Course Subject Code	Course Number
CST	131

Department

Computer Systems Eng Tech

Course Description

Continuation of CST 130. Topics include: main memory, cache, virtual memory, memory management, secondary storage, networks, operating system functions, and pipelining.

Academic Level (Course Level)

Undergraduate

CST133 - Digital Logic II

Overview

Course Subject Code	Course Number
CST	133

Department

Computer Systems Eng Tech

Course Description

Introduction to sequential logic, latches, flip-flops, registers, counters, timers, finite state machines. Implementation in programmable logic devices using HDL. DC and AC parameters, timing analysis. Laboratory is integral to class.

Academic Level (Course Level)

Undergraduate

CST134 - Instrumentation

Overview

Course Subject Code	Course Number
CST	134

Department

Computer Systems Eng Tech

Course Description

Lecture/laboratory course that provides students experience in measuring, calibrating, and testing digital and analog systems. Uses various test equipment for test and measurement of digital and analog components.

Academic Level (Course Level)

Undergraduate

CST136 - OOP with C++

Overview

Course Subject Code	Course Number
CST	136

Department

Computer Systems Eng Tech

Course Description

A study of object oriented programming with C++. Beginning and intermediate concepts are covered including classes, objects, member functions, overloading, inheritance, polymorphism, templates, and virtual functions. This course prepares students with a strong C background for upper division coursework using C++. Cannot be taken for graduation credit if student has completed MIS 136.

Academic Level (Course Level)

Undergraduate

CST137 - COBOL Programming

Overview

Course Subject Code	Course Number
CST	137

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST162 - Digital Logic I

Overview

Course Subject Code	Course Number
CST	162

Department

Computer Systems Eng Tech

Course Description

Introduction to combinational logic. Includes introduction to number systems, Boolean algebra, logic gates, Muxes, Decoders, Adders, Subtracters. Logic design using a hardware description language. Laboratory integral to the class.

Academic Level (Course Level)

Undergraduate

CST204 - Intro to Microcontrollers

Overview

Course Subject Code	Course Number
CST	204

Department

Computer Systems Eng Tech

Course Description

An introduction to microcontrollers (uC). Signals and data flow within simple systems. Introduction to instruction set, software development tools and I/O techniques, both programmed and interrupt-driven. Experiments using uC plus external circuits in applications.

Academic Level (Course Level)

Undergraduate

CST207 - Seminar

Overview

Course Subject Code	Course Number
CST	207

Department

Computer Systems Eng Tech

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CST211 - Data Structures

Overview

Course Subject Code	Course Number
CST	211

Department

Computer Systems Eng Tech

Course Description

Discussion of efficient methods of data representation such as stacks, queues, linked-lists, binary trees, B-trees. Emphasis is on data representation and algorithm analysis.

Academic Level (Course Level)

Undergraduate

CST223 - Concepts of Programming Lang

Overview

Course Subject Code	Course Number
CST	223

Department

Computer Systems Eng Tech

Course Description

Study of principles and fundamental concepts characterizing high-level programming languages, including history and survey of programming paradigms, syntax and semantic rules, data types, control flow and data abstraction.

Academic Level (Course Level)

Undergraduate

CST229 - Introduction to Grammars

Overview

Course Subject Code	Course Number
CST	229

Department

Computer Systems Eng Tech

Course Description

The concepts involving alphabet words and languages will be discussed. Related topics in automata and regular expression will be explored. Emphasis is on context free grammars, parse tree and parsing techniques.

Academic Level (Course Level)

Undergraduate

CST231 - Digital Systems Design I

Overview

Course Subject Code	Course Number
CST	231

Department

Computer Systems Eng Tech

Course Description

Concepts, terminology and techniques in design and implementation of digital system components. Synchronous sequential logic design with emphasis on state machines. System design process including synthesis using Verilog HDL and implementation in programmable logic devices. Lab integral to course.

Academic Level (Course Level)

Undergraduate

CST236 - Engr. for Quality Software

Overview

Course Subject Code	Course Number
CST	236

Department

Computer Systems Eng Tech

Course Description

This course teaches industry standard tools to enforce best practices to ensure quality software. Topics include project management, the Agile methodology, build management, and testing methodologies.

Academic Level (Course Level)

Undergraduate

CST238 - GUI Programming

Overview

Course Subject Code	Course Number
CST	238

Department

Computer Systems Eng Tech

Course Description

Introduction to HCI and GUI design in a rapid application development environment. Prerequisite material in delegation, events, and multithreaded programming included. Topics include: forms, containers, components, controls, modal/modeless windows, fixed/dynamic layouts, SDI/MDI applications, application internationalization, and data binding.

Academic Level (Course Level)

Undergraduate

CST240 - Linux Programming

Overview

Course Subject Code	Course Number
CST	240

Department

Computer Systems Eng Tech

Course Description

Students will study the structure of the Linux Operating System, including: file structure, input/output processing, commands and utilities, shell configuration, communications, and script programming languages. Students will write programs using processes, threads, and sockets.

Academic Level (Course Level)

Undergraduate

CST250 - Computer Assembly Lang

Overview

Course Subject Code	Course Number
CST	250

Department

Computer Systems Eng Tech

Course Description

Concepts of assembly language programming applied to a modern computer; data and instruction formats, address generation; data definition, storage allocation and program control statements; sub-routine library; CPU instruction set; control records; and writing of sub-routines.

Academic Level (Course Level)

Undergraduate

CST263 - Input/Output Devices II

Overview

Course Subject Code	Course Number
CST	263

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST264 - Input/Output Devices II Lab

Overview

Course Subject Code	Course Number
CST	264

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST271 - Comp Peripheral Dev Lab

Overview

Course Subject Code	Course Number
CST	271

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST276 - Software Design Pattern**Overview**

Course Subject Code	Course Number
CST	276

Department

Computer Systems Eng Tech

Course Description

Design patterns establish a common terminology allowing developers to use a common vocabulary and share a common viewpoint of the problem. Design patterns provide a common point of reference during the analysis and design phase of a project.

Academic Level (Course Level)

Undergraduate

CST307 - Seminar**Overview**

Course Subject Code	Course Number
CST	307

Department

Computer Systems Eng Tech

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CST315 - Embedded Sensor Inter & I/O**Overview**

Course Subject Code	Course Number
CST	315

Department

Computer Systems Eng Tech

Course Description

Introduction to data acquisition systems, sampling theory, ADC, DAC, signal conditioning, filters, amplifiers, noise, transducers and sensors, including bio-sensors, sensor interfacing, smart sensors, and busses. Lab integral to course.

Academic Level (Course Level)

Undergraduate

CST316 - JR Team-Based Proj Dev I**Overview**

Course Subject Code	Course Number
CST	316

Department

Computer Systems Eng Tech

Course Description

In this three-term sequence, students will work in teams to gather requirements, model, analyze, develop and integrate an n-tiered architecture software product. Students will learn about project management, software development lifecycle tools and processes, and quality assurance processes.

Academic Level (Course Level)

Undergraduate

CST318 - Computer Graphics I**Overview**

Course Subject Code	Course Number
CST	318

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST320 - Compiler Methods**Overview**

Course Subject Code	Course Number
CST	320

Department

Computer Systems Eng Tech

Course Description

Basic concepts of compiler design and operation. Topics include lexical and syntactical analysis, parsing, translation, data flow analysis and code generation, and implementation of a small compiler.

Academic Level (Course Level)

Undergraduate

CST321 - Intro to Microprocessors**Overview**

Course Subject Code	Course Number
CST	321

Department

Computer Systems Eng Tech

Course Description

Hardware and assembly level software needed to interface a microprocessor to I/O ports, memory and interrupt sources. Topics include bus controller design, timing analysis, programmed I/O and interrupts. Extensive lab provides experience with system design, test and debugging using the 80386DX microprocessor.

Academic Level (Course Level)

Undergraduate

CST324 - Database Systems and Design**Overview**

Course Subject Code	Course Number
CST	324

Department

Computer Systems Eng Tech

Course Description

An overview of Data Base Management Systems including requirements analysis methodology for data base design, conceptual DB design methodology including formulation of entity-relationship models, review of query language characteristics, and a comparison of commonly available DBMS.

Academic Level (Course Level)

Undergraduate

CST325 - State Machine Design**Overview**

Course Subject Code	Course Number
CST	325

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST326 - JR Team-Based Proj Dev II**Overview**

Course Subject Code	Course Number
CST	326

Department

Computer Systems Eng Tech

Course Description

In this three term sequence, students will work in teams to gather requirements, model, analyze, develop and integrate an n-tiered architecture software product. Students will learn about project management, software development lifecycle tools and processes, and quality assurance processes.

Academic Level (Course Level)

Undergraduate

CST331 - Microproc Periph Interfacing**Overview**

Course Subject Code	Course Number
CST	331

Department

Computer Systems Eng Tech

Course Description

Expansion of processor based systems through off chip parallel bus interfacing. Adding off chip I/O ports, memory and parallel I/O devices. I/O port expansion through serial interface. In depth interface timing analysis. Extensive lab provides continued experience with system design, test and debugging techniques.

Academic Level (Course Level)

Undergraduate

CST332 - Computer Logic III**Overview**

Course Subject Code	Course Number
CST	332

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST334 - Project Proposal**Overview**

Course Subject Code	Course Number
CST	334

Department

Computer Systems Eng Tech

Course Description

Description of senior project; time management techniques; task assignment; development of in-depth senior project proposal and preparation of formal senior project. Includes use of PC-based planning.

Academic Level (Course Level)

Undergraduate

CST336 - JR Team-Based Proj Dev III**Overview**

Course Subject Code	Course Number
CST	336

Department

Computer Systems Eng Tech

Course Description

In this three-term sequence, students will work in teams to gather requirements, model, analyze, develop and integrate an n-tiered architecture software product. Students will learn about project management, software development lifecycle tools and processes, and quality assurance processes.

Academic Level (Course Level)

Undergraduate

CST337 - Embedded System Architecture**Overview**

Course Subject Code	Course Number
CST	337

Department

Computer Systems Eng Tech

Course Description

Configuration, programming, testing, debugging of embedded systems. Serial interfaces including RS232, I2C and SPI. I/O methods including programmed I/O, interrupts and DMS. Interfacing issues related to timing and protocol. Impact of processor architecture and I/O methods on system performance.

Academic Level (Course Level)

Undergraduate

CST340 - Advanced UNIX**Overview**

Course Subject Code	Course Number
CST	340

Department

Computer Systems Eng Tech

Course Description

Advanced facets of the UNIX operating system will be explored. Topics include: interprocesses communication, programming, system administration. Students will use OIT computers operating under UNIX.

Academic Level (Course Level)

Undergraduate

CST342 - Data Acquisition**Overview**

Course Subject Code	Course Number
CST	342

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST344 - Interm Computer Arch**Overview**

Course Subject Code	Course Number
CST	344

Department

Computer Systems Eng Tech

Course Description

Register level design of a computer system, including the processor and memory structures. Cache and virtual memory. Includes analysis of both CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) architectures.

Academic Level (Course Level)

Undergraduate

CST347 - Real Time Embedded Op Systems

Overview

Course Subject Code	Course Number
CST	347

Department

Computer Systems Eng Tech

Course Description

OS Kernel Constructs and problem scaling, small scale environment specification, process, threads, fibers, synchronization primitives, small scale memory management, scheduling paradigms, real time scheduling, I/O and debugging. Lab integral to course.

Academic Level (Course Level)

Undergraduate

CST351 - Digital Systems Design II

Overview

Course Subject Code	Course Number
CST	351

Department

Computer Systems Eng Tech

Course Description

Continuation of Digital Systems Design I. Focus on timing, test benches, testing, and security in programmable logic devices. Laboratory includes analysis, design, synthesis, simulation and testing of complete digital systems.

Academic Level (Course Level)

Undergraduate

CST352 - Operating Systems

Overview

Course Subject Code	Course Number
CST	352

Department

Computer Systems Eng Tech

Course Description

Issues in Operating Systems design. Topics include: processes, threads and fibers, privilege modes, preemptive multitasking, process state machine, scheduling paradigms, system calls/traps, shared resources and synchronization primitives, memory management schemes/virtual memory, deadlock detection, handling, and avoidance, I/O management.

Academic Level (Course Level)

Undergraduate

CST356 - Web Design and Development

Overview

Course Subject Code	Course Number
CST	356

Department

Computer Systems Eng Tech

Course Description

Basic components of web development which include aspects of design as well as current development technologies. Development technologies include, but are not limited to, HTML/XHTML, JavaScript, and CSS. Other technologies discussed may include Java Applets, CGI programming, ASP.NET and PHP.

Academic Level (Course Level)

Undergraduate

CST371 - Embedded Systems Development I

Overview

Course Subject Code	Course Number
CST	371

Department

Computer Systems Eng Tech

Course Description

A three term sequence covering design, implementation, test and documentation techniques used for embedded computer systems. Each student is required to work on and complete a project as a member of a team. The entire sequence must be completed in three consecutive terms.

Academic Level (Course Level)

Undergraduate

CST372 - Embedded Systems Develop II

Overview

Course Subject Code	Course Number
CST	372

Department

Computer Systems Eng Tech

Course Description

Second course in a three term sequence. Design, implementation, test and documentation techniques used for embedded computer systems. Each student is required to work on and complete a project as a member of a team. The entire sequence must be completed in three consecutive terms.

Academic Level (Course Level)

Undergraduate

CST373 - Embedded Systems Develop III

Overview

Course Subject Code	Course Number
CST	373

Department

Computer Systems Eng Tech

Course Description

Final course in a three term sequence. Design, implementation, test and documentation techniques used for embedded computer systems. Each student is required to work on and complete a project as a member of a team. The entire sequence must be completed in three consecutive terms.

Academic Level (Course Level)

Undergraduate

CST374 - Embedded Project Proposal

Overview

Course Subject Code	Course Number
CST	374

Department

Computer Systems Eng Tech

Course Description

Development of formal, in-depth embedded senior project proposal. Guidelines for an acceptable project; project and time management techniques; task assignment. Individual creativity will be encouraged by allowing the student to select an appropriate embedded systems project.

Academic Level (Course Level)

Undergraduate

CST405 - Directed Study

Overview

Course Subject Code	Course Number
CST	405

Department

Computer Systems Eng Tech

Course Description

Advanced study under the guidance of faculty. Topics and learning objectives arranged between students and instructor. Students will meet with instructor weekly to discuss progress and provide evidence of their performance. Junior standing in CSET and instructor consent required.

Academic Level (Course Level)

Undergraduate

CST407 - Seminar

Overview

Course Subject Code	Course Number
CST	407

Department

Computer Systems Eng Tech

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CST412 - Senior Development Proj**Overview**

Course Subject Code	Course Number
CST	412

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning and carrying out a computer-oriented project. Individual creativity will be encouraged by allowing the student to select an appropriate project.

Academic Level (Course Level)

Undergraduate

CST415 - Computer Networks**Overview**

Course Subject Code	Course Number
CST	415

Department

Computer Systems Eng Tech

Course Description

Current issues in computer networks and distributed systems. Topics include network protocols, interface standards, and transmissions mode. Network layers detailing Internet Protocol Suite and correlations with 7 layer abstract communication model. Routing and WAN architectures.

Academic Level (Course Level)

Undergraduate

CST416 - LISP**Overview**

Course Subject Code	Course Number
CST	416

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST417 - Embedded Networking**Overview**

Course Subject Code	Course Number
CST	417

Department

Computer Systems Eng Tech

Course Description

Network protocol in a small scale embedded environment, Physical characteristic specification, network interface, controller interface, TCP/IP, application interface, packet routing, network architecture. Lab integral to course.

Academic Level (Course Level)

Undergraduate

CST418 - Data Comm & Networks**Overview**

Course Subject Code	Course Number
CST	418

Department

Computer Systems Eng Tech

Course Description

Provides students with an introduction to data communications and computer networks. Students acquire knowledge of communications components and their use in implementing a network. Emphasis is on the practical aspects of network configuration, operations, and detection, isolation and correction of problems.

Academic Level (Course Level)

Undergraduate

CST422 - Sr Development Project**Overview**

Course Subject Code	Course Number
CST	422

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning and carrying out a computer-oriented project. Individual creativity will be encouraged by allowing the student to select an appropriate project.

Academic Level (Course Level)

Undergraduate

CST426 - Intro to Artif Intell

Overview

Course Subject Code	Course Number
CST	426

Department

Computer Systems Eng Tech

Course Description

Concepts and techniques of AI with considerable use of the LISP interpreter. Includes discussion of "search" methods, knowledge representation, natural language processing, models of cognition, vision, and "The Blocks World."

Academic Level (Course Level)

Undergraduate

CST429 - Grammars

Overview

Course Subject Code	Course Number
CST	429

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

CST432 - Senior Development Proj

Overview

Course Subject Code	Course Number
CST	432

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning and carrying out a computer-oriented project. Individual creativity will be encouraged by allowing the student to select an appropriate project.

Academic Level (Course Level)

Undergraduate

CST442 - Adv Comp Architecture

Overview

Course Subject Code	Course Number
CST	442

Department

Computer Systems Eng Tech

Course Description

Advanced concepts in computer architectures including pipelined, super pipelined, superscalar, and dynamically pipelined processor architectures. Parallel processors, multiprocessors, cache and cache coherency.

Academic Level (Course Level)

Undergraduate

CST455 - System on a Chip Design

Overview

Course Subject Code	Course Number
CST	455

Department

Computer Systems Eng Tech

Course Description

System level design representations, and modeling languages. Target architecture models. Intra-chip communication. Partitioning algorithms. Task time measurement. Back annotation of timing. Synthesis of SoC components.

Academic Level (Course Level)

Undergraduate

CST456 - Embedded System Testing

Overview

Course Subject Code	Course Number
CST	456

Department

Computer Systems Eng Tech

Course Description

Testing of complete embedded systems including hardware and software. Topics include unit testing for both hardware and software, UVM testing framework for hardware and test driven design practices as they apply to both hardware and software.

Academic Level (Course Level)

Undergraduate

CST465 - Web Development with ASP.NET

Overview

Course Subject Code	Course Number
CST	465

Department

Computer Systems Eng Tech

Course Description

Dynamic web site creation and development strategies using ASP.NET are discussed and practiced. Focus on the importance of databases in the creation of a dynamic web site is heavily emphasized.

Academic Level (Course Level)

Undergraduate

CST466 - Embedded System Security

Overview

Course Subject Code	Course Number
CST	466

Department

Computer Systems Eng Tech

Course Description

Fundamental theories and applications of cryptography relevant to computer and embedded system security.

Academic Level (Course Level)

Undergraduate

CST471 - Embedded Senior Project

Overview

Course Subject Code	Course Number
CST	471

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning, implementing and testing an embedded systems project.

Academic Level (Course Level)

Undergraduate

CST472 - Embedded Senior Project

Overview

Course Subject Code	Course Number
CST	472

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning, implementing and testing an embedded systems project.

Academic Level (Course Level)

Undergraduate

CST473 - Embedded Senior Project

Overview

Course Subject Code	Course Number
CST	473

Department

Computer Systems Eng Tech

Course Description

A three-term sequence giving the student major responsibility for planning, implementing and testing an embedded systems project.

Academic Level (Course Level)

Undergraduate

CST475 - Big-Data Analysis

Overview

Course Subject Code	Course Number
CST	475

Department

Computer Systems Eng Tech

Course Description

Data analysis using very large data sets. Topics include loading, extracting, and analyzing data. Technologies include distributed SQL and No-SQL databases, map-reduce, and other distributed data access and processing mechanisms.

Academic Level (Course Level)

Undergraduate

CST490 - Co-op Field Practice

Overview

Course Subject Code	Course Number
CST	490

Department

Computer Systems Eng Tech

Course Description

An approved work program related to the student's field of specialization for a continuous three-month or six-month period. The employer and the type, level, and difficulty of the particular job must be approved by the student's engineering technology department prior to the employment period. A written comprehensive report of each season's activity must be submitted during the following term of residence. Prerequisites: Associate degree and two terms of residence.

Academic Level (Course Level)

Undergraduate

CST507 - Seminar

Overview

Course Subject Code	Course Number
CST	507

Department

Computer Systems Eng Tech

Academic Level (Course Level)

Undergraduate

Dental Hygiene Department

Krista Beaty, *Department Chair/Online Director, Klamath Falls*

Professor: P. Russell, P. Hendrix

Associate Professor: , D. Swigart *Assistant Professors:* K. Beaty, J. Bopp, J. Luebbers, S. Neely

Instructors: C. Botsch, E. Gustafson-Plummer, A. Rollins, E. Wells, E. McCadden

Degrees Offered

- Bachelor of Science in Dental Hygiene (entry level program)
- Bachelor of Science in Dental Hygiene, RDH to BSDH Online Degree Completion (*for licensed dental hygienists who have already graduated from an entry level AAS program*)

The Bachelor of Science in Dental Hygiene is offered on the Oregon Tech campus in Klamath Falls, on the Chemeketa Community College campus in Salem, Oregon, and online for licensed professional dental hygienists completing their Bachelor's degree.

Accreditation

The Dental Hygiene Program is accredited by the Commission on Dental Accreditation (CODA), a national Commission that is responsible for the professional accreditation of dental schools, dental hygiene programs, and other programs related to dentistry. Oregon Tech's Dental Hygiene Program's accreditation status is "approval without reporting requirements" which means it meets all of the "Accreditation Standards for Dental Hygiene Education Programs".

Career Opportunities

Dental hygienists are most commonly employed in private or corporate dental practices and provide oral health preventive and therapeutic services. Graduates are prepared for licensure as a dental hygienist and graduate with the qualifications to obtain permits and endorsements for expanded practice in such settings as nursing homes, schools, and hospitals. In addition to clinical practice, dental hygienists have careers in the fields of education, research, administration, and public health.

Program Goals and Purpose

The Dental Hygiene Program supports developing Oregon Tech's Institutional Student Learning Outcomes through its Program Goals and the curriculum design based on professional standards developed by experts in the field. The Bachelor of Science in Dental Hygiene program prepares students for entry into the dental hygiene profession and additional careers such as public health, administration, education, research, and marketing. The graduate will be prepared to enter master's degree programs in dental hygiene and related programs.

Upon graduation, students are prepared for entry into the dental hygiene profession and are eligible for state and national exams leading to licensure as a registered dental hygienist, including all expanded functions allowed within the scope of practice for a dental hygienist. Program educational objectives are:

- Provide the dental hygiene student the opportunity to gain the necessary knowledge, skills, and values to enter the registered practice of dental hygiene.
- Prepare the student to sit for the National Board Dental Hygiene Examination.
- Prepare the student to take clinical board examinations in dental hygiene, anesthesia, and restorative functions.

Program Mission Statement

The Oregon Institute of Technology Dental Hygiene Program provides a humanistic learning environment that fosters student and graduate success through respect and professionalism, and by encouraging innovation and critical thinking. Its mission is to prepare students to become healthcare professionals who serve diverse populations in multiple roles including leadership, clinical and public health, research, education, and entrepreneurship. Oregon Tech Dental Hygiene graduates gain experience with project-based learning, community service, applied research emphasizing evidence-based practices; and are empowered to become life-long learners.

Program Learning Outcomes:

The dental hygiene graduate will be competent in:

1. Communication: The dental hygiene graduate will be competent in communication and collaborating with other members of the health care team to support comprehensive patient care
2. Critical Thinking and Problem Solving: The dental hygiene graduate will be competent in critical thinking and problem solving related to comprehensive care and management of patients
3. Professionalism, Ethical Practice: The dental hygiene graduate will be competent in applying ethical, legal, and regulatory concepts in the provision and/or support of oral health care services
4. Lifelong Learning: The dental hygiene graduate will demonstrate competent knowledge and self-assessment skills necessary for life-long learning
5. Provision of Oral Health Care: The dental hygiene graduate will be competent in providing the dental hygiene process of care for a wide range of patient profiles and all types of periodontal diseases
6. Community Health: The dental hygiene graduate will be competent in assessing, planning, implementing, and evaluating community based oral health programs including health promotion and disease prevention activities
7. Disease Prevention: The dental hygiene graduate will evaluate factors that can be used to promote patient adherence to disease prevention and/or health maintenance strategies.
8. Evaluating Research: The dental hygiene graduate will be competent in evaluating current scientific literature to incorporate evidence-based decisions into dental hygiene practice.

Professional Development & Membership

Faculty and students are expected to maintain membership in the ADHA professional organization, attend regularly scheduled SADHA meetings, and to participate in professional development, such as local and regional conferences that lead to lifelong learning as defined in the Program Outcomes. **Students are required to join the student chapter of the American Dental Hygienists Association.** There is an annual fee for membership, and this is outlined in the anticipated expenses provided to students upon entry into the Dental Hygiene program.

Program Goals and Purpose

The Dental Hygiene Program supports developing Oregon Tech's Institutional Student Learning Outcomes through its Program Goals and the curriculum design based on professional standards developed by experts in the field. The Bachelor of Science in Dental Hygiene program prepares students for entry into the dental hygiene profession and additional careers such as public health, administration, education, research, and marketing. The graduate will be prepared to enter master's degree programs in dental hygiene and related programs.

Upon graduation, students are prepared for entry into the dental hygiene profession and are eligible for state and national exams leading to licensure as a registered dental hygienist, including all expanded functions allowed within the scope of practice for a dental hygienist. Program educational objectives are:

- Provide the dental hygiene student the opportunity to gain the necessary knowledge, skills, and values to enter the

registered practice of dental hygiene.

- Prepare the student to sit for the National Board Dental Hygiene Examination.
- Prepare the student to take clinical board examinations in dental hygiene, anesthesia, and restorative functions.

Program Mission Statement

The Oregon Institute of Technology Dental Hygiene Program provides a humanistic learning environment that fosters student and graduate success through respect and professionalism, and by encouraging innovation and critical thinking. Its mission is to prepare students to become healthcare professionals who serve diverse populations in multiple roles including leadership, clinical and public health, research, education, and entrepreneurship. Oregon Tech Dental Hygiene graduates gain experience with project-based learning, community service, applied research emphasizing evidence-based practices; and are empowered to become life-long learners.

Program Learning Outcomes:

The dental hygiene graduate will be competent in:

1. Interprofessional Collaboration/Communication: The dental hygiene graduate will be competent in communication and collaborating with other members of the health care team to support comprehensive patient care.
2. Critical Thinking: The dental hygiene graduate will be competent in critical thinking and problem solving related to comprehensive care and management of patients.
3. Professionalism, Ethical Practice, Evidence Based Decision Making: The dental hygiene graduate will be competent in the application of ethical reasoning, legal, and regulatory concepts in the provision of care, and evidence-based support of oral health care services.
4. Lifelong Learning: The dental hygiene graduate will demonstrate competent knowledge and self-assessment skills necessary for life-long learning.
5. Provision of Oral Health Care: The dental hygiene graduate will be competent in providing the dental hygiene process of care for a wide range of patient profiles and all classifications of periodontal diseases.
6. Community Health: The dental hygiene graduate will be competent in assessing, planning, implementing, and evaluating community based oral health programs.
7. Disease Prevention: The dental hygiene graduate will evaluate factors that can be used to promote patient adherence to disease prevention and/or health maintenance strategies.
8. Evaluating Research: The dental hygiene graduate will be competent in evaluating current scientific literature to incorporate evidence-based decisions into dental hygiene practice.

Student Preparation

A strong science background is essential for individuals interested in any health sciences profession. Students considering a career in dental hygiene should take a college-bound course of study in high school that includes algebra, chemistry, and microbiology and human anatomy and physiology.

Professional Dental Hygiene Competencies

The professional standards of the profession have been published by the American Dental Hygienists Association and by the American Dental Education Association. Students are expected to meet these standards to graduate. Students must show competence by the standards provided by the Commission on Dental Accreditation.

Competency-Based Curriculum

Dental Hygiene academic and clinical courses are both graded and **competency-based**, which means that the essential skills, knowledge, and attitudes expected of students at a given point in the curriculum are specified with the conditions under which students are expected to perform. The criteria for evaluation are also defined. This includes a process of learning that develops in stages.

The expected level of development at any point in the curriculum is defined in the Program Competency Timeline. Competency assessments are Pass/Fail. Grades are only earned once the required minimum level of performance has been reached. All Competency assessments are required and **MUST** be passed at the appropriate level in order to continue in the program. They are benchmark assessments. A non-passing score will receive a zero grade and will warrant an F in the overall course grade. The Competency Timeline is a list of benchmark expectations for when students are expected to develop certain skills has been developed for the entire professional curriculum. The Competency Timeline also defines the **graduation requirements** for clinical experiences.

Essential Functions/Technical Standards of a Dental Hygienist

In accordance with its professional and accreditation standards, the Dental Hygiene program has established technical standards as essential requirements. To be admitted and maintain enrollment, participate in, and successfully complete the professional program, a student must meet these non-academic standards of performance. *Essential Functions* are characteristics deemed necessary to become a professional, licensed, dental hygienist. They are evaluated continuously throughout the program in both clinical and didactic settings.

To be admitted to or continue in the Dental Hygiene Program a student must possess skills and abilities essential to perform as a dental hygienist. Students are required to perform dental hygiene services for patients in the clinical setting. The department is responsible for ensuring the safety of the patients, including completion of treatment within an acceptable amount of time and without significant regression of skills. With these considerations a dental hygiene student/candidate must be able to meet the following essential functions:

Physical Skills

Sit or stand; bend and reach while performing clinical procedures. Function in a structured environment for several hours. Demonstrate hand/eye coordination, manual dexterity, and tactile sensitivity necessary to manipulate a variety of instruments, materials, and equipment. Perform cardiopulmonary resuscitation and assist in emergency situations.

Sensory Skills

Read charts, records, small print, typed and handwritten notes. See with measurable depth perception and in low-light conditions. Distinguish color variations and discern shades of black and white. Hear and understand verbal directions. Discern sounds related to patient assessment and treatment. Distinguish smells of various drugs, solutions and materials used in healthcare settings. Feel subtle differences in surface textures. Recognize changes in patient status.

Cognitive Skills

Comprehend, analyze, and synthesize complex science and clinical findings. Apply prior learning to new situations. Concentrate on the task at hand amidst a variety of environmental distractions. Interpret patient findings, recognize anomalies, and make decisions which affect patient care. Use personal computers to complete assignments.

Communication Skills

Speak and write fluent English, including language comprehension skills that are essential for healthcare providers. Provide patients with clear instructions appropriate for their level of understanding. Write clear and legible chart notes. Organize thoughts and ideas into written essays and research papers. Understand, comprehend, and *effectively* communicate the English language with peers and patients; both in written and verbal formats at English Proficiency levels expected for healthcare providers.

Interpersonal Skills

Interact with individuals, small groups, and large audiences. Establish sufficient rapport and maintain appropriate boundaries to effectively relate to patients, colleagues, faculty, and staff. Always display a respectful attitude. Demonstrate concern and empathy for a diverse variety of patients. Address problems or questions to the appropriate person at the appropriate time.

Professional Skills

Present a professional appearance and maintain personal health. Maintain composure during stressful situations. Work both independently and as a team member. Organize tasks, set priorities, and manage projects. Maintain accuracy and confidentiality of patient records. Comply with established policies, procedures, infection control standards, Oregon Tech student conduct code, ADHA code of ethics and the class code of conduct. Provide care to all patients regardless of age, race, ethnic origin, physical or mental status or other condition.

Inability to Meet Essential Functions and Technical Standards

It is critical that each student understands if she/he does not perform to the expected level of professionalism, or possesses the technical standards required in each category of the "essential functions" they risk being dismissed from the Program. Appropriate "Essential Functions of a Dental Hygienist" must be demonstrated, not only in the classroom and clinic, but in the entire surrounding area, anywhere on or off campus when representing the university or Program.

If a student has an essential functions violation, a conference will be called with the student and the faculty. The result of this meeting will be

- counseling with a recommendation to change behavior
- a grade reduction in the associated course
- and/or a recommendation for dismissal from the program.

Admissions Procedures

Any student who meets the general admissions requirements may enroll in Pre-Dental Hygiene courses (freshman year). Students must be selected to enter the professional program (sophomore-senior year) through a separate application process. A limited number of seats are available in the professional program courses (sophomore, junior, and senior years).

The application deadline is in late March of the year prior to enrollment. To be eligible for admission into the Dental Hygiene Program the following minimum eligibility requirements must be met:

1. Applicants must have on file with the Oregon Tech Office of Admissions an official *Application for Admission* to Oregon Tech, accompanied by a \$50 non-refundable fee and official transcripts of each college or university attended. Admission to Oregon Tech is independent of admission to the Dental Hygiene Program. All applicants to Oregon Tech are admitted as pre-dental hygiene majors until accepted into the dental hygiene program.
2. Applicants must have successfully completed or be in progress of completing all freshmen pre-dental hygiene courses. Introduction to Dental Hygiene (DHE 100 online) must be taken through Oregon Tech. Prerequisite (freshman) science, writing, and speech courses must be completed by the end of spring term, except for BIO 233, which may be extended into the summer but must be successfully completed prior to program entry in the subsequent fall term. Students are encouraged to work ahead and take courses in the summer to help offset credit loads during their regular academic terms while in the program.
3. Applicants must have a minimum cumulative 2.75 GPA in previous college work.
4. Applicants must complete a *Dental Hygiene Application for Admission*, related forms, and application fee of \$75 to the Dental Hygiene department. Detailed information and instructions can be found on the Oregon Tech Dental Hygiene Program web page, www.oit.edu/dentalhygiene/how-to-apply.

Professional Development & Membership

Faculty and students are expected to maintain membership in the ADHA professional organization, attend regularly scheduled SADHA meetings, and to participate in professional development, such as local and regional conferences that lead to lifelong learning as defined in the Program Outcomes. **Students are required to join the student chapter of the American Dental Hygienists Association.** There is an annual fee for membership, and this is outlined in the anticipated expenses provided to students upon entry into the Dental Hygiene program.

Program Requirements

Dental hygiene students admitted to the Dental Hygiene Program (sophomore, junior, senior years) must purchase instruments, uniforms, and other supplies to be used during clinical practice and pay additional fees associated with dental hygiene courses. A background check, drug test, and proof of immunizations specific to healthcare workers are required prior to final admission into the professional program. Medical insurance coverage is required to be maintained throughout the program in case of exposure incidents.

Graduation Requirements

All courses listed in the curriculum for the catalog year a student begins a program must be fulfilled. Total credits required for graduation are: Bachelor of Science degree, 180. A minimum cumulative grade point average (GPA) of 2.0 is required for graduation. Students must maintain a grade of "C" or better in all Dental Hygiene required courses and demonstrate competency in all technical standards and Essential Functions of a Dental Hygienist to continue in the program.

Programs

Dental Hygiene, BS

Overview

Program Long Title

Dental Hygiene, BS

Program Title

Dental Hygiene

Department(s)

Dental Hygiene

Degree Designation

BS

Program Level

UG

CIP Code

510602

Degree Maps

Degree Map Name
Advising Guide - Dental Hygiene

Total Degree Map Credits
186

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
The following are required courses and recommended terms for students attending on the Klamath Falls campus. Please visit www.oit.edu/dentalhygiene for transfer information from other Oregon colleges and for recommended course sequencing for those attending on the Chemeketa Community College campus. Courses marked as “approved elective” may be chosen from the list in the Degree Emphasis list.

Note: All transfer students must abide by the Dental Hygiene Transfer Guide posted on the Oregon Tech Dental Hygiene web page

Elective Courses must be selected from an advisor approved list - 6 credits required

Optional: DH 463 Restorative Dentistry III (2 credits), DH 370 (Junior Year, Spring term), DH 371 (Senior Year, Summer term), and DH 372 (Senior Year, Fall term) International Experience I, II, & III (3 credits).

Additional Required DH Program Courses
Program courses required, 9 credits offered multiple terms.

- DH 475 - EBDM in Healthcare
- DH 454 - Dental Pract Mgmt
- DH 450 Instructional Methods

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	18	0

Requirement Select

- Course Not Found
- AND** BIO135 - Prep for Human A&P

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- Course Not Found
- AND** Course Not Found

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH100 - Intermediate Algebra
- OR**
- MATH101 - Accelerated Algebra

Course Requirement Group**Course Requirement Group** (If needed as co-requisite for

(Free Text) CHE 101/104)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	16	0

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- BIO234 - Microbiology

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	13	0

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• STAT243Z - Elementary Statistics I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• BIO205 - Nutrition	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• DHE100 - Intro to Dental Hygiene I	
Course Requirement Group	
Course Requirement Group This course is offered every	
(Free Text) term.	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Sophomore	Fall	15	Credits
			0

Requirement Select	
• DH221 - Clinical Prac & Seminar I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select	
• DH225 - Head/Neck,Histology,Embryology	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• DH240 - Prevention I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH266 - Dental Anatomy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- DH222 - Clinical Prac & Seminar II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- DH241 - Prevention II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH275 - Dental Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- DH252 - Oral Radiology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- DH244 - General and Oral Pathology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- DH223 - Clinical Prac & Seminar III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- DH242 - Prevention III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH253 - Oral Radiology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- DH254 - Introduction to Periodontology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- DH267 - Emergency Procedures

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- DH360 - Pharmacology for DH
- OR**
- CHE360 - Clinical Pharmacology/Hlth Prf

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- DH321 - Clinical Prac & Sem IV

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- DH340 - Emerging Oral Health Topics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH354 - Periodontology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- DH380 - Community Health I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- Sociology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	14	0

Requirement Select

- DH322 - Clinical Prac & Sem V

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- DH341 - Vulnerable Populations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH381 - Comm Dentl Hlth II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- DH351 - Pain Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	12	0

Requirement Select

- DH323 - Clinical Prac & Sem VI

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 13
Clinical	-
Criticality	No

Requirement Select

- DH344 - Adv General & Oral Pathology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DH382 - Comm Dentl Hlth III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- DH352 - Pain Management II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- DH or Gen ED required course (from approved list)
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	16	3

Requirement Select

- DH421 - Clinical Prac & Sem VII

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- DH461 - Restorative Dentistry I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Dental Hygiene Program Courses
- OR**
- Dental Hygiene Advisor Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	6 - 9
Clinical	-
Criticality	No

Requirement Select

- Dental Hygiene Program Courses
- OR**
- Dental Hygiene Advisor Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	17	0

Requirement Select

- DH422 - Clinical Prac & Sem VIII

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 13
Clinical	-
Criticality	No

Requirement Select

- DH462 - Restorative Dentistry II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Dental Hygiene Advisor Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Dental Hygiene Advisor Electives
- OR**
- Dental Hygiene Program Courses

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	17	0

Requirement Select

- DH423 - Clinical Prac & Sem IX

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 13
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Dental Hygiene Advisor Electives
- OR**
- Dental Hygiene Program Courses

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Psychology Electives

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Dental Hygiene, RDH to BSDH Online Degree Completion, BS

Overview

Program Long Title

Dental Hygiene

Program Title

Dental Hygiene

Department(s)

Dental Hygiene

Degree Designation

BS

Program Level

UG

CIP Code

510602

Courses

AHED107 - Seminar

Overview

Course Subject Code	Course Number
AHED	107

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

AHED207 - Seminar

Overview

Course Subject Code	Course Number
AHED	207

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

AHED307 - Seminar

Overview

Course Subject Code	Course Number
AHED	307

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

AHED407 - Seminar

Overview

Course Subject Code	Course Number
AHED	407

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

AHED450 - Instructional Methods

Overview

Course Subject Code	Course Number
AHED	450

Department
Dental Hygiene

Course Description
Students develop instructional content and an instructional plan for teaching topics for adult learners. Teaching methods, learning styles, student and instructor evaluation, and use of media will be discussed
Pre-Requisite: Admission to the Respiratory Care Program (RCP), Bachelor Dental Hygiene degree completion program or Dental Hygiene Program

Academic Level (Course Level)
Undergraduate

AHED451 - Instructional Experience

Overview

Course Subject Code	Course Number
AHED	451

Department
Dental Hygiene

Course Description
Students create and structure their own instructional experience, participate in a clinical or laboratory setting as a supervising instructor, present a didactic unit using visual aids.

Academic Level (Course Level)
Undergraduate

DH107 - Seminar

Overview

Course Subject Code	Course Number
DH	107

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH207 - Seminar

Overview

Course Subject Code	Course Number
DH	207

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH221 - Clinical Prac & Seminar I

Overview

Course Subject Code	Course Number
DH	221

Department
Dental Hygiene

Course Description
Sequential courses designed to provide clinical skills essential for the practice of dental hygiene. Skill development of patient assessment, basic instrumentation and individualized preventive care emphasized. Prerequisite: Admission to Dental Hygiene program

Academic Level (Course Level)
Undergraduate

DH222 - Clinical Prac & Seminar II

Overview

Course Subject Code	Course Number
DH	222

Department
Dental Hygiene

Course Description
Sequential courses designed to provide clinical skills essential for the practice of dental hygiene. Skill development of patient assessment, basic instrumentation, and individualized preventive care emphasized.

Academic Level (Course Level)
Undergraduate

DH223 - Clinical Prac & Seminar III

Overview

Course Subject Code	Course Number
DH	223

Department
Dental Hygiene

Course Description
Sequential courses designed to provide clinical skills essential for the practice of dental hygiene. Skill development of patient assessment, basic instrumentation, and individualized preventive care emphasized.

Academic Level (Course Level)
Undergraduate

DH225 - Head/Neck,Histology,Embryology

Overview

Course Subject Code	Course Number
DH	225

Department
Dental Hygiene

Course Description
Lecture and lab course that provides an in-depth study of head and neck anatomy, histology, and embryology for the dental professional. Emphasis on human development, anatomy in relation to facial and oral structures, and histology of hard and soft dental tissues.

Academic Level (Course Level)
Undergraduate

DH240 - Prevention I

Overview

Course Subject Code	Course Number
DH	240

Department
Dental Hygiene

Course Description
Beginning discussions about healthcare for the provider as a part of holistic healthcare, and foundations for preventing oral disease. Focus on strategies for improving oral health.

Academic Level (Course Level)
Undergraduate

DH241 - Prevention II

Overview

Course Subject Code	Course Number
DH	241

Department
Dental Hygiene

Course Description
Second of a three-term series emphasizing prevention and management of caries and oral health education for individual patients and groups.

Academic Level (Course Level)
Undergraduate

DH242 - Prevention III

Overview

Course Subject Code	Course Number
DH	242

Department
Dental Hygiene

Course Description
Last of a three-term series emphasizing dental management and oral health education for a variety of age demographics including pregnancy, infants, children, and adolescence.

Academic Level (Course Level)
Undergraduate

DH244 - General and Oral Pathology

Overview

Course Subject Code	Course Number
DH	244

Department
Dental Hygiene

Course Description
Introduction to general pathology and common oral pathologies. Basic pathology, inflammation, immune system, and neoplasia. Etiology and recognition of benign and malignant oral and skin lesions. Descriptive terminology and differential diagnosis introduced.

Academic Level (Course Level)
Undergraduate

DH252 - Oral Radiology I

Overview

Course Subject Code	Course Number
DH	252

Department
Dental Hygiene

Course Description
The first of a two course series that includes didactic and pre-clinical instruction in the principles and techniques of dental radiography.

Academic Level (Course Level)
Undergraduate

DH253 - Oral Radiology II

Overview

Course Subject Code	Course Number
DH	253

Department
Dental Hygiene

Course Description
The second of a two course series that includes didactic instruction in the principles and techniques of dental radiography with emphasis on image interpretation.

Academic Level (Course Level)
Undergraduate

DH254 - Introduction to Periodontology

Overview

Course Subject Code	Course Number
DH	254

Department
Dental Hygiene

Course Description
Introduction to periodontology with emphasis on etiology and pathogenesis of periodontal disease, disease classification, and assessment procedures.

Academic Level (Course Level)
Undergraduate

DH266 - Dental Anatomy

Overview

Course Subject Code	Course Number
DH	266

Department
Dental Hygiene

Course Description
In-depth study of crown and root morphology of primary and permanent dentitions, with tooth restoration considerations. The temporomandibular joint and occlusion will also be studied.

Academic Level (Course Level)
Undergraduate

DH267 - Emergency Procedures

Overview

Course Subject Code	Course Number
DH	267

Department
Dental Hygiene

Course Description
Prevention, preparation, and management of emergency situations common in the dental environment. Individual and team practice in carrying out emergency procedures.

Academic Level (Course Level)
Undergraduate

DH275 - Dental Ethics

Overview

Course Subject Code	Course Number
DH	275

Department
Dental Hygiene

Course Description
Professional ethics and legal requirements of the dental profession.

Academic Level (Course Level)
Undergraduate

DH299 - Laboratory Practice

Overview

Course Subject Code	Course Number
DH	299

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH307 - Seminar

Overview

Course Subject Code	Course Number
DH	307

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH321 - Clinical Prac & Sem IV

Overview

Course Subject Code	Course Number
DH	321

Department
Dental Hygiene

Course Description

Sequential courses designed for the continued development of dental hygiene skills necessary for entry into professional clinical practice. Ultrasonic, advanced instrumentation, and expanded dental hygiene functions are practiced, in addition to observations in dental practice settings.

Academic Level (Course Level)
Undergraduate

DH322 - Clinical Prac & Sem V

Overview

Course Subject Code	Course Number
DH	322

Department
Dental Hygiene

Course Description

Sequential courses designed for the continued development of dental hygiene skills necessary for entry into profession clinical practice. Ultrasonic, advanced instrumentation, and expanded dental hygiene functions are practiced, in addition to observations in dental practice settings.

Academic Level (Course Level)
Undergraduate

DH323 - Clinical Prac & Sem VI

Overview

Course Subject Code	Course Number
DH	323

Department
Dental Hygiene

Course Description

Sequential courses designed for the continued development of dental hygiene skills necessary for entry into professional clinical practice. Ultrasonic, advanced instrumentation, and expanded dental hygiene functions are practiced, in addition to observations in dental practice settings.

Academic Level (Course Level)
Undergraduate

DH340 - Emerging Oral Health Topics

Overview

Course Subject Code	Course Number
DH	340

Department
Dental Hygiene

Course Description

Course emphasizing dental management of common conditions found in a variety of populations, exploration of current topics in dentistry, and oral health related trends commonly encountered in professional practice.

Academic Level (Course Level)
Undergraduate

DH341 - Vulnerable Populations

Overview

Course Subject Code	Course Number
DH	341

Department
Dental Hygiene

Course Description

Course emphasizing oral health education and dental management of patients with medically compromised status. A variety of systemic conditions are discussed in depth in regards to the unique needs and prevention strategies for each individual.

Academic Level (Course Level)
Undergraduate

DH344 - Adv General & Oral Pathology

Overview

Course Subject Code	Course Number
DH	344

Department
Dental Hygiene

Course Description

Further study of general and oral pathology. Developmental, hereditary, and congenital disorders. Endocrine, cardiovascular, hematopoietic, respiratory, gastrointestinal, neurologic, and skeletal disorders. Tooth abnormalities, radiographic lesions, and oral tissue enlargements. Systemic and oral complications of HIV and AIDS. Lesion description emphasized.

Academic Level (Course Level)
Undergraduate

DH351 - Pain Management I

Overview

Course Subject Code	Course Number
DH	351

Department
Dental Hygiene

Course Description

The first of a two course series. Lecture: study of pharmacology, solutions, dosages, vasoconstrictors, drug interactions, medical history evaluation and contradictions. Laboratory practice in techniques of local anesthesia include basic injection technique including block infiltration.

Academic Level (Course Level)
Undergraduate

DH352 - Pain Management II

Overview

Course Subject Code	Course Number
DH	352

Department
Dental Hygiene

Course Description

A continuation course of the pain management series. Coordinated lecture and laboratory practices in the recognition of dental anxiety; behavioral management; complications with anesthesia; nitrous oxide sedation techniques are practiced; advanced techniques in the administration of local anesthetics.

Academic Level (Course Level)
Undergraduate

DH354 - Periodontology

Overview

Course Subject Code	Course Number
DH	354

Department
Dental Hygiene

Course Description

Evidence-based approach for treatment of periodontal disease including nonsurgical and surgical treatment. Root anatomy relating to effective instrument adaptation. Treatment planning for patients with all types of classifications of periodontal disease.

Academic Level (Course Level)
Undergraduate

DH360 - Pharmacology for DH

Overview

Course Subject Code	Course Number
DH	360

Department
Dental Hygiene

Course Description

General principles of pharmacology, modes of administration and effects on body systems, modes of excretion, and potential effects on the oral cavity. This course will emphasize the drugs the dental hygienist will encounter, how to incorporate this knowledge into the dental hygiene care plan and in patient education.

Academic Level (Course Level)
Undergraduate

DH370 - International Experience I

Overview

Course Subject Code	Course Number
DH	370

Department

Dental Hygiene

Course Description

Sequential courses preparing for and providing dental hygiene care at an international site using portable dental equipment. Cultural issues, teamwork, financing, needs assessment, goal setting, and delivery of program.

Academic Level (Course Level)

Undergraduate

DH371 - International Experience II

Overview

Course Subject Code	Course Number
DH	371

Department

Dental Hygiene

Course Description

Sequential courses preparing for and providing dental hygiene care at an international site using portable dental equipment. Cultural issues, teamwork, financing, needs assessment, goal setting and delivery of program.

Academic Level (Course Level)

Undergraduate

DH372 - International Experience III

Overview

Course Subject Code	Course Number
DH	372

Department

Dental Hygiene

Course Description

Sequential courses preparing for and providing dental hygiene care at an international site using portable dental equipment. Cultural issues, teamwork, financing, needs assessment, goal setting and delivery of program.

Academic Level (Course Level)

Undergraduate

DH380 - Community Health I

Overview

Course Subject Code	Course Number
DH	380

Department

Dental Hygiene

Course Description

First in a three course sequence using a service learning approach. Students work in teams, identify target groups and conduct a needs assessment. Introduction to public health agencies and their functions; and to the role of the dental hygienist in public health.

Academic Level (Course Level)

Undergraduate

DH381 - Comm Dentl Hlth II

Overview

Course Subject Code	Course Number
DH	381

Department

Dental Hygiene

Course Description

Service learning and systematic approach to developing oral health programs continues. Teams complete a program based on the needs assessment. Community health education and health literacy are emphasized. Grant writing for program funding is practiced.

Academic Level (Course Level)

Undergraduate

DH382 - Comm Dentl Hlth III

Overview

Course Subject Code	Course Number
DH	382

Department

Dental Hygiene

Course Description

Service learning and systematic approach for implementing community oral health programs continues. Teams implement programs they designed. Health education occurs in the community. A broad view of public health including advocacy, epidemiology, research; controversy of water fluoridation.

Academic Level (Course Level)

Undergraduate

DH399 - Lab Practice

Overview

Course Subject Code	Course Number
DH	399

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH401 - Overview Advanced Dental Hyg

Overview

Course Subject Code	Course Number
DH	401

Department
Dental Hygiene

Course Description
Introduction to the online degree completion program. Career opportunities, roles of the dental hygienist, and the different emphases within the program are explored. Prerequisite: Admission to BDHO program

Academic Level (Course Level)
Undergraduate

DH405 - Pharmacology Review for DH

Overview

Course Subject Code	Course Number
DH	405

Department
Dental Hygiene

Course Description
A review of the general principles of pharmacology, modes of administration and effects on body systems, modes of excretion, and potential effects on the oral cavity. Course emphasizes drugs encountered in the dental hygiene care plan, in preparation for national board exams.

Academic Level (Course Level)
Undergraduate

DH407 - Seminar

Overview

Course Subject Code	Course Number
DH	407

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH421 - Clinical Prac & Sem VII

Overview

Course Subject Code	Course Number
DH	421

Department
Dental Hygiene

Course Description
Further refinement of clinical instrumentation and assessment skills. Emphasis on individualized care for patients with diverse oral needs. Variety of off-campus practice settings experienced.

Academic Level (Course Level)
Undergraduate

DH422 - Clinical Prac & Sem VIII

Overview

Course Subject Code	Course Number
DH	422

Department
Dental Hygiene

Course Description
Further refinement of clinical instrumentation and assessment skills. Emphasis on individualized care for patients with diverse oral needs. Variety of off-campus practice settings experienced.

Academic Level (Course Level)
Undergraduate

DH423 - Clinical Prac & Sem IX

Overview

Course Subject Code	Course Number
DH	423

Department
Dental Hygiene

Course Description
Further refinement of clinical instrumentation and assessment skills. Emphasis on individualized care for patients with diverse oral needs. Variety of off-campus practice settings experienced.

Academic Level (Course Level)
Undergraduate

DH430 - Dental Hyg Board Review

Overview

Course Subject Code	Course Number
DH	430

Department
Dental Hygiene

Course Description
Designed to help students prepare for their national board exam. Multiple-choice test-taking skills practiced. Mock tests simulating the real exam are used.

Academic Level (Course Level)
Undergraduate

DH450 - Instr Methods In DH

Overview

Course Subject Code	Course Number
DH	450

Department
Dental Hygiene

Academic Level (Course Level)
Undergraduate

DH453 - Res. & Evid. Based Dent. I

Overview

Course Subject Code	Course Number
DH	453

Department
Dental Hygiene

Course Description
First of two-course sequence exploring evidence-based decision making in dentistry and secondary research. Current issues affecting dental hygiene practice are explored. The process of evidence-based decision making is introduced with emphasis on writing questions and accessing quality research. Prerequisite: Admission to BDHO program

Academic Level (Course Level)
Undergraduate

DH454 - Dental Prac Mgmt

Overview

Course Subject Code	Course Number
DH	454

Department
Dental Hygiene

Course Description
Profitability of the dental hygiene department; practice models, office design; patient satisfaction; financing options for the patient. Technology's impact on practice management.

Academic Level (Course Level)
Undergraduate

DH455 - Res. & Evid. Based Dent. II

Overview

Course Subject Code	Course Number
DH	455

Department
Dental Hygiene

Course Description
Second in a two-course sequence. Emphasis is on critical appraisal of research and application of research findings. Students write critical summaries and apply findings to clinical practice.

Academic Level (Course Level)
Undergraduate

DH461 - Restorative Dentistry I

Overview

Course Subject Code	Course Number
DH	461

Department
Dental Hygiene

Course Description

Study of materials and procedures used in restorative dentistry at a foundational level. Emphasis on restoration placement techniques. Practical experience using restorative dental materials. Laboratory activities are designed to reinforce course content and prepare students for patient care.

Academic Level (Course Level)
Undergraduate

DH462 - Restorative Dentistry II

Overview

Course Subject Code	Course Number
DH	462

Department
Dental Hygiene

Course Description

Study of materials and procedures used in restorative dentistry at a practicing level. Emphasis on restoration placement techniques. Practical experience using restorative dental materials. Laboratory activities are designed to reinforce course content and prepare students for patient care.

Academic Level (Course Level)
Undergraduate

DH463 - Restorative Dentistry III

Overview

Course Subject Code	Course Number
DH	463

Department
Dental Hygiene

Course Description

Emphasis on restoration placement techniques. Practical experience using restorative dental materials. Placement and finishing of amalgam and composite restorations on typodonts in Restorative Dentistry I and on patients in Restorative II and III.

Academic Level (Course Level)
Undergraduate

DH465 - Indep. Dental Hygiene Practice

Overview

Course Subject Code	Course Number
DH	465

Department
Dental Hygiene

Course Description

Introduction to independent dental hygiene practice. Designed for those interested in developing their own business venture (self-employment) as an Expanded Practice Dental Hygienist. Various practice opportunities are explored. Students develop and submit a business plan for a dental hygiene practice.

Academic Level (Course Level)
Undergraduate

DH467 - Restorative Func Endorsement

Overview

Course Subject Code	Course Number
DH	467

Department
Dental Hygiene

Course Description

This course fulfills the Oregon Board of Dentistry (OBD) requirements for the restorative endorsement for dental assistants and dental hygienists. Lecture, lab practice on typodonts and clinical practice with patients. Additional testing is required by the OBD following course completion. Prerequisite: AS or BS in Dental Hygiene or EFDA (Expanded Function Dental Assistant)

Academic Level (Course Level)
Undergraduate

DH470 - Cmty. Asmt. & Program Planning

Overview

Course Subject Code	Course Number
DH	470

Department
Dental Hygiene

Course Description
Dental public health, social determinants of health, and the impact of current events affecting access to care are examined. A community oral health assessment and strategic program plan using local solutions will be developed. Prerequisite: Admission to BOHO program.

Academic Level (Course Level)
Undergraduate

DH475 - EBDM in Healthcare I

Overview

Course Subject Code	Course Number
DH	475

Department
Dental Hygiene

Course Description
Course emphasizes evidence-based decision making; developing clinical questions, identifying research designs and evidence, importance of statistics, and literature searches. Critical analysis of literature and formulation of critically appraised topics (CATS) in preparation for research dissemination (prospectus or graduate school).

Academic Level (Course Level)
Undergraduate

DH476 - Applied Research Concepts

Overview

Course Subject Code	Course Number
DH	476

Department
Dental Hygiene

Course Description
Course expands upon basic research principles. Emphasis on advanced knowledge and application of research culminating in an original research project. Prepare students for advanced coursework in graduate school.

Academic Level (Course Level)
Undergraduate

DH499 - Laboratory Practice

Overview

Course Subject Code	Course Number
DH	499

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

DH507 - Seminar

Overview

Course Subject Code	Course Number
DH	507

Department
Dental Hygiene

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Graduate

DHE100 - Intro to Dental Hygiene I

Overview

Course Subject Code	Course Number
DHE	100

Department

Dental Hygiene

Course Description

Orientation to the theory and practice of all aspects of the dental hygiene profession. The history of dental hygiene, professional organization and career opportunities are discussed.

Academic Level (Course Level)

Undergraduate

DHE207 - Seminar

Overview

Course Subject Code	Course Number
DHE	207

Department

Dental Hygiene

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

DHE221 - Dental Hyg Clinical Pract I

Overview

Course Subject Code	Course Number
DHE	221

Department

Dental Hygiene

Course Description

Sequential course designed to provide clinical skills essential for the practice of dental hygiene. Skill development in the areas of patient appraisal, basic instrumentation, and individualized preventive care emphasized.

Academic Level (Course Level)

Undergraduate

Electrical & Renewable Energy Department

Stefan Andrei, *Department Chair*

Professors: S. Andrei, T. Breedlove, C. Caldwell, D. Lynn

Associate Professors: P. Howard, T. Scevers, C. Heiner

Assistant Professors: G. Drouant, G. Jang, F. Karakaya, P. Nguyen

Instructors: Pramiti Barua

Degrees Offered

- Master of Science in Engineering - Multiple Specialties (Portland-Metro and Online)
- Master of Science in Renewable Energy Engineering (Klamath Falls, Online and Portland-Metro)
- Bachelor of Science in Electrical Engineering (Klamath Falls and Portland-Metro)
- Bachelor of Science in Electronics Engineering Technology (Portland-Metro)
- Bachelor of Science in Renewable Energy Engineering (Klamath Falls and Portland-Metro)

Dual Majors Offered

- Systems Engineering and Technical Management (Online)

Electrical Engineering, BS

The Bachelor of Science in Electrical Engineering (BSEE) at Oregon Tech is designed to prepare professionals to meet the needs of the growing Electrical Engineering industry. Electrical engineering is concerned with the use of electricity to transmit electric power, or to process information. Electrical engineers design, develop, test, and integrate electrical power systems and electrical machines, as well as electronic systems, including portable electronic devices, medical equipment, communication systems, radar and navigation systems, control and autonomous systems, to include robotics.

The program is designed around a set of core courses which provide a classical electrical engineering foundation, and a number of elective courses that allow students some flexibility to specialize in areas of particular interest, such as electronics, electrical power, optical engineering, renewable energy, etc. Emphasis is placed on practical application of engineering knowledge. The BSEE program at Oregon Tech can accommodate full-time students, transfer students, and working professionals, and provides a solid preparation for industry or graduate school.

Graduates of the Electrical Engineering Program are prepared to fulfill a wide range of functions within industry. Employers of electrical engineering graduates include research and development laboratories, electronic equipment manufacturers, public utilities, colleges and universities, government agencies, medical laboratories and hospitals, electronic equipment distributors, and semiconductor companies, among others.

The program also provides a solid preparation for students intending to continue to graduate school to pursue master's degrees in engineering, engineering management, MBAs, and JDs.

Program Learning Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Student Preparation

Students entering the Electrical Engineering program from high school should have a minimum of: 1) Two years of high-school algebra and one year of high-school geometry and trigonometry. 2) Two years of physical science (physics, chemistry preferred). 3) Three years of English composition. Additional mathematics, science, English, electronics, and computer languages are helpful.

Students entering the Electrical Engineering program by transfer are requested to contact the department concerning transfer of technical coursework.

Note: The Portland-Metro campus is a laptop-required campus with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/portland-metro/college-costs/bring-your-own-device>.

Accreditation

The BSEE program is accredited by the Engineering Accreditation Commission (EAC) of ABET, Inc., <http://www.abet.org>. ABET is a specialized accrediting board recognized by the Council for Higher Education and/or the Secretary of the U.S. Department of Education.

Bachelor of Science in Electrical Engineering (Post-Baccalaureate)

Oregon Tech Bachelor of Science in Electronics Engineering Technology graduates may complete 36 additional credits to receive a Bachelor of Science in Electrical Engineering (post-baccalaureate). Students will receive two diplomas: a BSEET degree (upon completion of the BSEET degree requirements), and a BSEE degree (upon completion of the BSEE degree requirements, which include a minimum of 36 credits from Oregon Tech beyond the BSEET requirements).

Students who have completed an ABET accredited BS degree in Electronics Engineering Technology from another university must complete a minimum of 45 Oregon Tech credits to receive the BS in Electrical Engineering from Oregon Tech. Students pursuing this option should contact an academic advisor to draft an academic plan that ensures all BSEE curriculum requirements are met.

Bachelor of Science in Electrical Engineering with a Dual Major

Students completing the BSEE program have the option of selecting a dual major. The EERE department currently offers a dual major in Systems Engineering & Technical Management. Students completing a BSEE degree with a dual major will receive a single BS degree with both majors listed on their diploma and transcript. The degree is issued upon completion of the requirements for each major (some courses may be used to meet the requirements for both majors). The requirements for the dual major in Systems Engineering & Technical Management are listed under the corresponding sections of the catalog.

Concurrent Degree in Electrical Engineering and Renewable Energy Engineering

The EERE Department provides the opportunity for interested and motivated students to earn two Bachelor of Science degrees concurrently: a BS in Electrical Engineering & BS in Renewable Energy Engineering. The purpose of this concurrent degree is to provide the top students with a challenging academic program that will prepare them for career opportunities in the electronics, electrical engineering, power, and energy industries. The students receive a BS degree in a classical engineering discipline (Electrical Engineering), as well as an emerging high growth discipline (Renewable Energy Engineering). This concurrent degree program takes approximately an additional year beyond the BSEE degree program (or 4.5 years total by taking courses in Summer term).

Concurrent Accelerated MSREE/BSEE

Students may earn both MSREE and BSEE degrees, awarded simultaneously upon completion of this curriculum. Students enrolled in the BSEE program who have a proven record of academic excellence have the option of completing the MSREE with one additional year of coursework.

To be eligible for this option, students must have a cumulative GPA of 3.0, and must contact the MSREE Program Director for admission into the graduate program by the end of Spring term of their junior year. Students will receive both their BSEE and MSREE degrees at the end of their fifth year. The graduate project requirement must be met by a design project supervised and approved by both EE and REE advisors. Students should contact their academic advisors for details.

Concurrent Accelerated MSE/BSEE

Students may earn both MSE and BSEE degrees, awarded simultaneously upon completion of this curriculum. Students enrolled in the BSEE program who have a proven record of academic excellence have the option of completing the MSE with one additional year of coursework.

To be eligible for this option, students must have a cumulative GPA of 3.0, and must apply for admission into the graduate program by the end of Spring term of their junior year. Students will receive both their BSEE and MSE degrees at the end of their fifth year. Students pursuing this option gain some efficiency by using graduate-level coursework and a graduate project to also satisfy undergraduate coursework and senior capstone project requirements. Students can contact the MSE program director for details.

Electronics Engineering Technology, BS

Oregon Institute of Technology offers an ABET accredited Bachelor of Science degree in Electronics Engineering Technology (BSEET). The program is conveniently offered at the Oregon Tech Portland-Metro campus, with courses offered in the evenings and online in order to accommodate degree seeking professionals working for high-tech companies in the Portland Westside area. The Willow Creek Center is located in Hillsboro (OR), at the heart of the Portland Westside high-tech industry cluster (Silicon Forest), minutes away from companies such as Intel, Tektronix, Maxim Integrated, Credence, Synopsis, Qorvo, and others. Some of the core and technical elective courses for the degree are also available online and at the Oregon Tech Portland-Metro campus.

Career Opportunities

Electronics Engineering Technology is concerned with theory, concepts, and practice of applied electronics engineering. Emphasis is placed on the practical application of engineering knowledge. As a result, the Electronics Engineering Technology graduate possesses a combination of theoretical and practical understanding and requires minimal on-the-job training.

The BSEET program is designed to prepare graduates to assume engineering and technology positions in the electronics industry. Graduates of the BSEET program fulfill a wide range of functions within industry, typically assuming positions such as component and system design, test engineering, product engineering, field engineering, manufacturing engineering, sales or market engineering, quality control engineering, and other similar roles. The program also provides a solid preparation for students intending to continue to graduate school to pursue master's degrees in engineering, engineering management, and MBAs.

Employers of Electronics Engineering Technology graduates include research and development laboratories, electronic equipment manufacturers, public utilities, colleges and universities, government agencies, medical laboratories and hospitals, electronic equipment distributors, semiconductor companies, and automated electronic controlled processing companies. Recent graduates have been employed at companies such as MAXIM, Tektronix, Qorvo, MSEI/Biotronik, Intel and others.

Program Learning Outcomes

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. an ability to function effectively as a member as well as a leader on technical teams.

Student Preparation

The BSEET degree at Oregon Tech is designed to accommodate working professionals with evening delivery of upper-division and custom bridging courses. It is especially suited for working professionals with an associate degree in Electronics Engineering Technology, Microelectronics Technology, or equivalent coursework. Students entering the BSEET program by transfer are requested to contact the BSEET Program Director concerning transfer of technical coursework. The BSEET program has articulation and transfer agreements with the Electronics, Microelectronics, and Renewable Energy Technology programs at various community colleges in Oregon. Students transferring to Oregon Tech with an AAS degree from these programs will not be required to take any lower-division electronics coursework. It is recommended (but not required) that students who are transferring with an AAS degree have completed Calculus II prior to transferring to the BSEET program at Oregon Tech, since Integral Calculus is a prerequisite for most upper-division BSEET courses.

We encourage transfer students to start the advising process with Oregon Tech upon completion of the first year of their AAS degree.

Note: The Portland-Metro campus is a laptop-required campus with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/portland-metro/college-costs/bring-your-own-device>.

Accreditation

The Electronics Engineering Technology program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, Inc., <http://www.abet.org>. ABET is a specialized accrediting board recognized by the Council for Higher Education and/or the Secretary of the U.S. Department of Education.

Bachelor of Science in Electrical Engineering (Post-Baccalaureate)

Oregon Tech Bachelor of Science in Electronics Engineering Technology graduates may complete 36 additional credits to receive a Bachelor of Science in Electrical Engineering (post-baccalaureate). Students will receive two diplomas: a BSEET degree (upon completion of the BSEET degree requirements), and a BSEE degree (upon completion of the BSEE degree requirements, which include a minimum of 36 credits from Oregon Tech beyond the BSEET requirements).

Students who have completed an ABET accredited BS degree in Electronics Engineering Technology from another university must complete a minimum of 45 Oregon Tech credits to receive the BS in Electrical Engineering from Oregon Tech. Students pursuing this option should contact an academic advisor to draft an academic plan that ensures all BSEE curriculum requirements are met.

Renewable Energy Engineering

Degrees Offered

- Master of Science in Renewable Energy Engineering
- Bachelor of Science in Renewable Energy Engineering
- Bachelor of Science in Renewable Energy Engineering and Systems Engineering & Technical Management (dual major)
- Bachelor of Science in Renewable Energy Engineering and Bachelor of Science in Electrical Engineering (concurrent degree)
- Bachelor of Science in Renewable Energy Engineering and Bachelor of Science in Environmental Science (concurrent degree)
- Bachelor of Science in Renewable Energy Engineering and Master of Science in Engineering (concurrent degree)

- Bachelor of Science in Renewable Energy Engineering and Master of Science in Renewable Energy Engineering (concurrent degree)

Note: The BS Renewable Energy Engineering is offered in both the Klamath Falls and Portland-Metro campuses. The different degree options (dual majors, concurrent degrees, etc.) may vary by campus. The MS Renewable Energy Engineering is offered at both the Klamath Falls and Portland-Metro campuses.

Career Opportunities

Program graduates will enter energy careers as power engineers, PV/semiconductor processing engineers, facilities and energy managers, energy system integration engineers, HVAC and M/E/P engineers, design and modeling engineers for net-zero energy buildings, biofuels plant and operations engineers, energy systems control engineers, power electronics engineers, utility program managers, as well as renewable energy planners and policy makers. Graduates of the program will be able to pursue a wide range of career opportunities, not only within the emerging field of renewable energy, but within more traditional areas of energy engineering as well.

Employers of Renewable Energy Engineering graduates include consulting engineering firms, fuel cell manufacturers, power converter manufacturers, public utilities, government agencies, photovoltaic manufacturers, and energy developers. Recent graduates have been employed at companies such as Advanced Energy, Jacobs Engineering, Power Engineers, and Iberdrola Renewables.

Bachelor of Science in Renewable Energy Engineering

The Bachelor of Science in Renewable Energy Engineering (BSREE) prepares students for the challenges of designing, promoting and implementing renewable energy engineering in societies rapidly changing energy-related industries. Energy, in its many abundant forms, is the driving physical factor upon which industrial societies are founded. As geopolitical, environmental and geological factors act to constrain traditional resources, societies have been forced to re-think and redevelop their energy infrastructures. Renewable energy resources include solar thermal collectors, photovoltaics, ground-source heat pumps, geothermal resources, hydroelectric power, wind power, tidal and wave power, bio-energy, and fuel cells. Oregon Tech's Bachelor of Science in Renewable Energy Engineering prepares students for success in these rapidly developing fields.

The BSREE program is built upon a solid foundation in physics, chemistry, mathematics and communications. Added to this foundation are courses in electrical and mechanical engineering that establish a firm understanding of the fundamentals of energy. The engineering coursework prepares students for renewable energy-specific courses such as photovoltaics, wind power, biofuels, hydroelectric, fuel cells and solar thermal systems. These courses are then integrated into system-wide senior level courses such as energy system design, energy-efficient building systems, renewable energy transportation systems, energy management and energy systems control.

Program Learning Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Student Preparation

High school students should be prepared to start their college academic work with at least college calculus and Freshman English composition. Typically, this means the successful new student has completed:

1. Four years of high school mathematics including algebra I and II, geometry and trigonometry
2. Four years of English composition/writing
3. Four years of science including physics and chemistry

Students entering the program by transfer are requested to contact the program director for evaluation of REE-related transfer courses.

Note: The Portland-Metro campus is a laptop-required campus with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/portland-metro/college-costs/bring-your-own-device>.

Accreditation

The Renewable Energy Engineering baccalaureate program is accredited by the Engineering Accreditation Commission (EAC) of ABET, Inc., <http://www.abet.org>. ABET is a specialized accrediting board recognized by the Council for Higher Education and/or the Secretary of the U.S. Department of Education.

Bachelor of Science in Renewable Energy Engineering with a Dual Major

Students completing the BSREE program have the option of selecting a dual major. The EERE department currently offers a dual major in Systems Engineering & Technical Management. Students completing a BSREE degree with a dual major will receive a single BS degree with both majors listed on their diploma and transcript. The degree is issued upon completion of the requirements for each major (some courses may be used to meet the requirements for both majors). The requirements for the dual major in Systems Engineering & Technical Management are listed under the corresponding sections of the catalog.

Concurrent Degree in Renewable Energy Engineering and Electrical Engineering

The EERE Department provides the opportunity for interested and motivated students to earn two Bachelor of Science degrees: a BS in Renewable Energy Engineering and a BS in Electrical Engineering. The purpose of this concurrent degree is to provide the top students with a challenging academic program that will prepare them for career opportunities in the electronics, electrical engineering, power and energy industries. The students receive a BS degree in a classical engineering discipline (Electrical Engineering), as well as an emerging high-growth discipline (Renewable Energy Engineering). The degree program will take an additional year beyond the BSREE degree program (or 4.5 years total by taking courses in Summer term.)

Concurrent Degree in Renewable Energy Engineering and Environmental Sciences

Renewable Energy Engineering students have the opportunity to earn a concurrent degree: a BS in Renewable Energy Engineering and a BS in Environmental Sciences. The additional degree requires 54 credits in Environmental Sciences courses, which can be taken concurrent to Renewable Energy Engineering courses or in an add-on year. A second degree in Environmental Sciences places engineering projects in the context of environmental impacts and environmental regulations, and greatly increases job opportunities for Oregon Tech Renewable Energy Engineering graduates. The purpose of the concurrent programs is to challenge motivated students to become even better prepared for the engineering and environmental job markets.

Concurrent Accelerated MSE/BSREE Program

Students may earn both MSE and BSREE degrees, awarded simultaneously upon completion of this curriculum. Students enrolled in the BSREE program who have a proven record of academic excellence have the option of completing the MSE with one additional year of coursework.

To be eligible for this option, students must have a cumulative GPA of 3.0, and must apply for admission into the graduate program by the end of Spring term of their junior year. Students will receive both their BSREE and MSE degrees at the end of their fifth year. Students pursuing this option gain some efficiency by using graduate-level coursework and a graduate project to also satisfy undergraduate coursework and senior capstone project requirements. Students can contact the MSE program director for details.

Concurrent Accelerated MSREE/BSREE Program

Students may earn both MSREE and BSREE degrees, awarded simultaneously upon completion of this curriculum. Students who enrolled in the BSREE program who have a proven record of academic excellence have the option of completing the MSREE with one additional year of coursework.

To be eligible for this option, students must have a cumulative GPA of 3.0, and must contact the MSREE Program Director for admission into the graduate program by the end of Spring term of their junior year. Students will receive both their BSREE and MSREE degrees at the end of their fifth year. The graduate project requirement must be met by a design project supervised and approved by an REE advisor. Students should contact their academic advisors for details.

Master of Science in Engineering - Multiple Specialties

The Master of Science in Engineering (MSE) is a highly customizable and modular MS program. There are multiple specialties or tracks available based on student interest. Under the supervision of an academic advisor, students are also able to choose coursework from multiple disciplines to design specialties typically not available in the classical engineering disciplines. Consequently, MSE students have the ability to customize the MSE to be highly relevant to their professional interest. The flexibility to design a specialized or multidisciplinary degree program, while maintaining practical focus and academic rigor, is the defining element of the program and is what makes it such a close match to the interdisciplinary environment in today's fast changing industries. This ensures a relevant, up-to-date educational experience, and the ability to meet urgent industry needs in multidisciplinary technical fields. Depending on their interest and career goals, students can choose a multidisciplinary MSE, a specialized MSE, or a more classical MSE program, such as the MSE in Electrical Engineering. The MSE program can accommodate full-time students or working professionals.

Program Learning Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Note: The Portland-Metro campus is a laptop-required campus with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/portland-metro/college-costs/bring-your-own-device>.

Admission Requirements

In addition to Oregon Tech's graduate admission requirements, admission to the MS Engineering (MSE) program requires a BS degree in engineering, physical science, or related technical field. Applicants who do not meet this requirement and apply for admission may be asked to complete a series of undergraduate "bridge" courses prior to formal admission (contact MSE program director for details). Students enrolled in a bachelor's degree program in engineering or engineering technology at Oregon Tech may apply for admission to the accelerated BS + MSE program at the end of their junior year (students interested in this accelerated program are encouraged to contact the MSE program director for details).

MSE/BS Concurrent Fast Track Degree (5 year Program)

Students enrolled in the EERE BS programs (BSEE, BSEET, BSREE) are eligible to apply for the concurrent Fast Track BS/MSE program. This enables students to potentially obtain both the BS and MS degrees in 5 years.

MSE Coursework & Specialties

Students can complete a multidisciplinary program by taking courses in Systems Engineering, Research Methods & Innovation (covering peer-reviewed research, IP fundamentals, and technology commercialization), and one or more engineering disciplines including Electrical & Computer Engineering.

Multidisciplinary MSE Program

- MSE (Multidisciplinary)
- MSE in Systems Engineering

Engineering Discipline MSE Program

- MSE in Electrical Engineering

Specialized MSE Programs

- MSE in Power Engineering

Accreditation

Oregon Institute of Technology is accredited by the Northwest Commission on Colleges and Universities, 8060 165th Ave. NE, Suite 100, Redmond, WA 98052-3981, an institutional accrediting body recognized by the Council for Higher Education Accreditation and/or the Secretary of the U.S. Department of Education.

Master of Science in Renewable Energy Engineering (MSREE)

The Master of Science in Renewable Energy Engineering (MSREE) program is offered at both the Klamath Falls and Portland-Metro campuses. The MSREE program accommodates both full-time students and working professionals. The program is designed to prepare graduates to be energy engineering professionals who have advanced knowledge and skills that enable them to assume a broad range of technical leadership roles.

The MSREE curriculum is built upon core tracks in research methods & innovation and advanced energy engineering. These courses provide the foundation for three required specialized course sequences in renewable energy technologies and nine credits of thesis or graduate R&D project work.

In the second year of the program, students demonstrate mastery on a renewable energy-related topic through REE 596/597/598 - Graduate Thesis or Project Thesis. A thesis answers a question using scientific methods. Projects solve a problem using the engineering design process. In both cases, there should be an element of novelty in students work. Students who have previously received a BS in Engineering from an ABET accredited program may opt for either a Thesis or Project path, or a coursework only path in which REE 596/597/598 - Graduate Thesis or Project Thesis is substituted by technical courses.

Student Preparation

Students should be prepared to start graduate academic work. Typically, this means the successful new student has the following:

- 1. A baccalaureate degree in engineering, the physical sciences (e.g., physics, chemistry), or a related technical discipline
- 2. Evidence of potential for graduate academic work, success or potential for success in industry, and demonstrated interest in energy engineering

Accreditation

Oregon Institute of Technology is accredited by the Northwest Commission on Colleges and Universities, 8060 165th Ave. NE, Suite 100, Redmond, WA 98052-3981, an institutional accrediting body recognized by the Council for Higher Education Accreditation and/or the Secretary of the U.S. Department of Education.

Programs

Concurrent Degree in Electrical Engineering and Renewable Energy Engineering

Overview

Program Long Title
Dual Elec/Renewable Energy Eng

Program Title
Dual Elec/Renewable Energy Eng

Department(s)
Electrical & Renewable Energy

Degree Designation
BS

Program Level CIP Code
UG 141099

Concurrent Degree in Renewable Energy Engineering and Environmental Sciences

Overview

Program Long Title
Dual Renewable Energy/Env Sci

Program Title
Dual Renewable Energy/Env Sci

Department(s)
Electrical & Renewable Energy

Degree Designation
BS

Program Level CIP Code
UG 149999

Concurrent Degree in Renewable Energy Engineering and Electrical Engineering

Overview

Program Long Title
Dual Renewable Energy/Elec Eng

Program Title
Dual Renewable Energy/Elec Eng

Department(s)
Electrical & Renewable Energy

Degree Designation
BS

Program Level CIP Code
UG 149999

Electrical Engineering, BS

Overview

Program Long Title
Electrical Engineering

Program Title
Electrical Engineering

Department(s)
Electrical & Renewable Energy

Degree Designation
BS

Program Level CIP Code
UG 141001

Degree Maps

Degree Map Name
Advising Guide - Electrical Engineering
Total Degree Map Credits
181
Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
The Bachelor of Science in Electrical Engineering follows a rigorous curriculum, requiring a minimum of 180 credit hours, which takes approximately four years to complete. To be eligible for graduation, students must maintain a 2.0 GPA. In addition, a final grade of “C” or better must be earned in all courses with CST, EE, ENGR, MATH, PHY prefixes, as well as in all technical elective courses.

- Notes/Options
- CHE 201/205 can be substituted with CHE 221Z/ 227Z
 - Math/Science Elective - choose a course in BIO, CHE, ENV, GEOL, MATH, or PHY class (or advisor approved Math/Science)
 - EE 225 can be replaced with [EE 320](#)
 - Technical electives include upper division EE and REE courses (except EE 311, EE320, EE 347, and EE 431), and courses listed for a specific BSEE technical emphasis. Other courses may be used with advisor approval . See Electrical Engineering webpage for more information.
- for more information.

Technical Emphases
Students in the BSEE program may choose to specialize in a particular area by selecting at least three of their engineering technical elective courses from the appropriate lists. **These lists**

of courses are provided only for guidance. Students are not required to select a technical emphasis, and technical emphases will not appear on the students’ transcripts. Some technical elective courses in the emphases may not be available at both campuses. Check course offerings with your advisor.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0
Requirement Select			
• CHE201 - General Chemistry I			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		3	
Progress Credits		-	
Contact Hours		3	
Clinical		-	
Criticality		No	

Requirement Select			
• CHE204 - General Chemistry I Lab			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		1	
Progress Credits		-	
Contact Hours		0 - 3	
Clinical		-	
Criticality		No	

Requirement Select			
• EE131 - Digital Electronics I			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		0 - 6	
Clinical		-	
Criticality		No	

Requirement Select	
• EE101 - Introduction to Engineering I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MATH251Z - Differential Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• ACAD110 - ETM Freshman Seminar	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Freshman	Winter	14	Credits
			0

Requirement Select	
• EE133 - Digital Electronics II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• EE102 - Introduction to Engineering II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• MATH252Z - Integral Calculus	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	16	0

Requirement Select

- CST116 - C++ Programming I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH341 - Linear Algebra I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- EE221 - Circuits I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

• MATH321 - Appl Diff Equation I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• PHY221 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• WRI227Z - Technical Writing

OR

• WRI122Z - Composition II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

• EE223 - Circuits II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• ENGR267 - Engineering Programming

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

• MATH254 - Vector Calculus I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- EE225 - Circuits III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH253Z - Calculus: Sequences and Series

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	16	0

Requirement Select

- EE321 - Electronics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- EE333 - Intro to Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH465 - Mathematical Statistics
- OR**
- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- EE323 - Electronics II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- EE331 - Digital System Design w/HDL

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE341 - Electricity/Magnetism w/Transm

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- EE335 - Advanced Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE461 - Cntrl Engr I:Classical Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- EE Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	14	0

Requirement Select

- EE343 - Solid State Electronic Devices

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- EE Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	16	0

Requirement Select

- EE430 - Linear Sys & Digital Signal

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MGT345 - Engineering Economy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI350 - Documentation Development
- OR**
- WRI410 - Proposal & Grant Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

- EE401 - Communication Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select EE Technical Electives	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No
Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Electronics Engineering Technology, BS

Overview

Program Long Title

Electronics Engineering Tech

Program Title

Electronics Engineering Tech

Department(s)

Electrical & Renewable Energy

Degree Designation

BS

Program Level

UG

CIP Code

150303

Degree Maps

Degree Map Name
Advising Guide - Electronics Engineering Tech
Total Degree Map Credits
85
Degree Map Effective Catalog Year
2425 -
Degree Map Narrative
The Bachelor of Science in Electronics Engineering Technology follows a rigorous curriculum, requiring a minimum of 180 credit hours, which takes approximately four years to complete. To be eligible for graduation, students must maintain a 2.0 GPA. In addition, a final grade of “C” or better must be earned in all courses with CST, EE, ENGR, MATH, PHY prefixes, as well as in all technical elective courses.
<u>Freshman and Sophomore Years</u>
The degree requirements for the first two years can be fulfilled by completing an accredited Associate of Applied Science degree in Electronics Engineering Technology, Microelectronics Engineering Technology, Microelectronics Technology, Electrical Engineering Transfer, Renewable Energy Technology, or equivalent coursework. Oregon Tech has articulation agreements with various community colleges throughout Oregon. Students transferring to Oregon Tech with an AAS degree from these programs will not be required to take any lower-division electronics courses at Oregon Tech. In addition to the electronics courses, students should complete the programming, math and science, communication, and general education courses specified below during the Freshman and Sophomore years while completing their AAS degree in order to be able to complete the upper-division (Junior and Senior) BSEET courses at Oregon Tech in two years. Below is a list of courses to satisfy the requirements for the first two years of the degree. Completion of all these courses is not required to be able to transfer, but it is recommended for 2+2 transferability.

Communication

- COM 111Z - Public Speaking
- WRI 121Z - Composition I
- WRI 122Z - Composition II or WRI 227Z - Technical Writing

General Education

- Humanities Elective - Credit Hours: 6
- Social Science Elective - Credit Hours: 9

Mathematics and Science

- MATH 111Z - Precalculus I: Functions
- MATH 112Z - Precalculus II: Trigonometry
- MATH 251Z - Differential Calculus
- MATH 252Z - Integral Calculus
- PHY 201 - General Physics or PHY 221 General Physics w/Calc
- PHY 202 - General Physics or PHY 222 General Physics w/Calc
- PHY 203 - General Physics or PHY 223 General Physics w/Calc

Electronics

- EE 131 - Digital Electronics I
- EE 133 - Digital Electronics II
- EE 221 - Circuits I
- EE 223 - Circuits II

Programming

- CST 116 - C++ Programming I

Technical Emphasis Electives

16 credits in Lower Division Technical Electives. Electives include CST 126, CST 136, and other approved 200-level engineering or engineering technology courses.

7 credits in Upper Division EET Technical Electives (listed in guide below). Upper division EE or REE courses (except EE 311, EE 320, and EE 347), or courses included in the list for a specific degree option. Other courses may be used as engineering electives with advisor and department chair approval. Students must complete a minimum of 7 credits of engineering elective coursework.

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	14	0

Requirement Select

- EE320 - Adv Circuit Systems Analysis
- OR
- EE225 - Circuits III
- OR
- EE432 - Advanced Digital System Design

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- EE321 - Electronics I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- EE323 - Electronics II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- EE331 - Digital System Design w/HDL

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- ENGR267 - Engineering Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	12	0

Requirement Select

- EE325 - Electronics III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- EE432 - Advanced Digital System Design

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE333 - Intro to Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR**
- MATH465 - Mathematical Statistics
- OR**
- STAT243Z - Elementary Statistics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- EET Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- EE430 - Linear Sys & Digital Signal

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EET Technical Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI350 - Documentation Development
- OR**
- WRI410 - Proposal & Grant Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- EE335 - Advanced Microcontrollers

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- EE401 - Communication Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MGT345 - Engineering Economy

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Renewable Energy Engineering, BS**Overview****Program Long Title**

Renewable Energy Engineering

Program Title

Renewable Energy Engineering

Department(s)

Electrical & Renewable Energy

Degree Designation

BS

Program Level

UG

CIP Code

144801

Degree Maps**Degree Map Name**

Advising Guide - Renewable Energy Engineering

Total Degree Map Credits

183 - 184

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative**Degree Requirements**

The Bachelor of Science in Renewable Energy Engineering follows a rigorous curriculum, requiring a minimum of 180 credit hours, which takes approximately four years to complete. To be eligible for graduation, students must maintain a 2.0 GPA. In addition, a final grade of "C" or better must be earned in all courses with MATH, CHE, PHY, EE, ENGR, MECH, and REE prefixes. Students must also earn a grade of "C" or better in all courses listed as prerequisites for these courses.

Renewable Energy Engineering Electives*

9 credits of technical electives are required. At least 3 of these classes must be REE 300-level or above and up to two courses from the following list: 300- or 400-level EE courses (except for EE 320), ENGR42X, or SEM42X. No more than three 1-credit courses are allowed. Enrollment in graduate-level courses at the undergraduate level requires special approval. Examples of acceptable elective courses are:

- EE 341 Electricity/Magnetism w/Transm
- EE 343 Solid State Electronic Devices
- EE 347 Digital Logic
- MECH 433 HVAC
- REE 307 Seminar
- REE 331 Fuel Cells

- REE 333 Batteries
- REE 335 Hydrogen
- REE 344 Nuclear Energy
- REE 345 Wind Power
- REE 348 Solar Thermal Energy Systems
- REE 407 Seminar
- REE 427 Greenhouse Gas Acct/Footprints
- REE 439 Energy Systems Auditing and Management
- REE 453 Power System Analysis
- REE 454 Power Syst Protection & Cntrl
- REE 455 Energy Efficient Building Dsgn
- REE 469 Grid Integration of Renewables

Senior Sequence**

3 courses/9 credits of Senior Sequence is required. Classes must be at least 400-level. See your Academic Advisor, the program website, or Degree Works for sequence options.

Notes:

CHE 201/CHE 204 and CHE 202/CHE 205 can be substituted with CHE 221/227 and CHE 222/228 respectively

REE 201 + 1 engineering credit may replace EE 101/102 for Portland Metro students

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	14	0
Requirement Select • CHE201 - General Chemistry I Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 3 Progress Credits - Contact Hours 3 Clinical - Criticality No			

Requirement Select

- CHE204 - General Chemistry I Lab

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- EE101 - Introduction to Engineering I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- CHE202 - General Chemistry II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CHE205 - General Chemistry II Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics
OR
- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- EE102 - Introduction to Engineering II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- CHE260 - Electrochemistry for RE Applic

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH341 - Linear Algebra I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- EE221 - Circuits I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- WRI227Z - Technical Writing

OR

- WRI122Z - Composition II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- EE223 - Circuits II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- ENGR267 - Engineering Programming

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- EE225 - Circuits III

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH465 - Mathematical Statistics
- OR**
- MATH361 - Statistical Methods I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY223 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CE211 - CE Mechanics: Statics
- OR**
- MECH211 - Engineering Mechanics: Statics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- EE321 - Electronics I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MECH318 - Fluid Mechanics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- REE337 - Materials for RE Applications
- OR**
- EE343 - Solid State Electronic Devices

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	21	0

Requirement Select

- HIST356 - A History of Energy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- REE243 - Electrical Power

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- REE412 - Photovoltaic Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- REE463 - Energy Systems Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MECH355 - Thermodynamics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16 - 17	Credits
			0

Requirement Select

- EE461 - Cntrl Engr I:Classical Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH323 - Heat Transfer I
- OR**
- ENGR318 - Engineering Mech: Fluids

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- REE253 - Electromech Energy Conversion

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Renewable Energy Engineering Elective*
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	14	0

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- REE333 - Batteries
OR
- REE335 - Hydrogen
OR
- REE331 - Fuel Cells

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Senior Sequence I **
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	12	0

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI350 - Documentation Development
- OR**
- WRI410 - Proposal & Grant Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- EE419 - Power Electronics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Senior Sequence II **
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Renewable Energy Engineering Elective*
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- ENGR465 - Capstone Project

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- REE413 - Electric Power Conv Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Senior Sequence III ** (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Renewable Energy Engineering Elective* (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Power Systems Engineering, Graduate Certificate

Overview

Program Long Title

Power Systems Engineering

Program Title

Power Systems Engineering

Department(s)

Electrical & Renewable Energy

Degree Designation

CERT

Program Level

GR

CIP Code

141001

Systems Engineering, Graduate Certificate

Overview

Program Long Title
Systems Engineering

Program Title
Systems Engineering

Department(s)
Electrical & Renewable Energy

Degree Designation
CERT

Program Level	CIP Code
GR	141001

Renewable Energy Engineering, MS

Overview

Program Long Title
Renewable Energy Engineering

Program Title
Renewable Energy Engineering

Department(s)
Electrical & Renewable Energy

Degree Designation
MS

Program Level	CIP Code
GR	149999

Degree Maps

Degree Map Name
Advising Guide, MSREE

Total Degree Map Credits
60

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative

Degree Requirements
The Master of Science in Renewable Energy Engineering is a rigorous curriculum that requires 45 credit hours and approximately two years to complete.

Renewable Energy Specialization Sequences: Students must complete at least two REE specialization sequences from the list below. One sequence constitutes three courses under the titles below. Other sequences may be used to satisfy this requirement with advisor and department chair approval. Not all sequences are offered every year. Some sequences are campus specific.

Look under Requirements to see course sequence options.

Year	Semester	Actual Credits	Progress Credits
First Year	Fall	9	0

Requirement Select

- REE515 - Energy Engineering I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- REE 5xx REE Specialization Sequence X: 1 of 3 (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- 500-Level Advisor Approved Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Winter	9	0

Requirement Select

- REE516 - Energy Engineering II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- REE 5xx REE Specialization Sequence X: 2 of 3 (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- 500-Level Advisor Approved Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
First Year	Spring	9	0

Requirement Select

- REE517 - Energy Engineering III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- REE 5xx REE Specialization Sequence X: 3 of 3
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- 500-Level Advisor Approved Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Fall	9	0

Requirement Select

- REE 5yy Specialization Sequence Y: 1 of 3 and
either
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- REE 5zz REE Specialization Sequence Z: 1 of 3
or
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- ENGR596 - Grad Research & Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Winter	9	0

Requirement Select

- REE 5yy Specialization Sequence Y: 2 of 3 and either
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- REE 5zz REE Specialization Sequence Z: 2 of 3 or
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- ENGR596 - Grad Research & Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Spring	15	0

Requirement Select

- REE 5yy REE Specialization Sequence Y: 3 of 3 and either
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- REE 5zz Specialization Sequence Z: 3 of 3 or
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- ENGR596 - Grad Research & Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

• ENGR597 - Graduate Project

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• ENGR598 - Graduate Thesis

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Engineering, MS

Overview

Program Long Title

Engineering

Program Title

Engineering

Department(s)

Electrical & Renewable Energy

Degree Designation

MS

Program Level

GR

CIP Code

140101

310 / 727

Courses

EE101 - Introduction to Engineering I

Overview

Course Subject Code	Course Number
EE	101

Department

Electrical & Renewable Energy

Course Description

Introduces the student to engineering with a focus on academic success, professional development, ethics, communication, and creative problem-solving techniques, engineering tools (CAD/CAE), and design concepts. A discipline-specific team-based laboratory experience encourages consideration of a chosen engineering discipline.

Academic Level (Course Level)

Undergraduate

EE102 - Introduction to Engineering II

Overview

Course Subject Code	Course Number
EE	102

Department

Electrical & Renewable Energy

Course Description

The student will focus on their chosen discipline through an interdisciplinary team-based design project, including problem identification, measurement, analysis, and presentation to peers. Emphasis will be placed on proper usage of engineering tools and instruments and sound design practices.

Academic Level (Course Level)

Undergraduate

EE107 - Seminar

Overview

Course Subject Code	Course Number
EE	107

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

EE131 - Digital Electronics I

Overview

Course Subject Code	Course Number
EE	131

Department

Electrical & Renewable Energy

Course Description

Introduction to combinational logic, gates, Boolean Algebra, Karnaugh Mapping, Number Systems/Codes, arithmetic circuits, decoders/encoders, mux/demux, comparators, basic sequential gates (Latches/FF) and introduction to HDL (Verilog/VHDL), PLD HW implementation.

Academic Level (Course Level)

Undergraduate

EE133 - Digital Electronics II

Overview

Course Subject Code	Course Number
EE	133

Department

Electrical & Renewable Energy

Course Description

Introduction to sequential logic with HDL, review latches and flip/flops, timers, counters/registers, HDL implementation, PLD HW implementation, finite state machine design/analysis, logic testing and timing analysis.

Academic Level (Course Level)

Undergraduate

EE207 - Seminar

Overview

Course Subject Code	Course Number
EE	207

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

EE221 - Circuits I

Overview

Course Subject Code	Course Number
EE	221

Department

Electrical & Renewable Energy

Course Description

Introductory course in linear circuit analysis. Topics include: Ohm's law, Kirchhoff's laws, nodal analysis, mesh analysis, source transformations, Thévenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance, and first-order transient circuit response. Students must also register for a laboratory section.

Academic Level (Course Level)

Undergraduate

EE223 - Circuits II

Overview

Course Subject Code	Course Number
EE	223

Department

Electrical & Renewable Energy

Course Description

Introductory course in linear circuit analysis. Second-order transient circuit analysis, phasors, sinusoidal steady-state analysis, phasor-domain nodal, mesh analysis; phasor Thévenin and Norton equivalent circuits, AC power, three-phase circuits, magnetically coupled circuits and transformers. Students must register for a laboratory section.

Academic Level (Course Level)

Undergraduate

EE225 - Circuits III

Overview

Course Subject Code	Course Number
EE	225

Department

Electrical & Renewable Energy

Course Description

Introductory course in linear circuit analysis. Transfer functions, frequency response, Bode plots, passive and active filters, Laplace transforms, Fourier series, Fourier transforms, and two-port networks. Students must also register for a laboratory section.

Academic Level (Course Level)

Undergraduate

EE307 - Seminar

Overview

Course Subject Code	Course Number
EE	307

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

EE320 - Adv Circuit Systems Analysis

Overview

Course Subject Code	Course Number
EE	320

Department

Electrical & Renewable Energy

Course Description

Methods of circuit analysis and circuit theorems. Introduction to the Laplace transform and its applications. Advanced circuit analysis using Laplace transform techniques. Transfer function analysis. Impulse and frequency response of circuits and systems. Bode plots. Stability.

Academic Level (Course Level)

Undergraduate

EE321 - Electronics I

Overview

Course Subject Code	Course Number
EE	321

Department

Electrical & Renewable Energy

Course Description

Basic semiconductor theory. Diodes and diode circuits. Bipolar-junction transistor (BJT). Ebers-Moll model. BJT amplifiers (CE, CB & CD). Multistage and differential amplifiers. Metal-Oxide-Semiconductor Field-Effect Transistor (MOSFET). MOSFET amplifiers (CS, CG & CD). Multistage MOSFET amplifiers. Op-Amps.

Academic Level (Course Level)

Undergraduate

EE323 - Electronics II

Overview

Course Subject Code	Course Number
EE	323

Department

Electrical & Renewable Energy

Course Description

Current sources. Current mirrors. Cascade active loads. Multistage amplifiers. Differential amplifiers. Frequency response. Miller's theorem. Negative feedback amplifier types: Voltage, Current, transconductance and transresistance. Stability and pole location. Gain and phase margins. Frequency compensation.

Academic Level (Course Level)

Undergraduate

EE325 - Electronics III

Overview

Course Subject Code	Course Number
EE	325

Department

Electrical & Renewable Energy

Course Description

Real operational amplifiers and basic circuits. Output stages. Power amplifiers. Filters, passive and active. Oscillators. Wave-shaping circuits. D/A and A/D circuits.

Academic Level (Course Level)

Undergraduate

EE331 - Digital System Design w/HDL

Overview

Course Subject Code	Course Number
EE	331

Department

Electrical & Renewable Energy

Course Description

Introduction to digital systems design with Hardware Description Languages (HDL). Topics include dataflow, behavioral and structural modeling, hierarchical design, programmable logic, 10 standards, and timing diagrams. Students will design and implement digital circuits which include counters, state machines, digital arithmetic, and external interfaces.

Academic Level (Course Level)

Undergraduate

EE333 - Intro to Microcontrollers

Overview

Course Subject Code	Course Number
EE	333

Department

Electrical & Renewable Energy

Course Description

Introductory course in microcontroller design. Topics include interrupt controller, time/counters, A/D converters, PWM channels, USARTs, SPI, two-wire interfaces, LEDs, LCDs, motors, and various sensors. Hands-on projects or lab assignments require C and/or assembly language programming to develop applications.

Academic Level (Course Level)

Undergraduate

EE335 - Advanced Microcontrollers

Overview

Course Subject Code	Course Number
EE	335

Department

Electrical & Renewable Energy

Course Description

Advanced course in design and development of micro-controller-based systems. Topics include internal peripheral devices, external devices interfacing, and micro-controller system design. Learning objectives are accomplished through design of fully integrated projects or lab assignments using C and/or assemble language programming.

Academic Level (Course Level)

Undergraduate

EE341 - Electricity/Magnetism w/Transm

Overview

Course Subject Code	Course Number
EE	341

Department

Electrical & Renewable Energy

Course Description

Review vector calculus. Flux, potential, gradient, divergence, curl and field intensity. Static electric and magnetic fields. Maxwell's equations. Boundary conditions. Uniform plane waves in media and free space. Reflection and transmission at interfaces. Propagation of guided waves. Transmission line. Antennas.

Academic Level (Course Level)

Undergraduate

EE343 - Solid State Electronic Devices

Overview

Course Subject Code	Course Number
EE	343

Department

Electrical & Renewable Energy

Course Description

Crystal properties and growth of semiconductors. Atoms and electrons. Energy bands and charge carriers in semiconductors. Excess carriers in semiconductors, p-n junctions. FETs and BJTs. Optoelectronic devices. High-frequency and high-power devices.

Academic Level (Course Level)

Undergraduate

EE401 - Communication Systems

Overview

Course Subject Code	Course Number
EE	401

Department

Electrical & Renewable Energy

Course Description

Signal Analysis, Fourier series, Fourier Transforms; analog signal transmission and Reception (AM, FM, PM); effects of noise in Analog Systems. Digital Data and Communication Systems; effects of noise in Digital Systems.

Academic Level (Course Level)

Undergraduate

EE407 - Seminar

Overview

Course Subject Code	Course Number
EE	407

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

EE419 - Power Electronics

Overview

Course Subject Code	Course Number
EE	419

Department

Electrical & Renewable Energy

Course Description

Power electronic device characterization. Rectifiers, DC-DC converters and inverters design, modeling, and build.

Academic Level (Course Level)

Undergraduate

EE430 - Linear Sys & Digital Signal

Overview

Course Subject Code	Course Number
EE	430

Department

Electrical & Renewable Energy

Course Description

Introduction to signals and systems. Spectral analysis techniques. Fourier Series and the continuous-time Fourier transform (CTFT). Discrete-time Fourier transform (DTFT) and digital Fourier transform (DFT). Computational spectral analysis using the FFT. FIR and IIR filters. Z-transform. Practical implementation of digital filters and computational spectral analysis using MATLAB.

Academic Level (Course Level)

Undergraduate

EE432 - Advanced Digital System Design

Overview

Course Subject Code	Course Number
EE	432

Department

Electrical & Renewable Energy

Course Description

Advanced digital system design with Field Programmable Gate Arrays (FPGAs). Students implement designs with pre-generated and custom digital logic functions using VHDL and/or Verilog hardware description languages. Projects include digital systems design, simulations, and hardware implementation.

Academic Level (Course Level)

Undergraduate

EE435 - Embedded Systems

Overview

Course Subject Code	Course Number
EE	435

Department

Electrical & Renewable Energy

Course Description

Advanced course in embedded systems hardware design and development. Topics include system-on-chip design, ARM processor architecture, digital signal processors, multi-core processing, vector processors, graphics processing units, external serial interfaces, external memory interfaces, network interfaces, debuggers, in-circuit emulators, and hardware security.

Academic Level (Course Level)

Undergraduate

EE448 - Geometric Optics

Overview

Course Subject Code	Course Number
EE	448

Department

Electrical & Renewable Energy

Course Description

Reflection and refraction at plane and curved surfaces; imaging properties of lenses; first-order Gaussian optics and thin-lens system layout; matrix optics; ray-tracing software; spherical and chromatic aberrations.

Academic Level (Course Level)

Undergraduate

EE460 - Comput Data Science & Big Data

Overview

Course Subject Code	Course Number
EE	460

Department

Electrical & Renewable Energy

Course Description

Applied data science, statistical techniques for data science, applied machine learning, big data analysis, big data processing, visualization and representation, applied computational & mathematical methods for data science, data analytics, applied text mining and network analysis.

Academic Level (Course Level)

Undergraduate

EE461 - Cntrl Engr I:Classical Methods

Overview

Course Subject Code	Course Number
EE	461

Department

Electrical & Renewable Energy

Course Description

An introduction to the design and compensation of linear control systems using a complex frequency-domain approach. Feedback control of first- and second-order systems, controller sensitivity, disturbance rejection, stability, frequency response methods. Introduction to state-space modeling. Computer simulation of feedback control systems.

Academic Level (Course Level)

Undergraduate

EE462 - RF/Wireless Systems

Overview

Course Subject Code	Course Number
EE	462

Department

Electrical & Renewable Energy

Course Description

Hardware components, system parameters, and architectures of RF and microwave wireless systems. Topics include microwave transmission lines, Smith charts, impedance matching networks, antenna systems, microwave components, receivers and transmitters, radar systems and sensors, and wireless communication systems.

Academic Level (Course Level)

Undergraduate

EE485 - Printed Circuit Board Design

Overview

Course Subject Code	Course Number
EE	485

Department

Electrical & Renewable Energy

Course Description

A course on modern PCB technology and design skills required for successful implementation of PCB designs in industry. This course provides direct, hands-on experience with industry standards, tools, and design techniques. Students will learn schematic capture and PCB layout.

Academic Level (Course Level)

Undergraduate

EE501 - Communication Systems

Overview

Course Subject Code	Course Number
EE	501

Department

Electrical & Renewable Energy

Course Description

Single Analysis, Fourier series, Fourier Transforms; Analog signal transmission and Reception (AM, FM, PM); effects of noise in Analog Systems. Digital Data and Communication Systems; effects of noise in Digital Systems. Cross-listed with EE 401. Graduate standing required.

Academic Level (Course Level)

Graduate

EE507 - Seminar

Overview

Course Subject Code	Course Number
EE	507

Department

Electrical & Renewable Energy

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Graduate

EE519 - Power Electronics

Overview

Course Subject Code	Course Number
EE	519

Department

Electrical & Renewable Energy

Course Description

Power electronic device characterization. Rectifiers, DC-DC converters and inverters design, modeling, and build.

Academic Level (Course Level)

Graduate

EE524 - Advanced Control Engineering

Overview

Course Subject Code	Course Number
EE	524

Department

Electrical & Renewable Energy

Course Description

Advanced modeling of continuous and discrete processes suitable for use in control system design. State functions, state equations, transfer matrices. State-space model building, state-feedback control and observation, pole placement, linear transformations of state vectors. Introduction to discrete-time control systems.

Academic Level (Course Level)

Undergraduate

EE530 - Linear Sys & Digital Sig Prcsg

Overview

Course Subject Code	Course Number
EE	530

Department

Electrical & Renewable Energy

Course Description

Introduction to signals and systems. Spectral analysis techniques. Fourier Series and the continuous-time Fourier transform (CTFT). Discrete-time Fourier transform (DTFT) and digital Fourier transform (DFT). Computational spectral analysis using the FFT. FIR and IIR filters. Z-transform. Practical implementation of digital filters and computational spectral analysis using CAD tools.

Academic Level (Course Level)

Graduate

EE532 - Advanced Digital System Design**Overview**

Course Subject Code	Course Number
EE	532

Department

Electrical & Renewable Energy

Course Description

Advanced digital system design with Field Programmable Gate Arrays (FPGAs). Students implement designs with pre-generated and custom digital custom logic functions using VHDL and/or Verilog hardware description languages. Projects include digital system design, simulation, and hardware implementation. Cross listed with EE 432. MSE Graduate Standing required.

Academic Level (Course Level)

Graduate

EE535 - Embedded Systems Hardware**Overview**

Course Subject Code	Course Number
EE	535

Department

Electrical & Renewable Energy

Course Description

Advanced course in embedded systems hardware design and development. Topics include system-on-chip design, ARM processor architecture, digital signal processors, multicore processing, vector processors, graphics processing units, external serial interfaces, external memory interfaces, network interfaces, debuggers, in-circuit emulators, and hardware security. Cross-listed with EE 435. MSE Graduate Standing required.

Academic Level (Course Level)

Graduate

EE548 - Geometric Optics**Overview**

Course Subject Code	Course Number
EE	548

Department

Electrical & Renewable Energy

Course Description

Reflection and refraction at plane and curved surfaces; imaging properties of lenses; first-order Gaussian optics and thin-lens system layout; matrix optics; ray-tracing software; spherical and chromatic aberrations.

Academic Level (Course Level)

Graduate

EE552 - Waveguides & Fiber Optics**Overview**

Course Subject Code	Course Number
EE	552

Department

Electrical & Renewable Energy

Course Description

Light propagation in fibers and waveguides; termination, coupling, and splicing of fibers; fiber optic communication; optical time domain reflectometry, fiber amplifiers, and fiber sensors.

Academic Level (Course Level)

Graduate

EE561 - Ctrl Engr I: Classic Methods**Overview**

Course Subject Code	Course Number
EE	561

Department

Electrical & Renewable Energy

Course Description

An introduction to the design and compensation of linear control systems using a complex frequency-domain approach. Feedback control of first- and second-order systems, controller sensitivity, disturbance rejection, stability, frequency response methods. Introduction to state-space modeling. Computer simulation of feedback control systems.

Academic Level (Course Level)

Graduate

EE585 - Printed Circuit Board Design**Overview**

Course Subject Code	Course Number
EE	585

Department

Electrical & Renewable Energy

Course Description

A course on modern PCB technology and design skills required for successful implementation of PCB designs in industry. This course provides direct, hands-on experience with industry standards, tools, and design techniques. Students will learn schematic capture and PCB layout. Cross-listed with EE 485.MSE Graduate Standing required.

Academic Level (Course Level)

Graduate

EE597 - Graduate Project**Overview**

Course Subject Code	Course Number
EE	597

Department

Electrical & Renewable Energy

Course Description

Graduate project in electrical, computer, and embedded engineering topics. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

EE598 - Graduate Thesis**Overview**

Course Subject Code	Course Number
EE	598

Department

Electrical & Renewable Energy

Course Description

Graduate thesis in electrical, computer, and embedded engineering topics. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

EET000 - EET Lower Division Elective**Overview**

Course Subject Code	Course Number
EET	000

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Undergraduate

ENGR101 - Intro to Engineering I**Overview**

Course Subject Code	Course Number
ENGR	101

Department

Electrical & Renewable Energy

Course Description

Introduces the student to engineering with a focus on academic success, professional development, ethics, communication, and creative problem solving techniques, engineering tools (CAD/CAE), and design concepts. A discipline-specific team-based laboratory experience encourages consideration of a chosen engineering discipline.

Academic Level (Course Level)

Undergraduate

ENGR102 - Intro to Engineering II**Overview**

Course Subject Code	Course Number
ENGR	102

Department

Electrical & Renewable Energy

Course Description

The student will focus on their chosen discipline through an interdisciplinary team-based design project including problem identification, measurement, analysis, and presentation to peers. Emphasis will be placed on proper usage of engineering tools and instruments and sound design practices.

Academic Level (Course Level)

Undergraduate

ENGR107 - Seminar

Overview

Course Subject Code	Course Number
ENGR	107

Department

Electrical & Renewable Energy

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Undergraduate

ENGR111 - MMET Orientation

Overview

Course Subject Code	Course Number
ENGR	111

Department

Electrical & Renewable Energy

Course Description

Topics include: survey of the engineering profession, educational and professional development, standards of practice; engineering information, calculations, and analysis. An engineering design project will be incorporated. This course provides knowledge and skills to engineering students which will benefit their future academic and professional endeavors. Prerequisite: Declared major in BSME, BSMET, or BSMFG program

Academic Level (Course Level)

Undergraduate

ENGR207 - Seminar

Overview

Course Subject Code	Course Number
ENGR	207

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ENGR211 - Engineering Mechanics: Statics

Overview

Course Subject Code	Course Number
ENGR	211

Department

Electrical & Renewable Energy

Course Description

Fundamental principles of mechanics of rigid bodies and the application of these principles to engineering problems.

Academic Level (Course Level)

Undergraduate

ENGR212 - Engineering Mech: Dynamics

Overview

Course Subject Code	Course Number
ENGR	212

Department

Electrical & Renewable Energy

Course Description

Kinematics of particles and rigid bodies. Kinetics of particles and rigid bodies in plane motion, including Newton's second law, work and energy, and impulse and momentum.

Academic Level (Course Level)

Undergraduate

ENGR213 - Engr Mech: Strength of Mat

Overview

Course Subject Code	Course Number
ENGR	213

Department

Electrical & Renewable Energy

Course Description

Internal stresses and deformations of structural members and machines when subjected to external forces.

Academic Level (Course Level)

Undergraduate

ENGR236 - Fund of Elec Circuits**Overview**

Course Subject Code	Course Number
ENGR	236

Department

Electrical & Renewable Energy

Course Description

Resistive circuits, operational amplifiers, capacitors, inductors, transient analysis, sine waves, AC circuit analysis, resonance, transformers. Not for Electronics Engineering Technology and Computer Engineering Technology students.

Academic Level (Course Level)

Undergraduate

ENGR266 - Engineering Computation**Overview**

Course Subject Code	Course Number
ENGR	266

Department

Electrical & Renewable Energy

Course Description

Programming and problem solving using current computer software. General programming techniques using conditional statements, looping, subroutines, and data input/output will be stressed. Consideration of features specific to the software being used will also be presented.

Academic Level (Course Level)

Undergraduate

ENGR267 - Engineering Programming**Overview**

Course Subject Code	Course Number
ENGR	267

Department

Electrical & Renewable Energy

Course Description

Data structures, operators, control structures, functions, object-oriented programming, algorithms, GUIs, engineering data analysis and processing, plotting and data visualization, computational problem solving, Python and MATLAB programming languages.

Academic Level (Course Level)

Undergraduate

ENGR305 - Nanoscience & Nanotech**Overview**

Course Subject Code	Course Number
ENGR	305

Department

Electrical & Renewable Energy

Course Description

Survey of chemical and physical phenomena as applied to nanoscale materials, including metal and semiconductor nanoparticles and carbon nanostructures. Discussion of major synthesis and characterization techniques. Biological and engineering applications of nanoscale materials.

Academic Level (Course Level)

Undergraduate

ENGR307 - Seminar**Overview**

Course Subject Code	Course Number
ENGR	307

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Undergraduate

ENGR318 - Engineering Mech: Fluids**Overview**

Course Subject Code	Course Number
ENGR	318

Department

Electrical & Renewable Energy

Course Description

Fundamental properties of fluids, fluid statics and pressure variation, flow characterization, momentum and forces due to fluid motion, energy of fluids in motion, and flow in conduits. Emphasis on civil and mechanical engineering applications of fluid mechanics principles.

Academic Level (Course Level)

Undergraduate

ENGR326 - Electric Power Systems

Overview

Course Subject Code	Course Number
ENGR	326

Department

Electrical & Renewable Energy

Course Description

Study related to theory and application of industrial electric power systems. Topics include transformers, motors, generators, motor controls, and protective devices.

Academic Level (Course Level)

Undergraduate

ENGR355 - Thermodynamics

Overview

Course Subject Code	Course Number
ENGR	355

Department

Electrical & Renewable Energy

Course Description

An introductory course in thermodynamics, the science of heat energy conversion. Develops understanding of energy, heat, work, efficiency, and ideal thermodynamic cycles. Teaches first and second laws of thermodynamics and perfect gas law.

Academic Level (Course Level)

Undergraduate

ENGR407 - Seminar

Overview

Course Subject Code	Course Number
ENGR	407

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ENGR415 - Occupational Safety

Overview

Course Subject Code	Course Number
ENGR	415

Department

Electrical & Renewable Energy

Course Description

Topics include current occupational safety and health issues. Practical application of regulations in the industrial setting. Compliance to Industrial Hygiene and General Safety Standards. Common safety violations and implementation of safety programs. Junior standing in any MMET program required.

Academic Level (Course Level)

Undergraduate

ENGR420 - Engr Mdlng & Sim of Dyn Sys

Overview

Course Subject Code	Course Number
ENGR	420

Department

Electrical & Renewable Energy

Course Description

Conservation laws of physics are used to develop lumped-parameter models of dynamic systems, Modeling, mathematical analysis, and computer simulation of systems containing mechanical, electrical, electromechanical, fluid, and thermal components. Dynamic behavior and performance criteria characterization of continuous-time models.

Academic Level (Course Level)

Undergraduate

ENGR421 - Automation for Robotics

Overview

Course Subject Code	Course Number
ENGR	421

Department

Electrical & Renewable Energy

Course Description

A capstone course in the automation, robotics, and control system engineering sequence. A unified treatment using dynamics, modeling, simulation, and linear control for the automation of robots. Trajectory planning, stability, controllability, and how these topics form key concepts of automation.

Academic Level (Course Level)

Undergraduate

ENGR424 - Advanced Control Engineering

Overview

Course Subject Code	Course Number
ENGR	424

Department

Electrical & Renewable Energy

Course Description

Advanced modeling of continuous and discrete processes suitable for use in control system design. State functions, state equations, transfer matrices. State-space model building, state-feedback control and observation, pole placement, linear transformations of state vectors. Introduction to discrete-time control systems.

Academic Level (Course Level)

Undergraduate

ENGR423 - MC in Mechanisms & Robotics

Overview

Course Subject Code	Course Number
ENGR	423

Department

Electrical & Renewable Energy

Course Description

Motion control components, beginning with the study of the function, classification, position, velocity, and acceleration of fundamental mechanisms and robot kinematic chains. Dynamic response of open- and closed-loop mechanisms to periodic and non-periodic loading. Sensors and actuators in motion control.

Academic Level (Course Level)

Undergraduate

ENGR445 - Engineering Project Management

Overview

Course Subject Code	Course Number
ENGR	445

Department

Electrical & Renewable Energy

Course Description

Applications of the Critical Path Method to organization and control of engineering projects. Applications software will be used to create and evaluate project networks to develop management reports. Junior standing in Engineering or Engineering Technology required.

Academic Level (Course Level)

Undergraduate

ENGR461 - Engr Mdlng & Sim of Dyn Sys

Overview

Course Subject Code	Course Number
ENGR	461

Department

Electrical & Renewable Energy

Course Description

Conservation laws of physics are used to develop lumped-parameter models of continuous-time dynamic systems. Modeling and analysis of engineering systems containing mechanical, electrical, electromechanical, fluid, and thermal components. Computational methods are used to simulate a range of practical engineering problems.

Academic Level (Course Level)

Undergraduate

ENGR462 - Cntrl Engr II: Modern Methods

Overview

Course Subject Code	Course Number
ENGR	462

Department

Electrical & Renewable Energy

Course Description

Modeling, simulation, and control of continuous and discrete processes using state-space methods. State functions, state equations, transfer matrices. State-space model building, state-feedback control and observation, pole placement, state vector transformations. Discrete-time control systems.

Academic Level (Course Level)

Undergraduate

ENGR463 - MC in Mechanisms & Robotics

Overview

Course Subject Code	Course Number
ENGR	463

Department

Electrical & Renewable Energy

Course Description

Motion control components, beginning with the study of the function, classification, position, velocity, and acceleration of fundamental mechanisms and robot kinematic chains. Dynamic response of open- and closed-loop mechanisms to periodic and non-periodic loading. Motion and torque control.

Academic Level (Course Level)

Undergraduate

ENGR464 - Autonomous Systems

Overview

Course Subject Code	Course Number
ENGR	464

Department

Electrical & Renewable Energy

Course Description

A capstone course in the Robotics, Control, and Autonomous Systems Engineering sequence. A unified treatment using dynamics, modeling, simulation, and control in the analysis and synthesis of autonomous control systems.

Academic Level (Course Level)

Undergraduate

ENGR465 - Capstone Project

Overview

Course Subject Code	Course Number
ENGR	465

Department

Electrical & Renewable Energy

Course Description

Students apply material learned in other courses, develop expertise on a specific topic, work closely with a faculty member to implement the project, and improve professional communication skills by writing a project report. Course may be repeated for credit. Junior standing and instructor consent required.

Academic Level (Course Level)

Undergraduate

ENGR485 - Fund of Engineering Exam Prep

Overview

Course Subject Code	Course Number
ENGR	485

Department

Electrical & Renewable Energy

Course Description

A preparation course covering the requirements of, and providing a review for, the NCEES FE exam. Senior standing in MMET program required.

Academic Level (Course Level)

Undergraduate

ENGR507 - Seminar

Overview

Course Subject Code	Course Number
ENGR	507

Department

Electrical & Renewable Energy

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Graduate

ENGR511 - Res. Methods & Innovation: IP

Overview

Course Subject Code	Course Number
ENGR	511

Department

Electrical & Renewable Energy

Course Description

Intellectual property (IP) development, evaluation, and strategy. IP fundamentals, patent fundamentals, conducting patentability searches, state-of-the art searches, evaluating the patentability potential of an invention, drafting invention disclosures and patent applications, assessing the value of a patent or patent portfolio, and IP licensing fundamentals.

Academic Level (Course Level)

Graduate

ENGR512 - Res Meth & Innov: Res Meth

Overview

Course Subject Code	Course Number
ENGR	512

Department

Electrical & Renewable Energy

Course Description

Fundamental concepts of scientific research. An introduction to the concepts underlying peer-reviewed research, evaluating the relevance and impact of sources, conducting literature reviews, evaluating published findings, using research productivity tools, using statistical methods, designing research studies, and writing scholarly articles.

Academic Level (Course Level)

Graduate

ENGR513 - Res Meth & Innov: Strat & Inno

Overview

Course Subject Code	Course Number
ENGR	513

Department

Electrical & Renewable Energy

Course Description

Strategy and innovation concepts with a focus on technology commercialization. Business strategy frameworks, strategic execution, project management, technology forecasting, financial analysis, technical marketing, operations management, business models, business law, and entrepreneurship.

Academic Level (Course Level)

Graduate

ENGR520 - Engr Modeling & Sim of Dyn Sys

Overview

Course Subject Code	Course Number
ENGR	520

Department

Electrical & Renewable Energy

Course Description

Conservation laws of physics are used to develop lumped-parameter models of dynamic systems. Modeling, mathematical analysis, and computer simulation of systems containing mechanical, electrical, electrochemical, fluid, and thermal components. Dynamic behavior and performance criteria. Graduate standing in engineering required.

Academic Level (Course Level)

Graduate

ENGR523 - MC in Mechanisms and Robotics

Overview

Course Subject Code	Course Number
ENGR	523

Department

Electrical & Renewable Energy

Course Description

Motion control components, beginning with the study of the function, classification, position, velocity, and acceleration of fundamental mechanisms and robot kinematic chains. Dynamic response of open- and closed-loop mechanisms to periodic and non-periodic loading. Sensors and actuators in motion control.

Academic Level (Course Level)

Graduate

ENGR521 - Automation Systems

Overview

Course Subject Code	Course Number
ENGR	521

Department

Electrical & Renewable Energy

Course Description

A capstone course in the automation, robotics, and control system engineering sequence. A unified treatment using dynamics, modeling, simulation, and linear control for the automation of robots. Trajectory planning, stability, controllability, and how these topics form key concepts of automation.

Academic Level (Course Level)

Graduate

ENGR524 - Advanced Control Engineering

Overview

Course Subject Code	Course Number
ENGR	524

Department

Electrical & Renewable Energy

Course Description

Advanced modeling of continuous and discrete processes suitable for use in control system design. State functions, state equations, transfer matrices. State-space model building, state-feedback control and observation, pole placement, linear transformations of state vectors. Introduction to discrete-time control systems.

Academic Level (Course Level)

Graduate

ENGR535 - Embedded Systems I

Overview

Course Subject Code	Course Number
ENGR	535

Department

Electrical & Renewable Energy

Course Description

Advanced course in embedded systems design and development. Topics include an introduction operating systems, cross-compilation, device tree overlays, ARM processor architecture, embedded networking, inter process communications, external hardware interfaces, and development of graphic user interfaces.

Academic Level (Course Level)

Graduate

ENGR555 - Embedded Systems II

Overview

Course Subject Code	Course Number
ENGR	555

Department

Electrical & Renewable Energy

Course Description

Advanced course in embedded systems design and development. Topics include bootloaders, interrupts, embedded operating systems, memory management systems, file systems, device drivers, makefiles, software revision control, software profiling, software debugging, and development of embedded software applications.

Academic Level (Course Level)

Graduate

ENGR561 - Modeling & Sim of Dyn Systems

Overview

Course Subject Code	Course Number
ENGR	561

Department

Electrical & Renewable Energy

Course Description

Conservation laws of physics are used to develop lumped-parameter models of continuous-time dynamic systems. Modeling and analysis of engineering systems containing mechanical, electrical, electromechanical, fluid, and thermal components. Computational methods are used to simulate a range of practical engineering problems.

Academic Level (Course Level)

Graduate

ENGR562 - Ctrl. Engr. II: Modern Methods

Overview

Course Subject Code	Course Number
ENGR	562

Department

Electrical & Renewable Energy

Course Description

Modeling, simulation, and control of continuous and discrete processes using state-space methods. State functions, state equations, transfer matrices. State-space model building, state-feedback control and observation, pole placement, state vector transformations. Discrete-time control systems.

Academic Level (Course Level)

Graduate

ENGR563 - Motion Ctrl in Mech & Robotics

Overview

Course Subject Code	Course Number
ENGR	563

Department

Electrical & Renewable Energy

Course Description

Motion control components, beginning with the study of the function, classification, position, velocity, and acceleration of fundamental mechanisms and robot kinematic chains. Dynamic response of open- and closed-loop mechanisms to periodic and non-periodic loading. Motion and torque control.

Academic Level (Course Level)

Graduate

ENGR595 - Selected Grad Topics in Engr

Overview

Course Subject Code	Course Number
ENGR	595

Department

Electrical & Renewable Energy

Course Description

Selected engineering topics at the graduate level. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

ENGR596 - Grad Research & Development

Overview

Course Subject Code	Course Number
ENGR	596

Department

Electrical & Renewable Energy

Course Description

Selected engineering topics at the graduate level. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

ENGR597 - Graduate Project

Overview

Course Subject Code	Course Number
ENGR	597

Department

Electrical & Renewable Energy

Course Description

Graduate project in engineering topics. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

ENGR598 - Graduate Thesis

Overview

Course Subject Code	Course Number
ENGR	598

Department

Electrical & Renewable Energy

Course Description

Graduate thesis in engineering topics. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

PHY449 - Radiometry & Optical Detect

Overview

Course Subject Code	Course Number
PHY	449

Department

Electrical & Renewable Energy

Course Description

Fundamentals of radiometry and photometry; detection of light using thermal and photon (photoemissive, photoconductive, and photovoltaic) methods; noise processes; blackbodies; charge transfer devices; spectroradiometry.

Academic Level (Course Level)

Undergraduate

PHY549 - Radiometry & Optical Detection

Overview

Course Subject Code	Course Number
PHY	549

Department

Electrical & Renewable Energy

Course Description

Fundamentals of radiometry and photometry; detection of light using thermal and photon (photoemissive, photoconductive, and photovoltaic) methods; noise processes; blackbodies; charge transfer devices; spectroradiometry.

Academic Level (Course Level)

Graduate

REE107 - Seminar

Overview

Course Subject Code	Course Number
REE	107

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

REE201 - Intro to Renewable Energy

Overview

Course Subject Code	Course Number
REE	201

Department

Electrical & Renewable Energy

Course Description

An introduction to renewable energy. Topics include photovoltaics, solar thermal systems, green building, fuel cells, hydrogen, wind power, waste heat, biofuels, wave power, tidal power and hydroelectric. Discussions of economic, environment, politics and social policy are integral components of the course.

Academic Level (Course Level)

Undergraduate

REE207 - Seminar

Overview

Course Subject Code	Course Number
REE	207

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

REE221 - LabView Programming

Overview

Course Subject Code	Course Number
REE	221

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Undergraduate

REE243 - Electrical Power

Overview

Course Subject Code	Course Number
REE	243

Department

Electrical & Renewable Energy

Course Description

Fundamentals of electrical power. Power systems components and equipment. Fundamental analysis and design of electrical power systems.

Academic Level (Course Level)

Undergraduate

REE253 - Electromech Energy Conversion

Overview

Course Subject Code	Course Number
REE	253

Department

Electrical & Renewable Energy

Course Description

Motoring and generating principles for direct current, synchronous, and induction machines. Analysis and design of motor and generator power and control circuits.

Academic Level (Course Level)

Undergraduate

REE307 - Seminar

Overview

Course Subject Code	Course Number
REE	307

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

REE315 - Digital Logic

Overview

Course Subject Code	Course Number
REE	315

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Undergraduate

REE331 - Fuel Cells

Overview

Course Subject Code	Course Number
REE	331

Department

Electrical & Renewable Energy

Course Description

Introduction to fuel cell technologies: PEM, PAFC, AFC, SOFC, MCFC and DMFC systems. Fuel cell components and systems; field flow plates, electrolytes, electrode materials, electrode catalysts, on-board reformers. Portable devices, utility-scale power production, transportation systems. Fuel types and fuel storage.

Academic Level (Course Level)

Undergraduate

REE333 - Batteries

Overview

Course Subject Code	Course Number
REE	333

Department

Electrical & Renewable Energy

Course Description

This course covers fundamentals of the most important battery types including alkaline, zinc-air, lead-acid, nickel-cadmium, nickel-metal hydride, lithium ion, and lithium polymer. Applications include stationary, transportation, and portable batteries. The lab deals with battery system design, testing, and prototype assembly.

Academic Level (Course Level)

Undergraduate

REE335 - Hydrogen

Overview

Course Subject Code	Course Number
REE	335

Department

Electrical & Renewable Energy

Course Description

This course will cover hydrogen production, storage, distribution, and use. Specific energy scenarios such as renewable hydrogen cycles will be explored focusing on transportation applications. The concept of hydrogen economy will be discussed in the context of global energy crisis.

Academic Level (Course Level)

Undergraduate

REE345 - Wind Power

Overview

Course Subject Code	Course Number
REE	345

Department

Electrical & Renewable Energy

Course Description

Introduction to power production from wind resources. Historical uses of wind resources. The Earth's wind systems. Physics of wind power. Vertical and horizontal axis turbines. Aerodynamics of wind turbines. Large scale turbine farms and siting. Commercial development, economics and environmental impacts.

Academic Level (Course Level)

Undergraduate

REE337 - Materials for RE Applications

Overview

Course Subject Code	Course Number
REE	337

Department

Electrical & Renewable Energy

Course Description

Electrical, mechanical, thermal, chemical, optical and processing properties of material in renewable energy systems; solid state device characteristics and their material properties. Engineering applications.

Academic Level (Course Level)

Undergraduate

REE348 - Solar Thermal Energy Systems

Overview

Course Subject Code	Course Number
REE	348

Department

Electrical & Renewable Energy

Course Description

Introduction to solar thermal energy systems for residential, commercial and industrial applications. Solar radiation; topics in heat transfer; flat plate and concentrating collectors; non-imaging optics; applications including water heating, building heating, cooling, industrial process heat, distillation solar thermal power systems.

Academic Level (Course Level)

Undergraduate

REE344 - Nuclear Energy

Overview

Course Subject Code	Course Number
REE	344

Department

Electrical & Renewable Energy

Course Description

Introduction to nuclear energy. Atomic and nuclear physics; the interaction of radiation and matter. Nuclear reactor operation; reactor components, nuclear cycles, neutron diffusion and moderation. Reactor shielding. Fuel reprocessing and waste disposal. Reactor licensing and safety. Economics and environmental concerns.

Academic Level (Course Level)

Undergraduate

REE407 - Seminar

Overview

Course Subject Code	Course Number
REE	407

Department

Electrical & Renewable Energy

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

REE412 - Photovoltaic Systems

Overview

Course Subject Code	Course Number
REE	412

Department

Electrical & Renewable Energy

Course Description

The solar resource, sun charts, site assessments. Grid-connected and stand-alone systems. Module and array performance, PV systems components including batteries, modules, charge controllers, maximum power point trackers, inverters. Economic considerations including investment tax credits, present-value analysis, IRR. Advanced PV materials.

Academic Level (Course Level)

Undergraduate

REE413 - Electric Power Conv Systems

Overview

Course Subject Code	Course Number
REE	413

Department

Electrical & Renewable Energy

Course Description

Power electronics devices in energy applications. DC-DC MPPT and charge controllers. Advanced inverter controls and applications. FACTS and HVDC systems and equipment.

Academic Level (Course Level)

Undergraduate

REE439 - Energy Systems Auditing & Mgt

Overview

Course Subject Code	Course Number
REE	439

Department

Electrical & Renewable Energy

Course Description

Evaluating building thermal/electric/process loads, including lighting, hot water, HVAC and central plant systems, industrial refrigeration and motors. Opportunities for managing energy use through controls and operations/maintenance strategies. Roles of commissioning, energy auditing, renewables, and economic analysis in reducing use.

Academic Level (Course Level)

Undergraduate

REE453 - Power System Analysis

Overview

Course Subject Code	Course Number
REE	453

Department

Electrical & Renewable Energy

Course Description

Faults: symmetric, asymmetric. Modeling system components using positive, negative, zero sequence networks. System admittance matrixes. Load flow computational methods such as Gauss-Seidel, Newton-Raphson. Power system stabilization. Power system analysis using software, emphasizing renewable resources.

Academic Level (Course Level)

Undergraduate

REE454 - Power Sys Protection & Control

Overview

Course Subject Code	Course Number
REE	454

Department

Electrical & Renewable Energy

Course Description

Protection systems overview; protective devices; coordination and sequencing of relays; grounding practices; impedance protection. Methods of power systems operation and control; load-frequency control, automatic generation control. Modeling power systems protection and control using power system analysis software, emphasizing renewable resources.

Academic Level (Course Level)

Undergraduate

REE455 - Energy Efficient Building Dsgn

Overview

Course Subject Code	Course Number
REE	455

Department

Electrical & Renewable Energy

Course Description

Principles of integrated, energy-efficient building design. Interpretation/application of codes, standards. Use of software tools for modeling, simulation of building energy systems. Daylighting, natural ventilation, architectural features of passive solar buildings. Inclusion of renewable resources, and net-zero designs. Life-cycle economic analysis.

Academic Level (Course Level)

Undergraduate

REE463 - Energy Systems Instrumentation

Overview

Course Subject Code	Course Number
REE	463

Department

Electrical & Renewable Energy

Course Description

Application of electrical and mechanical sensors, data acquisition, logic controllers as applied to energy systems. Determination of physical parameters necessary for control and data-logging. Methods of calibration and correction.

Academic Level (Course Level)

Undergraduate

REE469 - Grid Integration of Renewables

Overview

Course Subject Code	Course Number
REE	469

Department

Electrical & Renewable Energy

Course Description

Issues unique to connecting renewable energy generation to the grid. Microgrids. Stability, transient and harmonic effects. Interconnect agreements and requirements. Standard development. SCADA and smart grid concepts. Systems optimization.

Academic Level (Course Level)

Undergraduate

REE487 - Electric Vehicles I

Overview

Course Subject Code	Course Number
REE	487

Department

Electrical & Renewable Energy

Course Description

More Electric Vehicles, Hybrid Electric Vehicles, Plug-in Hybrid Electric Vehicles, Range-extended Electric Vehicles, and all Electric Vehicles including Battery Electric Vehicles (BEVs) and Fuel Cell Vehicles (FCVs). Major components including power electronics converters, electric machines, and electric motor controllers.

Academic Level (Course Level)

Undergraduate

REE488 - Electric Vehicles II

Overview

Course Subject Code	Course Number
REE	488

Department

Electrical & Renewable Energy

Course Description

Battery and super-capacitor chemistry, manufacturing package assembly, characterization, safety, and economics for lithium ion, lithium polymer systems for Electric Vehicles (EV); Hybrid battery/ ultra-capacitor systems for EV.

Academic Level (Course Level)

Undergraduate

REE489 - Electric Vehicles III

Overview

Course Subject Code	Course Number
REE	489

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Undergraduate

REE507 - Seminar

Overview

Course Subject Code	Course Number
REE	507

Department

Electrical & Renewable Energy

Academic Level (Course Level)

Graduate

REE511 - Research Methods/Innovation I

Overview

Course Subject Code	Course Number
REE	511

Department

Electrical & Renewable Energy

Course Description

Fundamental concepts of scientific research. An introduction the concepts underlying peer-reviewed research, evaluating the relevance and impact of sources, conducting literature reviews, evaluating published findings, using statistical methods, designing research studies, and writing scholarly articles.

Academic Level (Course Level)

Graduate

REE512 - ResearchMethods/Innov II

Overview

Course Subject Code	Course Number
REE	512

Department

Electrical & Renewable Energy

Course Description

Intellectual property (IP) development, evaluation, and strategy. IP fundamentals, patent fundamentals, conducting patentability searches, evaluating the patentability potential of an invention, drafting invention disclosures for patent applications, assessing the value of a patent or patent portfolio, and IP licensing fundamentals.

Academic Level (Course Level)

Graduate

REE513 - Research Methods/Innov III

Overview

Course Subject Code	Course Number
REE	513

Department

Electrical & Renewable Energy

Course Description

Strategy and innovation concepts with a focus on technology commercialization. Business strategy frameworks, financial analysis, strategic marketing, operations management, business models, project management, business law, and entrepreneurship.

Academic Level (Course Level)

Graduate

REE515 - Energy Engineering I

Overview

Course Subject Code	Course Number
REE	515

Department

Electrical & Renewable Energy

Course Description

Three-term sequence in energy engineering. For a variety of renewable and conventional means of energy production, storage, and distribution, students gain a robust understanding of resources, energy conversion technology, integration with existing systems, regulatory contexts, business environment, and future trends.

Academic Level (Course Level)

Graduate

REE516 - Energy Engineering II

Overview

Course Subject Code	Course Number
REE	516

Department

Electrical & Renewable Energy

Course Description

Three-term sequence in energy engineering. For a variety of renewable and conventional means of energy production, storage, and distribution, students gain a robust understanding of resources, energy conversion technology, integration with existing systems, regulatory contexts, business environment, and future trends.

Academic Level (Course Level)

Graduate

REE517 - Energy Engineering III

Overview

Course Subject Code	Course Number
REE	517

Department

Electrical & Renewable Energy

Course Description

Three-term sequence in energy engineering. For a variety of renewable and conventional means of energy production, storage, and distribution, students gain a robust understanding of resources, energy conversion technology, integration with existing systems, regulatory contexts, business environment, and future trends.

Academic Level (Course Level)

Graduate

REE525 - Solid-State Physics/Photov Mat

Overview

Course Subject Code	Course Number
REE	525

Department

Electrical & Renewable Energy

Course Description

Principles of PV; electrons and holes in semiconductors; junction analysis. Survey of available semiconductors and materials choices for photovoltaic design. Principles of important photovoltaic devices. Monocrystalline, polycrystalline, and thin film solar cells. Strategies for high efficiency. Photovoltaic materials and phenomena.

Academic Level (Course Level)

Graduate

REE529 - Power System Analysis

Overview

Course Subject Code	Course Number
REE	529

Department

Electrical & Renewable Energy

Course Description

Faults: symmetric, asymmetric. Modeling system components using positive, negative, zero sequence networks. System admittance matrixes. Load flow computational methods such as Gauss-Seidel, Newton-Raphson. Power system stabilization. Power system analysis using software, emphasizing renewable resources. Requires background in power systems.

Academic Level (Course Level)

Graduate

REE533 - Heating, Ventilation/Air Condi

Overview

Course Subject Code	Course Number
REE	533

Department

Electrical & Renewable Energy

Course Description

Heating, ventilating, and air conditioning. Application of laws and principles of thermodynamics to analysis, design, and control of mechanically-controlled environments for human comfort, animal health, and food preservation. Teaches computation of heating and cooling loads, humidity control, heating, and refrigeration.

Academic Level (Course Level)

Graduate

REE545 - Applied Photovoltaics

Overview

Course Subject Code	Course Number
REE	545

Department

Electrical & Renewable Energy

Course Description

The characteristics of sunlight. Solar cell behavior, properties, and design. Cell interconnection and module fabrication. Designing stand-alone and grid-connected photovoltaic systems. Special-purpose photovoltaic applications. Concentrator and hybrid solar thermal and photovoltaic systems. Advanced photovoltaic systems.

Academic Level (Course Level)

Graduate

REE553 - Energy Systems Mgmt/Auditing

Overview

Course Subject Code	Course Number
REE	553

Department

Electrical & Renewable Energy

Course Description

Evaluating building thermal/electric/process loads, including lighting, hot water, HVAC and central plant systems, industrial refrigeration and motors. Opportunities for managing energy use through controls and operations/maintenance strategies. Roles of commissioning, energy auditing, renewables and economic analysis in reducing energy use.

Academic Level (Course Level)

Graduate

REE549 - Power Sys Protection & Control

Overview

Course Subject Code	Course Number
REE	549

Department

Electrical & Renewable Energy

Course Description

Protection systems overview; protective devices; coordination and sequencing of relays; grounding practices; impedance protection. Methods of power systems operation and control; load-frequency control, automatic generation control. Modeling power systems protection and control using power system analysis software, emphasizing renewable resources.

Academic Level (Course Level)

Graduate

REE565 - Semiconductor Process Enginrng

Overview

Course Subject Code	Course Number
REE	565

Department

Electrical & Renewable Energy

Course Description

Semiconductor process technology; crystal growth, silicon oxidation, photolithography, etching, diffusions, ion implantation, film deposition. Process integration, manufacturing, and metrology. Future trends and challenges.

Academic Level (Course Level)

Graduate

REE569 - Grid Integration of Renewables

Overview

Course Subject Code	Course Number
REE	569

Department

Electrical & Renewable Energy

Course Description

Issues unique to connecting renewable energy generation to the grid. Microgrids. Stability, transient, and harmonic effects. Interconnect agreements and requirements. SCADA and smart grid concepts. System optimization.

Academic Level (Course Level)

Graduate

REE573 - Energy-Efficient Bldg Design

Overview

Course Subject Code	Course Number
REE	573

Department

Electrical & Renewable Energy

Course Description

Principles of integrated, energy-efficient building design. Interpretation/application of codes, standards. Use of software tools for modeling, simulation of building energy systems. Daylighting, natural ventilation, architectural features of passive solar buildings. Inclusion of renewable resources and net-zero designs. Life-cycle economic analysis.

Academic Level (Course Level)

Graduate

REE581 - Energy Storage Fundamentals

Overview

Course Subject Code	Course Number
REE	581

Department

Electrical & Renewable Energy

Course Description

The survey course will examine energy storage fundamentals; applications and trends for pumped hydro, compressed air, flywheels, superconducting magnetic energy storage, gravitational mass, supercapacitors, batteries, fuel cells, and thermal systems.

Academic Level (Course Level)

Graduate

REE582 - Introduction to Batteries

Overview

Course Subject Code	Course Number
REE	582

Department

Electrical & Renewable Energy

Course Description

The course provides introduction to field of batteries and discusses electrochemical fundamentals and general properties of batteries such as energy density, specific power, charging and discharging, temperature effects, again, and self-discharge.

Academic Level (Course Level)

Graduate

REE583 - Intro to Fuel Cells

Overview

Course Subject Code	Course Number
REE	583

Department

Electrical & Renewable Energy

Course Description

This overview course will introduce students to fundamental fuel cell principles, history, classification, thermodynamics, efficiency and causes of voltage losses, reaction kinetics, electrode performance and catalyst design, and fuel cell components and their impact on performance.

Academic Level (Course Level)

Graduate

REE587 - Advanced Electric Vehicle I

Overview

Course Subject Code	Course Number
REE	587

Department

Electrical & Renewable Energy

Course Description

More Electric Vehicles, Hybrid Electric Vehicles, Plug-in Hybrid Electric Vehicles, Range-extended Electric Vehicles, and all Electric Vehicles including Battery Electric Vehicles (BEVs) and Fuel Cell Vehicles (FCVs). Major components including power electronics converters, electric machines, and electric motor controllers.

Academic Level (Course Level)

Graduate

REE588 - Advanced Electric Vehicle II

Overview

Course Subject Code	Course Number
REE	588

Department

Electrical & Renewable Energy

Course Description

Battery and super-capacitor chemistry, manufacturing package assembly, characterization, safety, and economics for lithium ion, lithium polymer systems for Electric Vehicles (EV); Hybrid battery/ ultra-capacitor systems for EV.

Academic Level (Course Level)

Graduate

REE589 - Advanced Electric Vehicle III

Overview

Course Subject Code	Course Number
REE	589

Department

Electrical & Renewable Energy

Course Description

Autonomous vehicle systems; localization technologies; traditional techniques used for perception; deep learning based techniques for perception; planning and control sub-systems, prediction and routing technologies; motion and feedback control on the planning and control sub-system; reinforcement learning-based planning and control.

Academic Level (Course Level)

Graduate

REE591 - Hydrogen Prod & Storage

Overview

Course Subject Code	Course Number
REE	591

Department

Electrical & Renewable Energy

Course Description

The course will discuss the basics of hydrogen production and storage, the concept of hydrogen economy, conventional hydrogen generation, electrochemical and photochemical technologies, principles of hydrogen storage and novel storage materials.

Academic Level (Course Level)

Graduate

REE592 - Advanced Batteries

Overview

Course Subject Code	Course Number
REE	592

Department

Electrical & Renewable Energy

Course Description

This course will examine technology and trends in battery chemistry, manufacturing, pack assembly, characterization, safety, economics and applications for battery systems including lead acid, nickel-based, lithium ion, lithium polymer, metal air and flow batteries.

Academic Level (Course Level)

Graduate

REE593 - Advanced Fuel Cells

Overview

Course Subject Code	Course Number
REE	593

Department

Electrical & Renewable Energy

Course Description

This course provides in an in-depth analysis of the current trends, fuel processing, novel materials, applications, safety, and characterization for polymer electrolyte membrane, alkaline, phosphoric acid, molten carbonate, solid oxide, and direct methanol fuel cells.

Academic Level (Course Level)

Graduate

REE599 - Graduate Reading & Conference

Overview

Course Subject Code	Course Number
REE	599

Department

Electrical & Renewable Energy

Course Description

Graduate research leading to the completion of a master's thesis or project. Minimum of three terms required. Requires advisor approval.

Academic Level (Course Level)

Graduate

SEM421 - Systems Engineering

Overview

Course Subject Code	Course Number
SEM	421

Department

Electrical & Renewable Energy

Course Description

Foundations of Systems Engineering: Structure of Complex Systems; System Development Processes and Frameworks; System Engineering Validation, Reliability, Availability, Maintainability and Deployment; Human Factors Engineering.

Academic Level (Course Level)

Undergraduate

SEM422 - Advanced Systems Engineering

Overview

Course Subject Code	Course Number
SEM	422

Department

Electrical & Renewable Energy

Course Description

Advanced concepts in systems science and systems engineering; modeling and mathematical methods for systems engineering; system simulation tools; optimization and decision analysis; case studies involving practical systems, engineering integration of hardware, software, information, and human factor systems.

Academic Level (Course Level)

Undergraduate

SEM521 - Systems Engineering

Overview

Course Subject Code	Course Number
SEM	521

Department

Electrical & Renewable Energy

Course Description

Foundations of Systems Engineering: Structure of Complex Systems; System Development Processes and Frameworks; System Engineering Validation, Reliability, Availability, Maintainability and Deployment; Human Factors Engineering.

Academic Level (Course Level)

Graduate

SEM425 - Advanced Engineering Mgmt

Overview

Course Subject Code	Course Number
SEM	425

Department

Electrical & Renewable Energy

Course Description

Competitive Strategy, Innovation Strategies, Risk and Return, Creativity and Product Development, Marketing and Sales, Intellectual Property, High-Tech Organization, Acquiring and Organizing Resources, Operations Management, Acquisitions/Global Expansion, Financial Plans, Sources of Capital, Deal Presentations and Negotiations, Successfully Leading High Tech Organizations.

Academic Level (Course Level)

Undergraduate

SEM522 - Advanced Systems Engineering

Overview

Course Subject Code	Course Number
SEM	522

Department

Electrical & Renewable Energy

Course Description

Advanced concepts in systems science and systems engineering; modeling and mathematical methods for systems engineering; system simulation tools; optimization and decision analysis; case studies involving practical systems engineering integration of hardware, software, information, and human factor systems.

Academic Level (Course Level)

Graduate

SEM507 - Seminar

Overview

Course Subject Code	Course Number
SEM	507

Department

Electrical & Renewable Energy

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Graduate

SEM525 - Advanced Engineering Mgmt

Overview

Course Subject Code	Course Number
SEM	525

Department

Electrical & Renewable Energy

Course Description

Competitive Strategy, Innovation Strategies, Risk and Return, Creativity and Product Development, Marketing and Sales, Intellectual Property, High-Tech Organization, Acquiring and Organizing Resources, Operations Management, Acquisitions/Global Expansion, Financial Plans, Sources of Capital, Deal Presentations and Negotiations, Successfully Leading High Tech Organizations.

Academic Level (Course Level)

Graduate

Humanities & Social Sciences Department

Management Department

Sonja H. Bickford, *Department Chair*

Professors: H. Neupert

Associate Professors: C. Morgan, K. Weidman

Assistant Professors: D. DaSaro, J. Emard, G. Lomprey, R. Sahay, M. Singh

Instructor: S. Beaudry

Degrees Offered

- Bachelor of Science in Business, with options in:
 - Management
 - Marketing
- Bachelor of Science in Cybersecurity
- Bachelor of Science in Health Care Management, with options in:
 - Administration
 - Clinical
 - Radiologic Science Management
- Bachelor of Science in Health Informatics
- Bachelor of Science in Information Technology
- Bachelor of Science in Operations Management
- Bachelor of Applied Science in Technology and Management

Minors Offered

- Business
- Health Informatics
- Information Technology

- Innovation & Entrepreneurship
- International Business

Specializations Offered

- Management
- Marketing

Emphases Offered

- Six Sigma Green Belt Certification
- Renewable Energy Management

The Management Department's tech-infused degrees empower graduates through innovative, hands-on, and multi-disciplinary learning experiences, and prepares students to take their place as leaders and managers in contemporary public and private organizations. Faculty members have been selected for their managerial experience and expertise in a diverse array of production and service industries.

Coursework in the Management programs builds upon foundational core courses including management, marketing, accounting, finance, information technology, economics, ethics, globalization, business law, and business presentations. These courses, along with program-specific courses, prepare students for their senior year which includes a senior experience and a capstone course. The senior experience provides management students with an opportunity to integrate and synthesize their educational experience within the context of a "real-world" business problem or project.

As a result of this unique combination of resources and coursework, the Management degree programs remain vital and up to date, providing students with both the technical tools of management and the interpersonal skills that employers most desire. Equally important, each graduate will be poised to positively contribute to society as well as to today's culturally diverse, global workplace.

Department Learning Outcomes

Upon graduating, Management Department graduates should be able to:

1. Apply core concepts in a business environment.
2. Apply the legal, social, ethical, and economic environments of business in a global context.
3. Contribute to the development of a team-oriented and collaborative environment.
4. Solve business problems using decision-support tools and/or research skills.
5. Demonstrate professional communication skills using a variety of delivery methods.
6. Analyze business concepts and apply strategic planning skills to effect change in an integrated manner.

Degree Completion and Co-enrollment at Community Colleges

The Management Department, in partnership with many Oregon community colleges, offers joint enrollment, transfer credit (articulation) agreements and course sequences so that students may complete a degree with coursework taken from multiple institutions. See the Oregon Tech Registrar Office's website, or a Management Department faculty advisor for additional information.

Oregon Tech Online

Many of the management degrees and core management courses are available online to facilitate the needs of degree completion students. Online courses are particularly appropriate for students capable of self-directed educational activities. Online degrees and courses are offered utilizing Internet delivery and collaborative learning. Degrees available online are: BS in Business, Management Option, BS in Health Care Management, Administration Option, Clinical Option, and Radiologic Sciences Management Option; BS in Operations Management; BS in Health Informatics; BS in Information Technology; BAS in Technology and Management.

Required Student Equipment

Successful completion of these degrees requires intensive, hands-on use of computers.

Therefore, all students are required to own their own computer. Financial aid may be available to help defray the cost of this equipment. Please consult the Financial Aid Office at Oregon Tech.

Note: The Portland-Metro campus is a laptop-required campus. Laptop specifications, financial aid, and helpful instructions may be found at <http://www.oit.edu/portland-metro/college-costs/bring-your-own-device>.

Accreditation

Oregon Tech has received specialized accreditation for its business programs through the International Accreditation Council for Business Education (IACBE).

Programs

Accounting, BS

Overview

Program Long Title

Accounting

Program Title

Accounting

Department(s)

Management

Degree Designation

BS

Program Level

UG

CIP Code

520301

Degree Maps

Degree Map Name Advising Guide - Accounting			
Total Degree Map Credits 144			
Degree Map Effective Catalog Year 2425 -			
Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	13	0
Requirement Select BA101Z - Intro to Business			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 4 Progress Credits - Contact Hours 4 Clinical - Criticality No			

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	12	0

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	11	0

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR
- STAT243Z - Elementary Statistics I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	11	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- BA212 - Prin of Accounting II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	11	0

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ACC331 - Interim Accounting I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	8	0

Requirement Select

- ACC332 - Interim Accounting II

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACC320 - Cost Accounting I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

-

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- ACC333 - Interim Accounting III

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACC305 - Accounting Information Systems

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACC321 - Cost Accounting II

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	12	0

Requirement Select

- ACC435 - Auditing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ACC411 - Income Tax Procedures

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	11	0

Requirement Select

- Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• ACC431 - Advanced Accounting I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• ACC412 - Corporate Taxation	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Elective (Generic)	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	10	0

Requirement Select	
• Course Not Found	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• ACC432 - Advanced Accounting II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Electives (Generic)	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Construction Management, BS

Overview

Program Long Title
Construction Management

Program Title
Construction Management

Department(s)
Management

Degree Designation
BS

Program Level
UG

CIP Code
522001

Degree Maps

Degree Map Name
Advising Guide - Construction Management

Total Degree Map Credits
181

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
Construction Concentration Series Option: For Construction Management, General Construction, take CM 330, 340, 350.

For Construction Management, Heavy Construction, take CM 331, 341, 351.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0
Requirement Select CM101 - Intro to Construction Mgmt			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 4 Progress Credits - Contact Hours 4 Clinical - Criticality No			

Requirement Select

- GIS103 - The Digital Earth

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 0 - 5

Clinical -

Criticality No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 4

Progress Credits -

Contact Hours 4

Clinical -

Criticality No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 4

Progress Credits -

Contact Hours 4

Clinical -

Criticality No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	16	0

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CM226 - Construction Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	14	0

Requirement Select

- CE203 - Engineering Graphics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• COM111Z - Public Speaking	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• WRI227Z - Technical Writing	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Lab Science General Education	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	4

Requirement Select	
• CE222 - Civil Engineering Materials	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• GME161 - Plane Surveying I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• BA211Z - Principles of Financial Accoun	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Construction Management Concentration Course

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	4
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- CM315 - Building Information Modeling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Construction Management Concentration Course

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- CM320 - Mech, Elec, & Plumb Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Construction Management Concentration Course

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Summer	4	0

Requirement Select

- CM280 - Construction Internship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	12
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CM410 - Simplified Struct Analysis/Des

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- General Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	12	0

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ENV314 - Environmental Policy & Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MGT322 - Supply Chain Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

- CM335 - Construction Project Mgmt
- OR**
- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ENGR415 - Occupational Safety

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Summer	4	0

Requirement Select

- CM380 - Heavy Construction Mgmt Intern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	12
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	14	0

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CM451 - CSR & Sustainable Construction

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CM461 - Infrastructure Security

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CM480 - CM Senior Project

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS334 - Business Analytics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- CM471 - Infrastructure & Utility Mgmt

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Communication Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Cybersecurity, BS

Overview

Program Long Title

Cybersecurity

Program Title

Cybersecurity

Department(s)

Management

Degree Designation

BS

Program Level

UG

CIP Code

111003

Degree Maps

Degree Map Name

Advising Guide - Cybersecurity

Total Degree Map Credits

187

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

The BS in Cybersecurity provides students with the knowledge and skills necessary to competently scan, assess, report, and mitigate cybersecurity threats, vulnerabilities, and exploits on information systems and technology. A graduate of the BS in Cybersecurity program is prepared to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, scripting, systems analysis, networking, cryptography, security system design, applicable law and regulations, risk assessment and policy analysis, contingency planning, user access issues, investigation techniques, and troubleshooting.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	16	0

Requirement Select

- CYB201 - Cybersecurity Fundamentals

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIS145 - Intro to PC Hardware/Software

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- BUS215 - Principles of Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS251 - Networking Fundamentals

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- MIS285 - Python Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- BA211Z - Principles of Financial Account

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS118 - Intro to Programming in C#

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS273 - Systems Administration I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS218 - Intermediate Programming in C#

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	19	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS240 - Linux Fundamentals

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	18	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CYB301 - Hacker Tools and Techniques

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS311 - Intro to Systems Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS351 - Networking II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- CYB302 - Sys. Defenses & Incident Rpt.

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- MIS312 - Systems Analysis I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MIS334 - Business Analytics	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MIS341 - Relational Database Design I	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select	
• BUS223 - Marketing I	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• CYB303 - Security Operations & Analysis	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select	
• CYB351 - Network Security	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select	
• MIS322 - Systems Analysis & Design II (Inactive)	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	14	0

Requirement Select

- CYB411 - Managing Risk in Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS365 - Cloud Computing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI350 - Documentation Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Health Care Management-Administration Option, BS

Overview

Program Long Title
Health Care Mgmt-Admin Mgmt

Program Title
Health Care Mgmt-Admin Mgmt

Department(s)
Management

Degree Designation
BS

Program Level
UG

CIP Code
510701

Degree Maps

Degree Map Name
Advising Guide - Health Care Mgmt-Admin Mgmt

Total Degree Map Credits
185 - 186

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative

Health Care Management Program Elective*

Students may choose a track to complete for their Program Electives or mix and match for options. Other courses can be taken with advisor approval.

- Health Data Analytics Track:
- MIS 118 - Intro to Programming in C#
 - MIS 334 - Business Analytics
 - MIS 341 - Relational Database Design I
 - MIS 344 - Business Intelligence
 - MIS 446 - Data Mining

- Medical Sociology Track:
- SOC 204Z - Introduction to Sociology
 - SOC 325 - Global Population Health
 - SOC 335 - Hlth Inequal & Cult Competency
 - SOC or PHM Elective
 - SOC or PSY Elective
 - PSY Elective

- Psychology Track:
- PSY 201Z - Introduction to Psychology I

- PSY 202Z - Introduction to Psychology II
- PSY 203 - Psychology
- Lower/Upper PSY Elective
- Upper Division PSY Elective
- Upper Division PSY Elective

'Elective Course (Generic)' can be any course the student chooses to take.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	13	0
Requirement Select			
• BIO200 - Medical Terminology			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		2	
Progress Credits		-	
Contact Hours		2	
Clinical		-	
Criticality		No	

Requirement Select			
• MATH111Z - Precalculus I: Functions			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select			
• MIS255 - Health Informatics Cpts & Prct			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		3	
Progress Credits		-	
Contact Hours		3	
Clinical		-	
Criticality		No	

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- BUS223 - Marketing I

OR

- BUS337 - Prin of Health Care Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Psychology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	17	3

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14 - 15	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO103 - Intro to Human Anat & Phys
- OR**
- BIO231 - Human Anatomy/Physiology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems
- OR**
- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	3

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM205 - Intercultural Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	3

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS215 - Principles of Management
- OR**
- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SOC225 - Medical Sociology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- ACC325 - Finance

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- PHIL305 - Medical Ethics
- OR**
- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- STAT414 - Stat Methods in Epidemiology

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	17	3

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- BUS or MGT Elective

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS456 - Business Research Methods
- OR**
- BUS457 - Business Research Methods II (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS467 - Service Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS345 - Health Care Info Systms Mgmt

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	16	0

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS357 - Info & Comm Sysys in Hlth Care

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Health Care Management Program Elective*

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

**Course Requirement Group -
(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Health Care Management, Clinical Option, BS

Overview

Program Long Title
Health Care Mgmt-Clinical Mgmt

Program Title
Health Care Mgmt-Clinical Mgmt

Department(s)
Management

Degree Designation
BS

Program Level
UG

CIP Code
510701

Degree Maps

Degree Map Name Advising Guide - Health Care Mgmt-Clinical Mgmt			
Total Degree Map Credits 185			
Degree Map Effective Catalog Year 2425 -			
Degree Map Narrative			
Health Care Management - Clinical Option			
This program bridges two disciplines; Allied Health and Management. The clinical option requires a current state and/or national registry, license, or certificate in an approved allied health field. The degree prepares Allied Health professionals for advancement to management or supervisory roles.			
Year	Semester	Actual Credits	Progress Credits
First Year	-	44	0
Requirement Select Registry Transfer Credits (Generic)			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		44	
Progress Credits		-	
Contact Hours		-	
Clinical		-	
Criticality		No	
Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO103 - Intro to Human Anat & Phys

OR

- BIO231 - Human Anatomy/Physiology I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	12	0

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- STAT243Z - Elementary Statistics I
- OR**
- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	18	0

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BUS223 - Marketing I
- OR**
- BUS337 - Prin of Health Care Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	12	0

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS457 - Business Research Methods II (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS467 - Service Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS345 - Health Care Info Systems Mgmt

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	16	0

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM205 - Intercultural Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course - Upper Division
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	16	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- WRI410 - Proposal & Grant Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Health Informatics, BS

Overview

Program Long Title

Health Informatics

Program Title

Health Informatics

Department(s)

Management

Degree Designation

BS

Program Level

UG

CIP Code

510706

Degree Maps

Degree Map Name

Advising Guide - Health Informatics

Total Degree Map Credits

180

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

Degree Required courses and recommended terms during which they should be taken:

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

386 / 727

Requirement Select

- MIS255 - Health Informatics Cpts & Prct

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIS145 - Intro to PC Hardware/Software

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS251 - Networking Fundamentals

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS118 - Intro to Programming in C#

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	14	0

Requirement Select

- BUS223 - Marketing I
- OR**
- BUS337 - Prin of Health Care Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH362 - Statistical Methods II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS218 - Intermediate Programming in C#

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS357 - Info & Comm Sys in Hlth Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO103 - Intro to Human Anat & Phys

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SOC225 - Medical Sociology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MIS311 - Intro to Systems Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- MIS312 - Systems Analysis I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS334 - Business Analytics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS341 - Relational Database Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS322 - Systems Analysis & Design II (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS344 - Business Intelligence

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MIS442 - Adv Web App Programming

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	9	0

Requirement Select

- BUS457 - Business Research Methods II
(Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS345 - Health Care Info Systms Mgmt

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	17	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHIL305 - Medical Ethics
- OR**
- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- STAT414 - Stat Methods in Epidemiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	16	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS446 - Data Mining

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- WRI410 - Proposal & Grant Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Health Care Management, Radiologic Science Management Option, BS

Overview

Program Long Title
Health Care Mgmt-Rad Science

Program Title
Health Care Mgmt-Rad Science

Department(s)
Management

Degree Designation
BS

Program Level
UG

CIP Code
510701

Degree Maps

Degree Map Name
Advising Guide - Health Care Mgmt-Rad Science

Total Degree Map Credits
206

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
First Year	-	89	0

Requirement Select

- Prior Learning - Registry Transfer Credits (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

89

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	12	0

395 / 727

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	10	3

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	3
Contact Hours	3 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS223 - Marketing I
- OR**
- BUS337 - Prin of Health Care Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO103 - Intro to Human Anat & Phys
- OR**
- BIO231 - Human Anatomy/Physiology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- STAT243Z - Elementary Statistics I
- OR**
- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	12	0

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I
- OR**
- PSY202Z - Intro to Psychology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS457 - Business Research Methods II (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS345 - Health Care Info Systms Mgmt

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	13	0

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR
- PHIL342 - Business Ethics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- WRI410 - Proposal & Grant Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Information Technology, BS

Overview

Program Long Title

Information Technology

Program Title

Information Technology

Department(s)

Management

Degree Designation

BS

Program Level

UG

CIP Code

110103

Degree Maps

Degree Map Name

Advising Guide - Information Technology

Total Degree Map Credits

185

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

***Focused Sequence Electives - Students will select a 24-unit track listed as their focus elective sequence and will complete a senior project related to the track chosen.**

Business Application Programming

- MIS 285 - Python Programming
- MIS 442 - Adv Database App Programming
- Programming Elective - 12 credits

Data Administration and Architecture

- MIS 344 - Business Intelligence
- MIS 365 - Cloud Computing
- MIS 441 - Big Data
- MIS 442 - Adv Database App Programming
- MIS 446 - Data Mining
- Elective - 2 credits

Data Infrastructure and Networking

- CYB 351 - Network Security
- MIS 240 - Intro to Linux OS
- MIS 285 - Python Programming
- MIS 351 - Enterprise Networking
- MIS 365 - Cloud Computing

- MIS 441 - Big Data

Health Informatics (Includes HI Minor)

- BUS 313 - Health Care Systems & Policy
- MIS 255 - Health Informatics Cpts & Prct
- MIS 344 - Business Intelligence
- MIS 345 - Health Care Info Systms Mgmt
- MIS 357 - Info & Comm Sysys in Hlth Care
- MIS 446 - Data Mining
- STAT 414 - Stat Methods in Epidemiology
- Elective - 2 credits

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIS145 - Intro to PC Hardware/Software

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHIL205 - Introduction to Logic

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	15	0

Requirement Select

- BUS215 - Principles of Management

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS251 - Networking Fundamentals

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS118 - Intro to Programming in C#

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- MIS273 - Systems Administration I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	17	0

Requirement Select

- BUS223 - Marketing I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- CYB201 - Cybersecurity Fundamentals

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3 - 6

Clinical

-

Criticality

No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS218 - Intermediate Programming in C#

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH362 - Statistical Methods II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- ACC325 - Finance

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS311 - Intro to Systems Analysis

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective*
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective*
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- MIS312 - Systems Analysis I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS334 - Business Analytics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS341 - Relational Database Design I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR
- WRI350 - Documentation Development

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS322 - Systems Analysis & Design II (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Focused Sequence Elective*
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	14	0

Requirement Select

- CYB411 - Managing Risk in Info Systems

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective*
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Focused Sequence Elective*
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- ANTH452 - Globalization
OR
• HIST452 - Globalization & Pac NW

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0
Requirement Select BUS215 - Principles of Management			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		3	
Progress Credits		-	
Contact Hours		3	
Clinical		-	
Criticality		No	

Requirement Select	
• MATH111Z - Precalculus I: Functions	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• WR121Z - Composition I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Lab Science General Education	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	16	0

Requirement Select	
• BUS223 - Marketing I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• ECO201Z - Principles of Microeconomics	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MIS102 - Spreadsheet Software Lab	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	17	0

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS206 - Intro to Mgmt Info Sys

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14 - 15	0

Requirement Select

- BA211Z - Principles of Financial Account

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems
- OR**
- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- BUS256 - Graphic Design for Business

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- BUS318 - Marketing II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH371 - Finite Math/Calc I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS456 - Business Research Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS225 - Digital Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIS375 - Decision Support Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	14	0

Requirement Select

- BUS319 - Integrated Marketing Comm.

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS467 - Service Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Business, Marketing Option Program Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- GIS207 - Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	17	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Business, Marketing Option Program Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- BUS390 - Applied Management Internship
- OR**
- General Business Elective

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- BUS435 - Marketing III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS473 - Marketing Plan Development

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13 - 16	0

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS457 - Business Research Methods II (Inactive)
- OR**
- BUS414 - Marketing Research

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	0 - 3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	17	0

Requirement Select

- ANTH452 - Globalization

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Business, Marketing Option Program Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Business, Marketing Option Program Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Business, Marketing Option Program Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

Area

Actual Credits

Progress Credits

Contact Hours

Clinical

Criticality

-

-

3

-

-

-

No

Total General Education Credits

0

Total Major Credits

0

Total Minor Credits

0

Total Elective Credits

0

Operations Management, BS

Overview

Program Long Title

Operations Management

Program Title

Operations Management

Department(s)

Management

Degree Designation

BS

Program Level

UG

CIP Code

520205

Degree Maps

Degree Map Name

Advising Guide - Operations Management

Total Degree Map Credits

184

Degree Map Effective Catalog Year

2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	14	0

Requirement Select

• BUS215 - Principles of Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

Area

Actual Credits

Progress Credits

Contact Hours

Clinical

Criticality

-

-

3

-

3

-

No

Requirement Select	
• PSY201Z - Intro to Psychology I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• WRI121Z - Composition I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	12	0

Requirement Select	
• MATH111Z - Precalculus I: Functions	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MIS102 - Spreadsheet Software Lab	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select	
• COM111Z - Public Speaking	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	17	0

Requirement Select

- BUS223 - Marketing I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS206 - Intro to Mgmt Info Sys

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- BA211Z - Principles of Financial Accoun

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	18	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH371 - Finite Math/Calc I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BUS456 - Business Research Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	16	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS457 - Business Research Methods II
(Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT461 - Lean/Six Sigma Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- MGT322 - Supply Chain Management

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT462 - Lean/Six Sigma Management II

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- MGT323 - Logistics Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MGT335 - Project Management

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MGT463 - Lean/Six Sigma Management III

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- MIS375 - Decision Support Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select	
• BUS467 - Service Management	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MGT421 - Agile Quality Management	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• Lab Science General Education	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Senior	Winter	16	Credits
			0

Requirement Select	
• ANTH452 - Globalization	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• BUS480 - Capstone Experience	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• MGT422 - Materials Management	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	16	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MGT423 - Enterprise Resource Planning

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Business, Management Option, BS

Overview

Program Long Title
Business Management Option

Program Title
Business Management Option

Department(s)
Management

Degree Designation
BS

Program Level	CIP Code
UG	520701

Degree Maps

Degree Map Name
Advising Guide - Business Management Option

Total Degree Map Credits
186 - 187

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative

Program Electives*

15 credits of Program Electives are required. Choose from the list below or consult with your Academic Advisor.

- ACC 205 - Computerized Accounting
- ART 315 - Design Thinking
- BUS 107 - Seminar
- BUS 256 - Graphic Design for Business
- BUS 318 - Marketing II
- BUS 319 - Integrated Marketing Comm.
- BUS 326 - Sales/Sales Management
- BUS 335 - Entrepreneurship II
- BUS 390 - Applied Management Internship
- BUS 399 - Marketing Special Topics
- BUS 434 - Global Marketing
- BUS 447 - Controversial Issues in Mgmt
- COM 237 - Intro to Visual Communication
- COM 248 - Digital Media Production
- COM 256 - Public Relations
- COM 347 - Negotiation & Conflict Resol'n

- GIS 134 - Geographic Information Systems
- MGT 462 - Lean/Six Sigma Management II
- MGT 463 - Lean/Six Sigma Management III
- MIS 118 - Intro to Programming in C#
- MIS 225 - Business on the Internet
- MIS 341 - Relational Database Design I
- MIS 344 - Business Intelligence
- MIS 446 - Data Mining
- WRI 350 - Documentation Develop
- MGT 322 - Supply Chain Management
- MGT 323 - Logistics Management

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	18	0
Requirement Select			
• BUS215 - Principles of Management			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		3	
Progress Credits		-	
Contact Hours		3	
Clinical		-	
Criticality		No	

Requirement Select			
• MATH111Z - Precalculus I: Functions			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select	
• WRI121Z - Composition I	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• Lab Science General Education	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• Psychology Electives	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	12	0

Requirement Select

- BUS223 - Marketing I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

1

Progress Credits

-

Contact Hours

0 - 3

Clinical

-

Criticality

No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

-

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	17	0

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MIS206 - Intro to Mgmt Info Sys

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14 - 15	0

Requirement Select

- BA211Z - Principles of Financial Account

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR**
- STAT243Z - Elementary Statistics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems
- OR**
- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	17	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Program Elective*
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS456 - Business Research Methods

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS375 - Decision Support Systems

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Program Elective*
(Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- BUS467 - Service Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- GIS207 - Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT421 - Agile Quality Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS314 - Intro to Innovation & Entr.

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	18	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS307 - Seminar

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 16
Clinical	-
Criticality	No

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MIS334 - Business Analytics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- BUS390 - Applied Management Internship
- OR**
- BUS Business Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours-
Clinical-
CriticalityNo

Requirement Select

- Elective Course (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours-
Clinical-
CriticalityNo

Requirement Select

- Program Elective* (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours-
Clinical-
CriticalityNo

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

- BUS308 - Prin of International Business

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours3
Clinical-
CriticalityNo

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours3
Clinical-
CriticalityNo

Requirement Select

- BUS457 - Business Research Methods II (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade-
Area-
Actual Credits3
Progress Credits-
Contact Hours3
Clinical-
CriticalityNo

Requirement Select

- MGT461 - Lean/Six Sigma Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	16	0

Requirement Select

- ANTH452 - Globalization
- OR**
- HIST452 - Globalization & Pac NW

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Elective Course
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

• Program Elective*

(Generic)

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

• BUS478 - Strategic Management

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Elective Course

(Generic)

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Program Elective*

(Generic)

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Technology and Management, BAS

Overview

Program Long Title
Technology and Management

Program Title
Technology and Management

Department(s)
Management

Degree Designation
BAS

Program Level
UG

CIP Code
529999

Degree Maps

Degree Map Name
Advising Guide - Technology and Management

Total Degree Map Credits
177 - 184

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
The Bachelor of Applied Science (BAS) in Technology and Management provides a path to a bachelor’s degree for those students who have completed a technical Associate of Applied Science (AAS) or Associate of Science (AS) degree from an accredited institution recognized by the Council for Higher Education (CHEA) and are seeking career advancement into management or in their technical career fields. The BAS builds on a core of 60 credits of career and technical education (CTE) courses taken as part of the AAS or AS degree, adding 65 credits of business, management, and information technology courses and 55 credits of broad-based general education courses to enable the BAS graduate to advance in the workplace or continue on to graduate school. The management core includes a three-term capstone senior project to enable the student to demonstrate successful integration of technical and managerial coursework.

Note:
The BAS degree specifies 60 upper-division credits. Students transferring in lower-division course equivalents do not receive upper-division credit and may be required to take upper-division electives to meet the minimum 60 credits of upper division credits required for the BAS degree.

Prior Learning
Up to 60 Career Technical Elective credits

Degree Required courses and recommended terms during which they should be taken:

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0
Requirement Select BA211Z - Principles of Financial Accoun			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select - BUS215 - Principles of Management OR - BUS304 - Engineering Management OR - BUS317 - Health Care Management			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		3	
Progress Credits		-	
Contact Hours		3	
Clinical		-	
Criticality		No	

Requirement Select MATH111Z - Precalculus I: Functions			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

-

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ECO201Z - Principles of Microeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	17	0

Requirement Select

- BUS226Z - Introduction to Business Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS457 - Business Research Methods II
(Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT321 - Operations Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT461 - Lean/Six Sigma Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- ACC325 - Finance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BUS349 - Human Resource Management I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIS102 - Spreadsheet Software Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- BUS356 - Business Presentations

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MIS206 - Intro to Mgmt Info Sys

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MGT335 - Project Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lab Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	12	0

Requirement Select

- BUS223 - Marketing I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS441 - Leadership I (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS467 - Service Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	17	0

Requirement Select

- ANTH452 - Globalization
- OR**
- HIST452 - Globalization & Pac NW

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Math/Science General Education

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	16 - 17	0

Requirement Select

- BUS478 - Strategic Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIS113 - Intro to Database Systems

OR

- MIS275 - Intro to Relational Databases (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3 - 4

Progress Credits

-

Contact Hours

6

Clinical

-

Criticality

No

Requirement Select

- WRI327 - Advanced Tech Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- BUS480 - Capstone Experience

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Curriculum	Required Coursework	54 - 60	0

Requirement Select

- Credit for Prior Learning (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Up to 60 Career Technical Elective credits

Minimum Grade

-

Area

-

Actual Credits

54 - 60

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	0	Total Major Credits	0
Total Minor Credits	0	Total Elective Credits	0

Accounting Post Baccalaureate Certificate

Overview

Program Long Title
Post Bac Accounting Cert

Program Title
Post Bac Accounting Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	520301

Heavy Construction Essential, Certificate

Overview

Program Long Title
Heavy Construction Mgmt Cert

Program Title
Heavy Construction Mgmt Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	522001

Tech-Infused Global Leadership & Management, Certificate

Overview

Program Long Title
Global Leadership Mgmt Cert

Program Title
Global Leadership Mgmt Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	520701

Business Management Essentials, Certificate

Overview

Program Long Title
Business Mgmt Essentials Cert

Program Title
Business Mgmt Essentials Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	520701

Management Information Systems, Certificate

Overview

Program Long Title
Business Mgmt Info System Cert

Program Title
Business Mgmt Info System Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	110103

Business Systems Management, Certificate

Overview

Program Long Title
Business Systems Mgmt Cert

Program Title
Business Systems Mgmt Cert

Department(s)
Management

Degree Designation
CERT

Program Level	CIP Code
UG	520701

Business, Minor

Overview

Program Long Title
Business

Program Title
Business

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	520101

Construction Management, Minor

Overview

Program Long Title
Construction Management

Program Title
Construction Management

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	522001

Health Informatics, Minor

Overview

Program Long Title
Health Informatics

Program Title
Health Informatics

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	512706

International Business, Minor

Overview

Program Long Title
International Business

Program Title
International Business

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	521101

Innovation & Entrepreneurship, Minor

Overview

Program Long Title
Innovation & Entrepreneurship

Program Title
Innovation & Entrepreneurship

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	520701

Information Technology, Minor

Overview

Program Long Title
Information Technology

Program Title
Information Technology

Department(s)
Management

Degree Designation
MINOR

Program Level	CIP Code
UG	110103

Overview

Program Long Title
Specialization in Accounting

Program Title
Specialization in Accounting

Department(s)
Management

Degree Designation
SPEC

Program Level	CIP Code
UG	520301

Overview

Program Long Title
Spec in Entrepreneur/Small Bus

Program Title
Spec in Entrepreneur/Small Bus

Department(s)
Management

Degree Designation
SPEC

Program Level	CIP Code
UG	520701

Overview

Program Long Title
Specialization in Marketing

Program Title
Specialization in Marketing

Department(s)
Management

Degree Designation
SPEC

Program Level	CIP Code
UG	521401

Courses

ACC101 - Intro to Accounting

Overview

Course Subject Code	Course Number
ACC	101

Department
Management

Course Description
The principles of elementary accounting systems for small businesses.

Academic Level (Course Level)
Undergraduate

ACC107 - Seminar

Overview

Course Subject Code	Course Number
ACC	107

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACC205 - Computerized Accounting

Overview

Course Subject Code	Course Number
ACC	205

Department
Management

Course Description
Spreadsheet software used to solve accounting problems, demonstrate model-building techniques and data analytics. Integrated accounting software introduced.

Academic Level (Course Level)
Undergraduate

ACC207 - Seminar

Overview

Course Subject Code	Course Number
ACC	207

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACC305 - Accounting Information Systems

Overview

Course Subject Code	Course Number
ACC	305

Department
Management

Academic Level (Course Level)
Undergraduate

ACC307 - Seminar

Overview

Course Subject Code	Course Number
ACC	307

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACC320 - Cost Accounting I

Overview

Course Subject Code	Course Number
ACC	320

Department
Management

Course Description
Cost accumulation systems including job order costing, process costing and activity-based costing will be explored. Techniques to control and evaluate operations including variance analysis based on flexible budgets and standard costs.

Academic Level (Course Level)
Undergraduate

ACC321 - Cost Accounting II

Overview

Course Subject Code	Course Number
ACC	321

Department
Management

Course Description
Continuation of Cost Accounting I. Strategic planning and financial budgeting. Cost measurement, planning, control and performance evaluation and behavioral issues. The role or responsibility accounting for revenue, cost, contribution and profit centers will be investigated.

Academic Level (Course Level)
Undergraduate

ACC325 - Finance

Overview

Course Subject Code	Course Number
ACC	325

Department
Management

Course Description
Emphasis on working capital management, long-term finance, and capital structure.

Academic Level (Course Level)
Undergraduate

ACC331 - Interm Accounting I

Overview

Course Subject Code	Course Number
ACC	331

Department
Management

Course Description
Financial accounting concepts, theory, and practices involving current asset accounts; practical application of theory to accounting problems.

Academic Level (Course Level)
Undergraduate

ACC332 - Interm Accounting II

Overview

Course Subject Code	Course Number
ACC	332

Department
Management

Course Description
Accounting concepts, theory, and practices involving ownership equities, interpretation, analysis of financial statements, and correction of errors; practical application of theory to accounting problems.

Academic Level (Course Level)
Undergraduate

ACC333 - Interm Accounting III

Overview

Course Subject Code	Course Number
ACC	333

Department
Management

Course Description
Accounting concepts, theory, and practices involving plant assets, intangible assets and liabilities; practical application of theory to accounting problems.

Academic Level (Course Level)
Undergraduate

ACC407 - Seminar

Overview

Course Subject Code	Course Number
ACC	407

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ACC411 - Income Tax Procedures

Overview

Course Subject Code	Course Number
ACC	411

Department
Management

Course Description
Federal and state income tax laws and regulations applicable to individuals and their businesses including computerized tax return preparation.

Academic Level (Course Level)
Undergraduate

ACC412 - Corporate Taxation

Overview

Course Subject Code	Course Number
ACC	412

Department
Management

Course Description
Federal tax law applicable to corporations, partnerships, and estates. Emphasis on tax research procedures, and locating and evaluating various sources of tax law.

Academic Level (Course Level)
Undergraduate

ACC431 - Advanced Accounting I

Overview

Course Subject Code	Course Number
ACC	431

Department
Management

Course Description
Comprehensive study of problems in partnership accounting, fund accounting, branch accounting, and governmental accounting.

Academic Level (Course Level)
Undergraduate

ACC432 - Advanced Accounting II

Overview

Course Subject Code	Course Number
ACC	432

Department
Management

Course Description
Analysis of problems facing small, medium, and large companies, with emphasis upon an integrated and concurrent decision making methodology applying economics, finance, accounting and tax theory.

Academic Level (Course Level)
Undergraduate

ACC435 - Auditing

Overview

Course Subject Code	Course Number
ACC	435

Department
Management

Course Description
Introduction to auditing concepts and practices. Topics include professional standards, audit planning and procedures, ethical considerations, internal controls, professional responsibilities, the acquisition and evaluation of audit evidence, and report writing.

Academic Level (Course Level)
Undergraduate

ACC496 - Senior Project

Overview

Course Subject Code	Course Number
ACC	496

Department
Management

Course Description
Development and implementation of an accounting related project for the benefit of an external entity and the student. Projects will include a proposal, analysis, design, and implementation. An oral presentation and project documentation will be required at the completion of each course.

Academic Level (Course Level)
Undergraduate

ACC497 - Senior Project

Overview

Course Subject Code	Course Number
ACC	497

Department
Management

Course Description
Development and implementation of an accounting related project for the benefit of an external entity and the student. Projects will include a proposal, analysis, design and implementation. An oral presentation and project documentation will be required at the completion of each course.

Academic Level (Course Level)
Undergraduate

BA101Z - Intro to Business

Overview

Course Subject Code	Course Number
BA	101Z

Department
Management

Course Description
Presents an integrated view of both established and entrepreneurial businesses by studying their common characteristics and processes in a global context. Introduces theory and develops basic skills in the areas of accounting, finance, management, and marketing, with an emphasis on social responsibility and ethical practices. Explores how businesses can create value for themselves and society by addressing environmental and social challenges.

Academic Level (Course Level)
Undergraduate

BA211Z - Principles of Financial Account

Overview

Course Subject Code	Course Number
BA	211Z

Department
Management

Course Description
Imparts an understanding of the purpose of accounting, common financial statement items, and the principles of internal controls. Focuses on recording the impact of economic events on account balances using U.S. Generally Accepted Accounting Principles, and the creation and analysis of financial statements to aid in external decision making.

Academic Level (Course Level)
Undergraduate

BA212 - Prin of Accounting II

Overview

Course Subject Code	Course Number
BA	212

Department
Management

Course Description
A continuation of BA 211Z with emphasis on corporate accounting.

Academic Level (Course Level)
Undergraduate

BA213Z - Princ of Managerial Accounting

Overview

Course Subject Code	Course Number
BA	213Z

Department
Management

Course Description
Builds an understanding of the role of managerial accounting in a business, focusing on the development and use of information to evaluate production costs and operational performance in support of short- and long-term organizational decision-making.

Academic Level (Course Level)
Undergraduate

BUS000 - Business General Elective

Overview

Course Subject Code	Course Number
BUS	000

Department
Management

Academic Level (Course Level)
Undergraduate

BUS00U - Business Upper Elective

Overview

Course Subject Code	Course Number
BUS	00U

Department
Management

Academic Level (Course Level)
Undergraduate

BUS107 - Seminar

Overview

Course Subject Code	Course Number
BUS	107

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BUS169Z - Data Analysis Using Microsoft

Overview

Course Subject Code	Course Number
BUS	169Z

Department
Management

Course Description
Covers Microsoft Excel software skills necessary for evidence-based problem-solving, including workbook editing, formula creation, charting, and pivot tables. Emphasizes hands-on learning using Excel functions to perform data analysis to enhance decision-making.

Academic Level (Course Level)
Undergraduate

BUS207 - Seminar

Overview

Course Subject Code	Course Number
BUS	207

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BUS215 - Principles of Management

Overview

Course Subject Code	Course Number
BUS	215

Department
Management

Course Description
Introduction to the history of management. Emphasis on the management functions of planning, organizing, directing and controlling; existing and emerging management theories, social responsibilities and business ethics. (Cannot be taken for graduation credit by students who have taken BUS 304 or BUS 317.)

Academic Level (Course Level)
Undergraduate

BUS223 - Marketing I

Overview

Course Subject Code	Course Number
BUS	223

Department
Management

Course Description
Principles that drive the integration of the marketing mix (product, price, place, promotion) to meet the needs and wants of consumer and business markets. Function of market research and the study of market opportunities to grow and sustain organizations.

Academic Level (Course Level)
Undergraduate

BUS226Z - Introduction to Business Law

Overview

Course Subject Code	Course Number
BUS	226Z

Department
Management

Course Description

Provides a comprehensive overview of U.S. business law, including the legal system, contracts, torts, intellectual property, agency, employment, and business organization forms. Emphasizes practical legal knowledge and explores how laws impact business operations, with a focus on risk management, contract disputes, business formation, and compliance with government regulation. Introduces legal challenges in business through real cases and legal terminology.

Academic Level (Course Level)
Undergraduate

BUS256 - Graphic Design for Business

Overview

Course Subject Code	Course Number
BUS	256

Department
Management

Course Description

Emphasis on effective content, structure, tone and visual format for both internal and external communication. Students will compose various commonly occurring business documents achieving effectiveness in design, organization, content, and style, applying current graphic design and visual-design principles.

Academic Level (Course Level)
Undergraduate

BUS304 - Engineering Management

Overview

Course Subject Code	Course Number
BUS	304

Department
Management

Course Description

The engineering management process. The unique aspects of managing "knowledge workers." The manager's role in planning, organizing, leading and controlling. Managing design and new products development, materials, and inventory. Organizational styles, structures, and policies. Human resource management for individuals and groups. (Cannot be taken for graduation credit by students who have taken BUS 215 or BUS 317.) Junior standing or instructor consent required.

Academic Level (Course Level)
Undergraduate

BUS307 - Seminar

Overview

Course Subject Code	Course Number
BUS	307

Department
Management

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BUS308 - Prin of International Business

Overview

Course Subject Code	Course Number
BUS	308

Department
Management

Course Description

Introduction to international business fundamentals in the areas of cultural, ethical, legal and economic environments, international financial tools and instruments, international trade theory, manufacturing strategies, international supply chain management, country selection, exchange rate mechanics and international human resource management.

Academic Level (Course Level)
Undergraduate

BUS309 - Introduction to Tourism

Overview

Course Subject Code	Course Number
BUS	309

Department
Management

Course Description

Introduction to tourism industry. Topics include major components of tourism, service suppliers, travel, transportation, accommodations, food and beverage, attractions, entertainment, destinations, and impacts of tourism on society.

Academic Level (Course Level)
Undergraduate

BUS313 - Health Care Systems & Policy

Overview

Course Subject Code	Course Number
BUS	313

Department
Management

Course Description

This course will explore the U.S. Health System focusing on its historical development, current configuration and possibly future direction. Included will be the study of health system development, key influencers, accessibility, financiers, employers, government and insurers. Particular attention will be paid to the future direction of healthcare and what parts of the system are likely to change.

Academic Level (Course Level)
Undergraduate

BUS314 - Intro to Innovation & Entr.

Overview

Course Subject Code	Course Number
BUS	314

Department
Management

Course Description

Complete a full business plan with marketing, financial and operational plan for new business venture. Students will learn and apply fundamental strategic decisions for small business entrepreneurs in all facets of starting, operating and growing a business.

Academic Level (Course Level)
Undergraduate

BUS316 - Total Quality Health Care

Overview

Course Subject Code	Course Number
BUS	316

Department
Management

Course Description

The health care quality management process, contemporary issues and trends involved with quality control, organization structures, policies, human factors and teamwork. Junior standing required.

Academic Level (Course Level)
Undergraduate

BUS317 - Health Care Management

Overview

Course Subject Code	Course Number
BUS	317

Department
Management

Course Description

The health care manager's role in planning, organizing, leading, and controlling. Special emphasis on the unique and complex issues involved in health care management. Organizational structures. Strategic and operational planning. Health care finance and budgeting. The future of management. (Cannot be taken for graduation credit by students who have taken BUS 215 or BUS 304.)

Academic Level (Course Level)
Undergraduate

BUS318 - Marketing II

Overview

Course Subject Code	Course Number
BUS	318

Department
Management

Course Description

Advanced study markets with a focus on the motivation and behavioral characteristics of consumers. Study and apply analytics, technology and data-driven decision making in the formation of a customer-centered marketing and marketing communication strategy.

Academic Level (Course Level)
Undergraduate

BUS319 - Integrated Marketing Comm.

Overview

Course Subject Code	Course Number
BUS	319

Department
Management

Course Description

Develop an integrated cross-media strategy and creative message to reach the target audience and deliver the brand promise through an IMC campaign. Special emphasis on paid, owned and earned digital media and social media platforms and analytics.

Academic Level (Course Level)
Undergraduate

BUS326 - Sales/Sales Management

Overview

Course Subject Code	Course Number
BUS	326

Department
Management

Course Description

This course introduces the student to the fundamentals of sales management. Topics includes principles of selling, introduction to prospecting skills, application of pricing strategies and theory, pricing after sales service offering, developing a value proposition, sales/ service territory identification and alignment to maximize total revenue opportunity and administration of sales personnel in diverse sales territories and developing sales programs.

Academic Level (Course Level)
Undergraduate

BUS331 - Personal Finance

Overview

Course Subject Code	Course Number
BUS	331

Department
Management

Course Description

Introduction to the basic principles of personal financial planning and budgeting. Includes banking services, consumer credit, asset purchases, insurance, and the fundamentals of investments and retirement planning.

Academic Level (Course Level)
Undergraduate

BUS335 - Innov. & Entrepreneurship II

Overview

Course Subject Code	Course Number
BUS	335

Department
Management

Course Description

Students will learn and apply strategic decision-making skills in the innovation and start-up of a new business or organization/venture. students will function in an interdisciplinary team or environment to complete a project/proposal to move from idea to development plan.

Academic Level (Course Level)
Undergraduate

BUS337 - Prin of Health Care Marketing

Overview

Course Subject Code	Course Number
BUS	337

Department
Management

Course Description

Fundamentals of health care marketing covering strategy, planning process, assessment, marketing actions, branding and evaluation.

Academic Level (Course Level)
Undergraduate

BUS349 - Human Resource Management I

Overview

Course Subject Code	Course Number
BUS	349

Department
Management

Course Description

Principles, theories and applications of HR management in the areas of strategy, workforce planning, employment law, job analysis, recruitment, selection, training, performance management and international HRM.

Academic Level (Course Level)
Undergraduate

BUS356 - Business Presentations

Overview

Course Subject Code	Course Number
BUS	356

Department
Management

Course Description

Design, preparation and delivery of effective business presentations. Emphasis on integration of skills in speech and digital communication software to deliver effective, informative and persuasive presentations in any business or organization.

Academic Level (Course Level)
Undergraduate

BUS375 - Experience Business Abroad I

Overview

Course Subject Code	Course Number
BUS	375

Department
Management

Course Description

This course provides opportunities for students interested in study abroad. The course is open to all students interested in traveling as part of their educational experience, and provides opportunity to travel with faculty.

Academic Level (Course Level)
Undergraduate

BUS390 - Applied Management Internship

Overview

Course Subject Code	Course Number
BUS	390

Department
Management

Course Description

This course provides credit for an approved internship related to the student's program. Students work in a supervised setting where they receive training to develop career related skills while applying college learned theory. Prerequisite: Instructor consent

Academic Level (Course Level)
Undergraduate

BUS397 - Human Resource Management II

Overview

Course Subject Code	Course Number
BUS	397

Department
Management

Course Description
Principles, theories, and applications of HR management in the areas of compensation, benefits, safety, labor relations, employee rights and engagement.

Academic Level (Course Level)
Undergraduate

BUS399 - Marketing Special Topics

Overview

Course Subject Code	Course Number
BUS	399

Department
Management

Course Description
Concentrated areas of marketing will be taught on a rotating basis: business to business, hospitality and travel, entertainment and sports, high tech, direct marketing and public relations.

Academic Level (Course Level)
Undergraduate

BUS407 - Seminar

Overview

Course Subject Code	Course Number
BUS	407

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BUS414 - Marketing Research

Overview

Course Subject Code	Course Number
BUS	414

Department
Management

Course Description
Introduction to the research function as it applies to marketing. Research methodology, design, surveys, data collection, interpretation and recommendations.

Academic Level (Course Level)
Undergraduate

BUS420 - Applied Management Internship

Overview

Course Subject Code	Course Number
BUS	420

Department
Management

Course Description
This course provides credit for an approved internship related to the student's program. Students work in a supervised setting where they receive training to develop career related skills while applying college learned theory. This course can substitute for BUS 496. Prerequisites: Senior standing and approval from senior project advisor

Academic Level (Course Level)
Undergraduate

BUS434 - Global Marketing

Overview

Course Subject Code	Course Number
BUS	434

Department
Management

Course Description

Comprehensive study of global business issues that develop strategic visions for market entry in emerging and developed countries, analyzing financial and pricing considerations, evaluating strategies of export versus local manufacturing, developing a marketing program that demonstrates implementation of global business principles.

Academic Level (Course Level)
Undergraduate

BUS435 - Marketing III

Overview

Course Subject Code	Course Number
BUS	435

Department
Management

Course Description

Management marketing strategies within a marketing centric business or organization, including the development of new products and services in response to market demands. Development of collaborative strategies in distribution, pricing and product/service mixes for new products, services and line extensions.

Academic Level (Course Level)
Undergraduate

BUS442 - Leadership II

Overview

Course Subject Code	Course Number
BUS	442

Department
Management

Course Description

Leadership in developing and communicating vision/mission and values setting ethical standards. Leading and developing multi-levels of managers. Mentoring high potential managers and transformational leaders. Leadership during conflict, change and diversity. The role of the leader in organizational development.

Academic Level (Course Level)
Undergraduate

BUS447 - Controversial Issues in Mgmt

Overview

Course Subject Code	Course Number
BUS	447

Department
Management

Course Description

Examination of the many controversial issues in management such as social responsibility, whistle blowing, outsourcing, drug testing, Affirmative Action and so on. Students will study opposing views and arguments from a variety of viewpoints. Discussion and debate develops critical thinking skills. Junior standing required.

Academic Level (Course Level)
Undergraduate

BUS456 - Business Research Methods

Overview

Course Subject Code	Course Number
BUS	456

Department
Management

Course Description

Research design, exploration, and proposals. Hypotheses formulation and testing. Data sources, collection and analysis. Survey design, sampling and census techniques. Library and on-line information retrieval sources. Effective search strategies.

Academic Level (Course Level)
Undergraduate

BUS458 - Process Improvement

Overview

Course Subject Code	Course Number
BUS	458

Department
Management

Academic Level (Course Level)
Undergraduate

BUS467 - Service Management

Overview

Course Subject Code	Course Number
BUS	467

Department
Management

Course Description
The nature of service and service encounters, strategy, and competitiveness. Design of service systems. Facilities location, design, and layout. Service quality and continuous improvement.

Academic Level (Course Level)
Undergraduate

BUS473 - Marketing Plan Development

Overview

Course Subject Code	Course Number
BUS	473

Department
Management

Course Description
Development of an in-depth marketing plan for a local community business. All aspects of the plan will be covered in detail.

Academic Level (Course Level)
Undergraduate

BUS475 - Experience Business Abroad II

Overview

Course Subject Code	Course Number
BUS	475

Department
Management

Course Description
This course provides students opportunity study abroad as part of their senior projects. Students complete their projects with faculty assistance in international settings. The senior project course sequence provides students with personalized alternatives for senior projects.

Academic Level (Course Level)
Undergraduate

BUS478 - Strategic Management

Overview

Course Subject Code	Course Number
BUS	478

Department
Management

Course Description
Comprehensive study and analysis of businesses and/or case studies. Evaluation of strategic and operational decision making. Performance analysis in areas of finance, marketing and social performance. Senior standing required.

Academic Level (Course Level)
Undergraduate

BUS480 - Capstone Experience**Overview**

Course Subject Code	Course Number
BUS	480

Department

Management

Course Description

Synthesize program concepts in applied, research, internship, or other project capstone experience. Demonstrate core business concepts, stakeholder collaboration, decision-support tools, research skills, delivering professional written report and presentation. Repeatable but cannot be taken simultaneously. One term only per internship site.

Academic Level (Course Level)

Undergraduate

BUS490 - Applied Management Internship**Overview**

Course Subject Code	Course Number
BUS	490

Department

Management

Course Description

This course provides credit for an approved internship related to the student's program. Students work in a supervised setting where they receive training to develop career related skills while applying college learned theory. Prerequisite: Instructor consent

Academic Level (Course Level)

Undergraduate

BUS495 - Senior Project Proposal**Overview**

Course Subject Code	Course Number
BUS	495

Department

Management

Course Description

Examination of senior project process and requirements. Definitions of a suitable senior project topic and preparation of a formal proposal. Topics dealing with client contact, task definition, privacy and confidentiality. Initial research, presentation of results.

Academic Level (Course Level)

Undergraduate

BUS496 - Senior Project**Overview**

Course Subject Code	Course Number
BUS	496

Department

Management

Course Description

Students finalize project plan and complete data gathering and analysis portion of a project for a client or an independent research project. Topics include completing research, data gathering and analysis. Interim project report is written.

Academic Level (Course Level)

Undergraduate

BUS497 - Senior Project**Overview**

Course Subject Code	Course Number
BUS	497

Department

Management

Course Description

Students complete project started in BUS 496 including preparing a detailed project report and delivering a final presentation. Periodic progress reports required. Instructor functions as a consultant.

Academic Level (Course Level)

Undergraduate

BUS507 - Seminar**Overview**

Course Subject Code	Course Number
BUS	507

Department

Management

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Graduate

CM101 - Intro to Construction Mgmt

Overview

Course Subject Code	Course Number
CM	101

Department
Management

Course Description

Introduction to general and heavy construction fields, methods & projects. This course is the first in a program designed to prepare the student for a professional career for management in a variety of construction projects.

Academic Level (Course Level)
Undergraduate

CM226 - Construction Law

Overview

Course Subject Code	Course Number
CM	226

Department
Management

Course Description

Introduction to the American legal system, ethics and issues significant to business and construction industries. Teaches fundamentals of law governing organizational structures, administration law, contracts, Uniform Commercial Code; torts, zoning, liability, building code and criminal law in various industries.

Academic Level (Course Level)
Undergraduate

CM280 - Construction Internship

Overview

Course Subject Code	Course Number
CM	280

Department
Management

Course Description

This course provides credit for an approved internship in the construction management industry. Students work in a supervised setting where they receive training to develop career-related skills while applying college-learned theory.

Academic Level (Course Level)
Undergraduate

CM315 - Building Information Modeling

Overview

Course Subject Code	Course Number
CM	315

Department
Management

Course Description

This course covers Building Information Modeling (BIM), including its use and application for small- and large-scale building construction projects. Students will learn building terminology, the theory and evolution of BIM, and how to develop BIM models using Autodesk Revit.

Academic Level (Course Level)
Undergraduate

CM320 - Mech, Elec, & Plumb Systems

Overview

Course Subject Code	Course Number
CM	320

Department
Management

Course Description

This course introduces students to the basic principles of mechanical, electrical, and plumbing (MEP) systems common to construction projects. It involves basic science principles, basic design principles, and an understanding of the components and installation of the MEP systems.

Academic Level (Course Level)
Undergraduate

CM330 - Construct Planning/Scheduling

Overview

Course Subject Code	Course Number
CM	330

Department
Management

Course Description

Introduces students to the life cycle of a construction project from conception through completion and commissioning. Students are given an overview and practice in construction management theory, real estate development, pre-construction, sub-contractor coordination, procurement, project administration, project closeout, and commissioning.

Academic Level (Course Level)
Undergraduate

CM331 - Heavy Const Project Scheduling

Overview

Course Subject Code	Course Number
CM	331

Department
Management

Course Description

This course introduces students to the life cycle of heavy construction projects from conception through completion and commissioning. Students are given an overview and practice in construction management theory, equipment timing, sub-contractor coordination, procurement, project administration, project closeout, and commissioning.

Academic Level (Course Level)
Undergraduate

CM335 - Construction Project Mgmt

Overview

Course Subject Code	Course Number
CM	335

Department
Management

Course Description

Advanced application of the Critical Path Method to organize and control projects in the construction field. Applications software is used to create and evaluate project networks and to develop reports. Students are prepared to develop and manage their own projects.

Academic Level (Course Level)
Undergraduate

CM340 - Construct Budgeting & Takeoffs

Overview

Course Subject Code	Course Number
CM	340

Department
Management

Course Description

Fundamentals of estimating materials and labor costs in construction. Deals with feasibility & risk analysis, price estimating, including transportation and handling costs, mark-up discount procedures, equipment cost, and labor rates. Utilizes case studies to introduce & test various bidding principles & mechanisms.

Academic Level (Course Level)
Undergraduate

CM341 - HC Cost Estimating & Control

Overview

Course Subject Code	Course Number
CM	341

Department
Management

Course Description

Rationale and technique of analysis of the work operations required for heavy construction work as distinct from residential and building construction. Format and preparation of competent heavy construction cost estimates with an emphasis on computer applications.

Academic Level (Course Level)
Undergraduate

CM350 - Cons Equip, Methods, Materials

Overview

Course Subject Code	Course Number
CM	350

Department
Management

Course Description

This course will introduce the principles of various construction methods and materials with a focus on the procedures for vertical, residential, and commercial development. Emphasis on various pieces of construction equipment, their respective operating and performance parameters, and costs. Exposure to different materials and forms of building.

Academic Level (Course Level)
Undergraduate

CM351 - HC Equip, Methods, Materials

Overview

Course Subject Code	Course Number
CM	351

Department
Management

Course Description

Principles of horizontal construction, emphasizing methods and procedures to construct roads, dams, waterways, mines, pipelines. The course emphasizes the properties of heavy construction equipment, their performance parameters, methods for equipment maintenance throughout the project life cycle, and the estimating processes.

Academic Level (Course Level)
Undergraduate

CM380 - Heavy Construction Mgmt Intern

Overview

Course Subject Code	Course Number
CM	380

Department
Management

Course Description

This course provides credit for an approved internship in the heavy construction management industry. Students work in a supervised setting where they receive training to develop career-related skills while applying college-learned theory. Meets requirements for a Senior Project course.

Academic Level (Course Level)
Undergraduate

CM410 - Simplified Struct Analysis/Des

Overview

Course Subject Code	Course Number
CM	410

Department
Management

Course Description

Introduction to behavior and analysis of building structures. Structural loading, materials, and element types will be explored to understand the basic building blocks of buildings. Investigation and design of building structural systems for gravity, wind, and seismic loading.

Academic Level (Course Level)
Undergraduate

CM450 - Building Energy Management

Overview

Course Subject Code	Course Number
CM	450

Department
Management

Course Description

This course evaluates green building techniques, sustainable practices, and Lean Construction throughout the entire project life cycle. Students are introduced to the various requirements for green building rating systems and certifications. Content is provided to assist students in their self-study to take the LEED Green Associate exam.

Academic Level (Course Level)
Undergraduate

CM460 - Smart City Transformations

Overview

Course Subject Code	Course Number
CM	460

Department
Management

Course Description

Smart cities are designed to connect and integrate services and sectors; construction & utilities, energy, transportation governance and data security. Interconnected services and infrastructures using state-of-the-art advanced technologies that automate services, improve quality of life, and increase project efficiencies.

Academic Level (Course Level)
Undergraduate

CM451 - CSR & Sustainable Construction

Overview

Course Subject Code	Course Number
CM	451

Department
Management

Course Description

This course examines sustainable practices & CSR via the EIA process throughout the project lifecycle. Students are introduced to carbon-free & net-neutral construction practices, ethical sourcing & sustainable construction lifecycles.

Academic Level (Course Level)
Undergraduate

CM461 - Infrastructure Security

Overview

Course Subject Code	Course Number
CM	461

Department
Management

Course Description

Topics covered include infrastructure security management, physical and logical security threats and policy requirements, disaster recovery, business continuity plans, change management scenarios, and approaching daily business security issues from an IT perspective.

Academic Level (Course Level)
Undergraduate

CM470 - Special Topics in CM

Overview

Course Subject Code	Course Number
CM	470

Department
Management

Course Description
This course will connect students' education with previous experience and post-graduation goals. Focused on professional development topics, and construction industry advances and changes. The course focuses on adapting to emerging practices.

Academic Level (Course Level)
Undergraduate

CM471 - Infrastructure & Utility Mgmt

Overview

Course Subject Code	Course Number
CM	471

Department
Management

Course Description
The course uses the systems and case study approaches to focus on improving infrastructure and utility organizations to deliver essential public services for transportation, water, energy, waste management, and building systems.

Academic Level (Course Level)
Undergraduate

CM480 - CM Senior Project

Overview

Course Subject Code	Course Number
CM	480

Department
Management

Course Description
Synthesize program concepts in applied, research, internship, or other project capstone experience. Demonstrate core business concepts, stakeholder collaboration, decision-support tools, research skills, delivering professional written report and presentation. Repeatable but cannot be taken simultaneously. One term only per internship site.

Academic Level (Course Level)
Undergraduate

CTE000 - Career Technical Elective

Overview

Course Subject Code	Course Number
CTE	000

Department
Management

Academic Level (Course Level)
Undergraduate

CTE00U - Career Technical Elect Upper

Overview

Course Subject Code	Course Number
CTE	00U

Department
Management

Academic Level (Course Level)
Undergraduate

ECO000 - Economics Elective

Overview

Course Subject Code	Course Number
ECO	000

Department
Management

Academic Level (Course Level)
Undergraduate

ECO00U - Economics Elective Upper

Overview

Course Subject Code	Course Number
ECO	00U

Department
Management

Academic Level (Course Level)
Undergraduate

ECO107 - Seminar

Overview

Course Subject Code	Course Number
ECO	107

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ECO207 - Seminar

Overview

Course Subject Code	Course Number
ECO	207

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ECO201Z - Principles of Microeconomics

Overview

Course Subject Code	Course Number
ECO	201Z

Department
Management

Course Description
Examines how consumers and firms make choices when facing scarce resources, and how those choices are related to government policy and market outcomes, such as prices and output.

Academic Level (Course Level)
Undergraduate

ECO307 - Seminar

Overview

Course Subject Code	Course Number
ECO	307

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

ECO202Z - Principles of Macroeconomics

Overview

Course Subject Code	Course Number
ECO	202Z

Department
Management

Course Description
Examines the aggregate activity of a market economy, economic growth, inflation, unemployment, and the use of fiscal and monetary policy to address macroeconomic problems.

Academic Level (Course Level)
Undergraduate

ECO407 - Seminar

Overview

Course Subject Code	Course Number
ECO	407

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

IMGT323P - Operational Budgeting

Overview

Course Subject Code	Course Number
IMGT	323P

Department
Management

Academic Level (Course Level)
Undergraduate

IMGT499P - Multinational Operations

Overview

Course Subject Code	Course Number
IMGT	499P

Department
Management

Academic Level (Course Level)
Undergraduate

MGT107 - Seminar

Overview

Course Subject Code	Course Number
MGT	107

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MGT207 - Seminar

Overview

Course Subject Code	Course Number
MGT	207

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MGT307 - Seminar

Overview

Course Subject Code	Course Number
MGT	307

Department
Management

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MGT321 - Operations Management

Overview

Course Subject Code	Course Number
MGT	321

Department
Management

Course Description
Functions of the operations division within the organizational structure. Manufacturing and service organizations reviewed. Capacity planning with forecasting and material requirements planning. Introduction to Just-In-Time concepts.

Academic Level (Course Level)
Undergraduate

MGT322 - Supply Chain Management

Overview

Course Subject Code	Course Number
MGT	322

Department
Management

Course Description
Supply chain management for service and manufacturing companies. Covers flow of goods and services through relationships with business customers, suppliers and partners. Students learn how to manage strategic, operational and tactical planning using best known practices and efficient use of information systems. Evaluate and design effective supply chains.

Academic Level (Course Level)
Undergraduate

MGT323 - Logistics Management

Overview

Course Subject Code	Course Number
MGT	323

Department
Management

Course Description

Approaches to warehousing practices and distribution of goods and services across the supply chain. Logistics justification and decisions. Procurement, packaging, handling, transport and ownership arrangements. Relationship management, sustainability and risk assessment

Academic Level (Course Level)
Undergraduate

MGT335 - Project Management

Overview

Course Subject Code	Course Number
MGT	335

Department
Management

Course Description

Includes project planning, risk assessment, scheduling, budgeting, and controls using tools such as Microsoft Project & Critical Path Method. This class will prepare students for a capstone experience, with project identification, proposal, charter & project plan.

Academic Level (Course Level)
Undergraduate

MGT345 - Engineering Economy

Overview

Course Subject Code	Course Number
MGT	345

Department
Management

Course Description

Capital expenditure, economic life and replacement analysis based on net present value, periodic costs, internal and incremental rates of return. Coverage of compound interest, value flows, economic equivalencies, depreciation, taxes and inflation.

Academic Level (Course Level)
Undergraduate

MGT407 - Seminar

Overview

Course Subject Code	Course Number
MGT	407

Department
Management

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MGT421 - Agile Quality Management

Overview

Course Subject Code	Course Number
MGT	421

Department
Management

Course Description

Agile principles and practices applied to quality management in both manufacturing and service industries are introduced. Emphasis is on adaptive planning, early delivery, and continuous improvement. Students will use Agile methodologies to solve quality problems and will apply basic statistical techniques to ensure quality performance.

Academic Level (Course Level)
Undergraduate

MGT422 - Materials Management

Overview

Course Subject Code	Course Number
MGT	422

Department
Management

Course Description

Approaches to materials management common to production and service industries. Demand forecasting, inventory management, scheduling, requirements planning and capacity planning using qualitative and quantitative methods. Application of computing systems in materials management processes.

Academic Level (Course Level)
Undergraduate

MGT423 - Enterprise Resource Planning

Overview

Course Subject Code	Course Number
MGT	423

Department
Management

Course Description

Fundamentals of enterprise resource planning (ERP) systems concepts, and the importance of integrated information systems in an organization. The focus of this course is on managing procurement, production, customer relationships, supply chain, and sales business processes using ERP software.

Academic Level (Course Level)
Undergraduate

MGT461 - Lean/Six Sigma Management I

Overview

Course Subject Code	Course Number
MGT	461

Department
Management

Course Description

Lean thinking as applied to production and service operations. Kaizen, kaikaku, pull production and systems, value stream mapping and analysis. Standardized work charts and combination tables to streamline work content and achieve flow. Identifying sources of muda and its elimination.

Academic Level (Course Level)
Undergraduate

MGT462 - Lean/Six Sigma Management II

Overview

Course Subject Code	Course Number
MGT	462

Department
Management

Course Description

Overview course of Six Sigma management roles, responsibilities and terminology. Students will understand the tools and the phases of the DMAIC model and explore business cases to understand how Six Sigma techniques are applied to business.

Academic Level (Course Level)
Undergraduate

MGT463 - Lean/Six Sigma Management III

Overview

Course Subject Code	Course Number
MGT	463

Department
Management

Course Description

Deployment and management of Lean Six Sigma within the enterprise. Planning and assessment of deployment sustainability, infrastructure, success factors and metrics that describe the value proposition associated with institutionalizing large strategic initiatives such as Lean Six Sigma.

Academic Level (Course Level)
Undergraduate

MGT507 - Seminar

Overview

Course Subject Code	Course Number
MGT	507

Department
Management

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)
Graduate

MGT561 - Lean Six Sigma Management I

Overview

Course Subject Code	Course Number
MGT	561

Department
Management

Course Description

In this course students deep dive into Lean thinking, covering concepts like Kaizen, Kanban, 5S, and value stream mapping to streamline operations and eliminate waste.

Academic Level (Course Level)
Graduate

MGT562 - Lean Six Sigma Management II

Overview

Course Subject Code	Course Number
MGT	562

Department
Management

Course Description

In this course students learn about the application of Lean and Six Sigma statistical methodologies to real-world business problems, emphasizing continuous improvement and operational excellence.

Academic Level (Course Level)
Graduate

MGT563 - Lean Six Sigma Management III

Overview

Course Subject Code	Course Number
MGT	563

Department
Management

Course Description

In this course students learn about the advanced Lean and Six Sigma methodologies, systems thinking, and practical application through simulated projects. Emphasis on creating and maintaining a Lean Six Sigma culture.

Academic Level (Course Level)
Graduate

MIS102 - Spreadsheet Software Lab

Overview

Course Subject Code	Course Number
MIS	102

Department
Management

Course Description

Spreadsheet lab using Microsoft Excel software. Includes creating worksheets, charts, formulas, functions, what-if analysis, sorting, multiple worksheets, workbooks, templates, pivot tables and importing of data.

Academic Level (Course Level)
Undergraduate

MIS113 - Intro to Database Systems

Overview

Course Subject Code	Course Number
MIS	113

Department
Management

Course Description

Introduces concepts of desktop computer-based database systems. Topics include database management issues, database design, creating and maintaining a database, normalization, table structures, and creating user queries, reports, and forms. Basic database security is discussed.

Academic Level (Course Level)
Undergraduate

MIS206 - Intro to Mgmt Info Sys

Overview

Course Subject Code	Course Number
MIS	206

Department
Management

Course Description

Introduction to key components in information systems. Identification of major hardware components and primary categories of software applications. Data resource management concepts; elements of how information systems work to support problem solving and business opportunities. Ethics of information systems usage.

Academic Level (Course Level)
Undergraduate

MIS375 - Decision Support Systems

Overview

Course Subject Code	Course Number
MIS	375

Department
Management

Course Description

Use of personal computer application programs for analysis and reporting, problem solving, and decision assistance. Junior standing required.

Academic Level (Course Level)
Undergraduate

Manufacturing & Mechanical Eng Department

Shawn Duan, *Department Chair*

Professors: D. Culler, Y. Gao, B. Moravec, M. Saber, C. Stover, W. Sun

Associate Professors: W. Abrous, I. Demeshko-Prosnik, P. Geng, S. Sloan

Assistant Professors: A. Budiman, M. Lee

Instructors: S. Lemery,

Degrees Offered

- Master of Science in Manufacturing Engineering Technology
- Bachelor of Science in Manufacturing Engineering Technology
- Bachelor of Science in Mechanical Engineering
- Bachelor of Science in Mechanical Engineering Technology

Manufacturing Engineering Technology

Degrees Offered

- Master of Science in Manufacturing Engineering Technology
- Bachelor of Science in Manufacturing Engineering Technology

Program Mission Statement

The Manufacturing Engineering Technology Program at Oregon Institute of Technology is an applied engineering technology program. Its mission is to provide graduates with the skills and knowledge for successful careers in Manufacturing Engineering Technology.

Program Learning Outcomes

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. an ability to function effectively as a member as well as a leader on technical teams

Career Opportunities

Manufacturing Engineering Technology graduates will find a wide range of opportunities for employment in manufacturing design, research and development, testing, educational institutions, consulting and business. Manufacturing Engineering Technology also prepares students for further study in graduate school. In today's engineering environment, manufacturing engineers are often called upon to perform a wide range of tasks, from designing and purchasing manufacturing equipment to improving and troubleshooting the manufacturing process. Manufacturing engineers are involved in the design and continuous improvement of products, manufacturing equipment and production tooling. The Manufacturing Engineering Technology curriculum provides education in a variety of areas including manufacturing process, robotics and automation, industrial controls, manufacturing tool design, computer aided design and manufacturing, engineering materials, manufacturing planning and quality control. Technical Electives allow the student flexibility in developing technical breadth or focus in their areas of interest.

Bachelor Program Objectives

The objective of the Manufacturing Engineering Technology undergraduate program is to offer the student a quality education that provides the greatest possible opportunity for rewarding and successful careers. This includes practical training and technical education in engineering, manufacturing processes, and manufacturing equipment as well as supplemental coursework in business, communications, mathematics, science, and social science.

Master Program Objectives

The objective of the graduate program in Manufacturing Engineering Technology is to offer students an advanced manufacturing education that will help them to be successful in their professional career. This includes the theoretical and practical training in manufacturing systems, design for manufacturability, development of lean enterprise, quality engineering, computer-aided manufacturing, project management and information systems. The master's degree is also available online to students meeting the admission requirements for the program. There are no residency requirements for this degree.

Student Preparation

Students planning to enter the Manufacturing Engineering Technology Program are strongly encouraged to take mathematics and science training in high school. In addition, courses such as CAD, computer skills, and industrial arts will prove beneficial.

Note: The Manufacturing and Mechanical Engineering and Technology Department is a laptop-required department with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/byod>.

Cooperative Education Program

Students in the Bachelor of Science degree program have an opportunity to work in industry for a specified time and receive college credit. They are encouraged to meet with the Manufacturing Engineering Technology Department Chair. Manufacturing Engineering Technology students at both the Klamath Falls and Portland-Metro campuses have the opportunity to participate in the state-wide MECOP internship program. For information, see the following Web site: <https://mecopinc.org>.

Accreditation

The Bachelor of Science in Manufacturing Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Mechanical Engineering

Degree Offered

- Bachelor of Science in Mechanical Engineering

Program Mission Statement

The Mechanical Engineering Bachelor of Science at Oregon Institute of Technology is an engineering program. Its mission is to provide graduates with the hands-on skills and academic knowledge for successful careers in mechanical engineering or related fields.

Program Learning Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Career Opportunities

Mechanical Engineering is the broadest branch of engineering providing graduates the ability to pursue many varied career paths. It encompasses a wide variety of specialties including alternative energy, mechanical design, thermal/fluids/heat transfer, and mechatronics to name a few. Graduates will find a wide range of opportunities for employment in design, research and development, testing, manufacturing, government agencies, educational institutions, consulting and business. The Mechanical Engineering degree also prepares the student for further study in graduate school.

Objectives of the Program

The Mechanical Engineering Program at Oregon Institute of Technology provides an excellent theoretical and applied or hands on engineering education. The program provides graduates with a foundation in fundamentals, applications, design, project management, communications, and professional and ethical responsibility.

The program offers coursework in all of the above areas beginning with mathematics, science, machining, and computer aided design topics in the freshman year. Engineering science and physics courses are typically taken by the student in the sophomore year. Junior and senior curriculum is devoted to analysis, design, and testing aspects of mechanical engineering. Technical electives are available for students to pursue their particular fields of interest.

Throughout the four-year curriculum, emphasis is placed on oral and written communication skills, teamwork, and hands on laboratory and project work. Graduates are well-rounded engineers and readily accepted into industry or graduate programs.

Student Preparation

Students planning to enter the Mechanical Engineering curriculum should undertake Mathematics/science training in high school. Such courses as algebra, trigonometry, calculus, physics, chemistry, drafting, CAD, writing, speech, and shop classes will prove beneficial.

Note: The Manufacturing and Mechanical Engineering and Technology Department is a laptop-required department with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/byod>.

Cooperative Field Experience

There is an opportunity for students in the Bachelor of Science degree program to work in industry for a specified time and receive college credit. Those interested in such an opportunity are encouraged to work out the details with the Mechanical Engineering Department Chair. Mechanical Engineering students at the Klamath Falls campus have the opportunity to participate in the state-wide MECOP internship program. For information, see the following Web site: <https://mecopinc.org>.

Accreditation

The Bachelor of Science in Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Mechanical Engineering Technology

Degree Offered

- Bachelor of Science in Mechanical Engineering Technology

Program Mission Statement

The Mechanical Engineering Technology Program at Oregon Institute of Technology is an applied engineering technology program. Its mission is to provide graduates with the skills and knowledge for successful careers in mechanical engineering and manufacturing engineering.

Program Learning Outcomes

1. an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
2. an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
3. an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
5. an ability to function effectively as a member as well as a leader on technical teams.

Career Opportunities

Mechanical Engineering Technology graduates find a wide range of opportunities for employment in design, research and development, testing, manufacturing, government agencies, educational institutions, consulting and business. The largest number of graduates are employed by manufacturing firms. There, the graduates may develop new products, improve existing products, modify existing products for easier manufacture, or develop equipment for use in the production process. The work done by Mechanical Engineering Technologists varies widely. Interfacing computers and machines is a rapidly growing area of employment. This involvement with robotics and automation is having an impact on most mechanical systems. New materials such as high strength ceramics and polymers, fiber reinforced plastics, and new bonding agents are growing in importance and their applications will offer many interesting and fulfilling careers. Energy systems become increasingly important

as energy costs rise. Aerospace firms employ many Oregon Tech graduates in design, testing, and manufacturing. Careers in such traditional areas as power plants, heating and cooling systems, gas and steam turbines, and automotive systems are within the domain for the Mechanical Engineering Technologist.

Objectives of the Program

The objective of the Mechanical Engineering Technology Program is to ensure that graduates of this curriculum acquire competency in those theoretical, applied engineering and practical subjects necessary to become successful in their careers. The program strives to maintain a reputation for academic standards that will assure graduates a welcome by prospective employers.

Student Preparation

Students planning to enter the Mechanical Engineering Technology curriculum should undertake mathematics-science training in high school. Such courses as algebra, geometry, trigonometry, physics, chemistry, drafting, CAD, English, writing, speech, and shop classes will prove beneficial.

Note: The Manufacturing and Mechanical Engineering and Technology Department is a laptop-required department with resources like laptop specifications, financial aid, and helpful instructions found at <http://www.oit.edu/byod>.

Cooperative Field Experience

There is an opportunity for students in the Bachelor of Science degree program to work in industry for a specified time and receive college credit. Those interested in such an opportunity are encouraged to work out the details with the Mechanical Engineering Technology program director. MET students at both the Klamath Falls and the Portland-Metro campuses have the opportunity to participate in the state-wide MECOP internship program. For information, see the following Web site: <https://mecopinc.org>.

Accreditation

The Bachelor of Science in Mechanical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Programs

Mechanical Engineering Technology/ Manufacturing Engineering Technology, BS

Overview

Program Long Title

Dual Mech Eng/MFG Eng Tech

Program Title

Dual Mech Eng/MFG Eng Tech

Department(s)

Manufacturing & Mechanical Eng

Degree Designation

BS

Program Level

UG

CIP Code

141901

Mechanical Engineering Technology/
Manufacturing Engineering Technology, BS

Overview

Program Long Title
Dual Mech Eng Tech/MFG Eng Tec

Program Title
Dual Mech Eng Tech/MFG Eng Tec

Department(s)
Manufacturing & Mechanical Eng

Degree Designation
BS

Program Level CIP Code
UG 150805

Degree Maps

Degree Map Name

Advising Guide - Dual Mech Eng Tech/MFG Eng Tec

Total Degree Map Credits

46

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

The Mechanical and Manufacturing Engineering Technology Department provides the opportunity for the interested student to earn concurrent degrees in Manufacturing Engineering Technology (MFG) and Mechanical Engineering Technology (MET) or Mechanical Engineering (MECH). Students who earn both degrees are highly sought after and have been very successful in industry. The concurrent degree program usually requires the student to complete an additional year of study beyond the Bachelor's Degree in Mechanical Engineering or Mechanical Engineering Technology.

Notes:

1. Manufacturing Electives - These courses must be different than those used to satisfy the BS degree in MET or MECH. In all cases the student must have at least 36 credits of additional coursework beyond the MET or MECH degree to qualify for the concurrent degree in MFG

Year	Semester	Actual Credits	Progress Credits
Fifth Year	Fall	15	0

Requirement Select

- MFG313 - Mfg Analysis & Planning

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 3
Clinical -
Criticality No

Requirement Select

- MFG341 - Numerical Control Prog (Inactive)

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 0 - 5
Clinical -
Criticality No

Requirement Select

- MFG453 - Automation & Robotics

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 0 - 5
Clinical -
Criticality No

Requirement Select

- BUS226 - Business Law (Inactive)
OR
- BUS304 - Engineering Management
OR
- BUS335 - Innov. & Entrepreneurship II
OR
- MGT321 - Operations Management
OR
- MGT461 - Lean/Six Sigma Management I
OR
- MGT462 - Lean/Six Sigma Management II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Manufacturing Elective Credit
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Fifth Year	Winter	16	0

Requirement Select

- MFG112 - Intro to Mfg Processes

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MFG333 - Stat Methods Qual/Improv

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MFG342 - Computer Aided Machining (Inactive)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG343 - Manufacturing Tool Dsgn

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MATH362 - Statistical Methods II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Fifth Year	Spring	15	0

Requirement Select

- ENGR415 - Occupational Safety

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG331 - Industrial Controls

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG344 - Dsgn of Mfg Tooling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG447 - Lean Manufacturing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Manufacturing Elective Credit
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Manufacturing Engineering Technology, BS

Overview

Program Long Title
Manufacturing Engineering Tech

Program Title
Manufacturing Engineering Tech

Department(s)
Manufacturing & Mechanical Eng

Degree Designation
BS

Program Level
UG

CIP Code
150613

Degree Maps

Degree Map Name
Advising Guide - Manufacturing Engineering Tech

Total Degree Map Credits
177 - 181

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
The Bachelor of Science in Manufacturing Engineering Technology requires completing 180 credit hours, as prescribed in the following curriculum outline. Several of these courses are titled manufacturing elective, and allow the student some flexibility to pursue specific career objectives within the manufacturing engineering field. Upper-division manufacturing engineering technology courses not specifically required for graduation, as well as selected upper-division mechanical engineering technology courses and other approved courses, may be used as manufacturing electives. Students should contact their advisor for specific details as to which courses qualify as manufacturing electives.

MECH 221, 222, 223 may be taken (as an entire sequence) to satisfy the MECH 221 and 213 requirements.

Consult with an academic advisor or program director regarding available and appropriate MFG elective courses. Certain ENGR, MECH, and MET upper-division courses not already required for the program are also acceptable.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 1
Progress Credits -
Contact Hours 1
Clinical -
Criticality No

Requirement Select

- MECH111 - MMET Orientation

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 0 - 5
Clinical -
Criticality No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 4
Clinical -
Criticality No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- CHE201 - General Chemistry I
- **AND** CHE204 - General Chemistry I Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MET241 - CAD for Mechanical Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MFG120 - Intro Machining Proc

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	13	0

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MET242 - CAD for Mechanical Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH260 - Engineering Materials I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG314 - Geom Dimension/Tolerance

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MECH211 - Engineering Mechanics:Statics

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- MFG112 - Intro to Mfg Processes

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select

- MECH213 - Engineering Mechanics:Material

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH266 - Engineering Computation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH236 - Fund of Elec Circuits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	18	0

Requirement Select

- MECH315 - Machine Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH326 - Electric Power Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MECH360 - Engineering Materials II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MET375 - Solid Modeling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG271 - Numerical Control Prog

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	5
Clinical	-
Criticality	No

Requirement Select

- MFG313 - Mfg Analysis & Planning

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- MECH316 - Machine Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH363 - Engineering Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG272 - Computer Aided Machining

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	5
Clinical	-
Criticality	No

Requirement Select

- MFG333 - Stat Methods Qual/Improv

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MFG343 - Manufacturing Tool Dsgn

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	17 - 18	0

Requirement Select

- MFG331 - Industrial Controls

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG344 - Dsgn of Mfg Tooling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved MFG Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- ENGR212 - Engineering Mech: Dynamics
- OR**
- ENGR355 - Thermodynamics
- OR**
- MECH318 - Fluid Mechanics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- MECH490 - Senior Project I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG453 - Automation & Robotics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG454 - Thermal Manufacturing Process

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	12	0

Requirement Select

- MECH491 - Senior Projects II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved MFG Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12 - 15	0

Requirement Select

- MECH415 - Occupational Safety

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

0 - 3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- MECH426 - Fluid Power Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- MECH492 - Senior Project III

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- MFG447 - Lean Manufacturing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits
- OR
- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Mechanical Engineering, BS

Overview

Program Long Title
Mechanical Engineering

Program Title
Mechanical Engineering

Department(s)
Manufacturing & Mechanical Eng

Degree Designation
BS

Program Level
UG

CIP Code
141901

Degree Maps

Degree Map Name
Advising Guide - Mechanical Engineering

Total Degree Map Credits
180

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
Notes

1.

Select 9 credits of Humanities electives and 12 credits of Social Science electives.

2.

MATH 111Z and MATH 112Z should be taken if needed to adequately prepare for MATH 251. Any credits earned from these courses **do not** apply to the degree program. Consult with an academic advisor for further guidance

3.

Consult with an academic advisor or program director regarding available and appropriate MECH elective courses. MFG and MET electives **are not** acceptable.

4.

MECH 221, MECH 222, MECH 223 may be alternatively taken (as an entire sequence) to satisfy the MECH 211 and MECH 213 requirements

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	15	0

- Requirement Select
- CHE201 - General Chemistry I
 - AND** CHE204 - General Chemistry I Lab

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 3 - 6
Clinical -
Criticality No

- Requirement Select
- WRI121Z - Composition I

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 4
Clinical -
Criticality No

- Requirement Select
- Humanities Elective Credits
 - OR**
 - Social Science Elective Credits

Course Requirement Group
Course Requirement Group -
(Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours -
Clinical -
Criticality No

Requirement Select

- MATH111Z College Algebra (if suggested by advisor)
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MECH111 - MMET Orientation

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- CHE201 - General Chemistry I
- AND CHE204 - General Chemistry I Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR
- Social Science Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MATH112Z Precalculus II: Trig (if suggested by advisor)
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	-
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	13	0

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MFG120 - Intro Machining Proc

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- MET241 - CAD for Mechanical Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH260 - Engineering Materials I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MET242 - CAD for Mechanical Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH211 - Engineering Mechanics:Statics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MFG314 - Geom Dimension/Tolerance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH213 - Engineering Mechanics:Material

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH266 - Engineering Computation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MECH236 - Fund of Elec Circuits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	18	0

Requirement Select

- MATH341 - Linear Algebra I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH318 - Fluid Mechanics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH363 - Engineering Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MET375 - Solid Modeling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR**
- MATH465 - Mathematical Statistics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	18	0

Requirement Select	
• MECH212 - Engineering Mechanics:Dynamics	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MECH315 - Machine Design I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MECH326 - Electric Power Systems	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• MECH355 - Thermodynamics	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MECH360 - Engineering Materials II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• SPE321 - Small Group/Team Communication	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	12	0

Requirement Select

- MECH313 - Thermodynamics II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH316 - Machine Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved MECH Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- MECH323 - Heat Transfer I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH351 - Finite Element Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• MECH490 - Senior Project I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• WRI327 - Advanced Tech Writing	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MECH417 - Fluid Mechanics II	
OR	
• MECH418 - Fluid Mechanics II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	13	0

Requirement Select	
• MECH437 - Heat Transfer II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• MECH480 - Mechanical Vibrations	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• MECH491 - Senior Projects II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

OR

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours -

Clinical -

Criticality No

Requirement Select

- Advisor Approved MECH Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 2

Progress Credits -

Contact Hours -

Clinical -

Criticality No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	12	0

Requirement Select

- MECH436 - Classical Control Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 0 - 5

Clinical -

Criticality No

Requirement Select

- MECH492 - Senior Project III

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 0 - 5

Clinical -

Criticality No

Requirement Select

- Humanities Elective Credits

OR

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours -

Clinical -

Criticality No

Requirement Select

- Advisor Approved MECH Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours -

Clinical -

Criticality No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Mechanical Engineering Technology, BS

Overview

Program Long Title
Mechanical Engineering Tech

Program Title
Mechanical Engineering Tech

Department(s)
Manufacturing & Mechanical Eng

Degree Designation
BS

Program Level CIP Code
UG 150805

Degree Maps

Degree Map Name
Advising Guide - Mechanical Engineering Tech
Total Degree Map Credits
180
Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- ACAD110 - ETM Freshman Seminar

Course Requirement Group
Course Requirement Group - (Free Text)
Minimum Grade -
Area -
Actual Credits 1
Progress Credits -
Contact Hours 1
Clinical -
Criticality No

Requirement Select

- MECH111 - MMET Orientation

Course Requirement Group
Course Requirement Group - (Free Text)
Minimum Grade -
Area -
Actual Credits 3
Progress Credits -
Contact Hours 0 - 5
Clinical -
Criticality No

Requirement Select

- CHE201 - General Chemistry I
- AND CHE204 - General Chemistry I Lab

Course Requirement Group
Course Requirement Group - (Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 3 - 6
Clinical -
Criticality No

Requirement Select

- MATH111Z - Precalculus I: Functions

Course Requirement Group
Course Requirement Group - (Free Text)
Minimum Grade -
Area -
Actual Credits 4
Progress Credits -
Contact Hours 4
Clinical -
Criticality No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MFG120 - Intro Machining Proc

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	14	0

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH260 - Engineering Materials I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MET241 - CAD for Mechanical Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	17	0

Requirement Select

- MECH211 - Engineering Mechanics:Statics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MET242 - CAD for Mechanical Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MFG112 - Intro to Mfg Processes

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH254 - Vector Calculus I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	15	0

Requirement Select

- MECH213 - Engineering Mechanics:Material

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH266 - Engineering Computation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- MECH315 - Machine Design I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH355 - Thermodynamics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH360 - Engineering Materials II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MET375 - Solid Modeling

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MECH236 - Fund of Elec Circuits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- MECH212 - Engineering Mechanics:Dynamics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH316 - Machine Design II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH318 - Fluid Mechanics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MECH363 - Engineering Instrumentation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	13	0

Requirement Select

- MATH321 - Appl Diff Equation I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MECH313 - Thermodynamics II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH351 - Finite Element Analysis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MFG314 - Geom Dimension/Tolerance

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- MECH323 - Heat Transfer I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MECH326 - Electric Power Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- MECH490 - Senior Project I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits
- OR**
- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved MET Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- MECH437 - Heat Transfer II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- MECH491 - Senior Projects II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

• WRI327 - Advanced Tech Writing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

OR

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Advisor Approved MET Elective

(Generic)

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

• MECH426 - Fluid Power Systems

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

• MECH492 - Senior Project III

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

• MFG331 - Industrial Controls

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Overview

Manufacturing Engineering Tech

Manufacturing Engineering Tech

Manufacturing & Mechanical Eng

MS

GR

150613

Courses

MECH107 - Seminar

Overview

Course Subject Code	Course Number
MECH	107

Department
Manufacturing & Mechanical Eng

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MECH111 - MMET Orientation

Overview

Course Subject Code	Course Number
MECH	111

Department
Manufacturing & Mechanical Eng

Course Description
Topics include: survey of the engineering profession, educational and professional development, standards of practice; engineering information, calculations, and analysis. An engineering design project will be incorporated. This course provides knowledge and skills to engineering students which will benefit their future academic and professional endeavors.

Academic Level (Course Level)
Undergraduate

MECH207 - Seminar

Overview

Course Subject Code	Course Number
MECH	207

Department
Manufacturing & Mechanical Eng

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

MECH211 - Engineering Mechanics:Statics

Overview

Course Subject Code	Course Number
MECH	211

Department
Manufacturing & Mechanical Eng

Course Description
Fundamental principles of mechanics of rigid bodies and the application of these principles to engineering problems.

Academic Level (Course Level)
Undergraduate

MECH212 - Engineering Mechanics:Dynamics

Overview

Course Subject Code	Course Number
MECH	212

Department
Manufacturing & Mechanical Eng

Course Description
Kinematics of particles and rigid bodies. Kinetics of particles and rigid bodies in plane motion, including Newton's second law, work and energy, and impulse and momentum.

Academic Level (Course Level)
Undergraduate

MECH213 - Engineering Mechanics:Material

Overview

Course Subject Code	Course Number
MECH	213

Department
Manufacturing & Mechanical Eng

Course Description
Internal stresses and deformations of structural members and machines when subjected to external forces.

Academic Level (Course Level)
Undergraduate

MECH221 - Statics

Overview

Course Subject Code	Course Number
MECH	221

Department

Manufacturing & Mechanical Eng

Course Description

Fundamental principles of mechanics of rigid bodies and the application of these principles to engineering problems.

Academic Level (Course Level)

Undergraduate

MECH222 - Strength of Materials I

Overview

Course Subject Code	Course Number
MECH	222

Department

Manufacturing & Mechanical Eng

Course Description

Internal stresses and deformations of structural members and machines when subjected to external forces.

Academic Level (Course Level)

Undergraduate

MECH223 - Strength of Materials II

Overview

Course Subject Code	Course Number
MECH	223

Department

Manufacturing & Mechanical Eng

Course Description

Internal stresses and deformations of structural members and machines when subjected to external forces. Analysis of stress in pressure vessels and column buckling.

Academic Level (Course Level)

Undergraduate

MECH236 - Fund of Elec Circuits

Overview

Course Subject Code	Course Number
MECH	236

Department

Manufacturing & Mechanical Eng

Course Description

Resistive circuits, operational amplifiers, capacitors, inductors, transient analysis, sine waves, AC circuit analysis, resonance, transformers. Not for Electronics Engineering Technology and Computer Engineering Technology students.

Academic Level (Course Level)

Undergraduate

MECH260 - Engineering Materials I

Overview

Course Subject Code	Course Number
MECH	260

Department

Manufacturing & Mechanical Eng

Course Description

Survey of materials with emphasis on metals and metal alloys used in industry; their physical and chemical properties as related to structure, corrosion, and engineering applications. Diffusion mechanisms and binary phase diagrams are also examined. Tensile, impact, and fatigue failure of metallic materials. Laboratory included.

Academic Level (Course Level)

Undergraduate

MECH266 - Engineering Computation

Overview

Course Subject Code	Course Number
MECH	266

Department

Manufacturing & Mechanical Eng

Course Description

Programming and problem solving using current computer software. General programming techniques using conditional statements, looping, subroutines, and data input/output will be stressed. Consideration of features specific to the software being used will also be presented.

Academic Level (Course Level)

Undergraduate

MECH307 - Seminar

Overview

Course Subject Code	Course Number
MECH	307

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MECH313 - Thermodynamics II

Overview

Course Subject Code	Course Number
MECH	313

Department

Manufacturing & Mechanical Eng

Course Description

Application of laws and principles of thermodynamics to real thermodynamic cycles. Teaches analysis of performance and design of internal and external combustion engines, steam generators, heat pumps, compressors, and refrigeration machinery.

Academic Level (Course Level)

Undergraduate

MECH315 - Machine Design I

Overview

Course Subject Code	Course Number
MECH	315

Department

Manufacturing & Mechanical Eng

Course Description

Study of stress and fatigue analysis as applied to machine elements.

Academic Level (Course Level)

Undergraduate

MECH316 - Machine Design II

Overview

Course Subject Code	Course Number
MECH	316

Department

Manufacturing & Mechanical Eng

Course Description

A study of power transmission systems components, selection, and application to power transmission systems. Special consideration is given to the dynamic characteristics of the systems.

Academic Level (Course Level)

Undergraduate

MECH318 - Fluid Mechanics I

Overview

Course Subject Code	Course Number
MECH	318

Department

Manufacturing & Mechanical Eng

Course Description

Covers fluid properties, fluid statics, conservation laws, pipe flow, drag, lift fluid dynamics, measurement of flow, viscous flow, laminar, and turbulent flow, and forces due to fluid motion.

Academic Level (Course Level)

Undergraduate

MECH323 - Heat Transfer I

Overview

Course Subject Code	Course Number
MECH	323

Department

Manufacturing & Mechanical Eng

Course Description

An introduction to the three modes of heat transfer, conduction, convection, and radiation. Teaches the analytical and empirical techniques used for solving problems in heat transfer, including those for which computer application is most suited.

Academic Level (Course Level)

Undergraduate

MECH326 - Electric Power Systems

Overview

Course Subject Code	Course Number
MECH	326

Department

Manufacturing & Mechanical Eng

Course Description

Study related to theory and application of industrial electric power systems. Topics covered include transformers, motors, generators, motor controls, and protective devices.

Academic Level (Course Level)

Undergraduate

MECH351 - Finite Element Analysis

Overview

Course Subject Code	Course Number
MECH	351

Department

Manufacturing & Mechanical Eng

Course Description

This course is an introduction to the use of finite analysis (FEA) in the solution of mechanical engineering problems. Existing FEA computer codes are used.

Academic Level (Course Level)

Undergraduate

MECH355 - Thermodynamics

Overview

Course Subject Code	Course Number
MECH	355

Department

Manufacturing & Mechanical Eng

Course Description

An introductory course in thermodynamics, the science of heat energy conversion. Develops understanding of energy, heat, work, efficiency, and ideal thermodynamic cycles. Teaches first and second laws of thermodynamics and perfect gas law.

Academic Level (Course Level)

Undergraduate

MECH360 - Engineering Materials II

Overview

Course Subject Code	Course Number
MECH	360

Department

Manufacturing & Mechanical Eng

Course Description

This course builds upon the concepts introduced in MECH 260 Engineering Materials I, adopting a more theoretical approach. It explores the fundamental principles of the Processing–Microstructure–Properties relationship in engineering materials. The course emphasizes the characteristics, processing methods, applications, and failure mechanisms of engineering materials, including metals, ceramics, polymers, and composites.

Academic Level (Course Level)

Undergraduate

MECH363 - Engineering Instrumentation

Overview

Course Subject Code	Course Number
MECH	363

Department

Manufacturing & Mechanical Eng

Course Description

Study of measurement techniques and equipment used in mechanical engineering. Instrumentation for measurements in mechanics, thermodynamics, fluid dynamics, and electrical systems are considered. Methods of calibration, correction, and data reduction are presented.

Academic Level (Course Level)

Undergraduate

MECH404 - Co-op Field Practice

Overview

Course Subject Code	Course Number
MECH	404

Department

Manufacturing & Mechanical Eng

Course Description

(Terms and hours to be arranged with approval of the curriculum coordinator.) An approved work program related to the student's field of specialization for a continuous three-month period. The employer and the type, level, and difficulty of the particular job must be approved prior to the employment period. A written comprehensive report must be submitted during the following term of residence.

Academic Level (Course Level)

Undergraduate

MECH405 - Reading and Conference

Overview

Course Subject Code	Course Number
MECH	405

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MECH407 - Seminar

Overview

Course Subject Code	Course Number
MECH	407

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MECH415 - Occupational Safety

Overview

Course Subject Code	Course Number
MECH	415

Department

Manufacturing & Mechanical Eng

Course Description

This course involves using material from prior course work in individual student projects.

Academic Level (Course Level)

Undergraduate

MECH417 - Fluid Mechanics II

Overview

Course Subject Code	Course Number
MECH	417

Department

Manufacturing & Mechanical Eng

Course Description

Fluid Kinematics, differential analysis, similitude and modeling, and compressible flow. Computational fluid dynamics is introduced. An alternative to MECH 418. MECH 417 covers less topics/theory but does include a laboratory session.

Academic Level (Course Level)

Undergraduate

MECH418 - Fluid Mechanics II

Overview

Course Subject Code	Course Number
MECH	418

Department

Manufacturing & Mechanical Eng

Course Description

A continuation of the study of the principles and applications of fluids in engineering, including: fluid kinematics, dimensional analysis and modeling, differential analysis of fluid flow, Navier-Stokes equations, compressible flow, open-channel flow, and turbomachinery. An alternative to MECH 417. MECH 418 covers more topics/theory but does not include a laboratory session.

Academic Level (Course Level)

Undergraduate

MECH421 - Intro to Wind Tunnels

Overview

Course Subject Code	Course Number
MECH	421

Department

Manufacturing & Mechanical Eng

Course Description

An introductory course on the experimental techniques used in wind tunnel testing of aerodynamic shapes. Includes operating characteristics of wind tunnels, the characteristics of and use of models and model instrumentation, and the development of analytical techniques for reduction of wind tunnel data.

Academic Level (Course Level)

Undergraduate

MECH426 - Fluid Power Systems

Overview

Course Subject Code	Course Number
MECH	426

Department

Manufacturing & Mechanical Eng

Course Description

A mechanical approach to industrial hydraulic applications with emphasis on selection and function of hardware and interfacing of hydraulic systems with mechanical, fluidic, and electrical/electronic controls.

Academic Level (Course Level)

Undergraduate

MECH433 - HVAC

Overview

Course Subject Code	Course Number
MECH	433

Department

Manufacturing & Mechanical Eng

Course Description

Heating, ventilation, and air conditioning. Application of laws and principles of thermodynamics to analysis, design, and control of mechanically controlled environments for human comfort, animal health, and food preservation. Teaches computation of heating and cooling loads, humidity control, heating, and refrigeration.

Academic Level (Course Level)

Undergraduate

MECH436 - Classical Control Systems

Overview

Course Subject Code	Course Number
MECH	436

Department

Manufacturing & Mechanical Eng

Course Description

Introduction to control systems. Both classic-control theory and programmable logic controllers. Topics include block diagrams, mathematical models, transfer functions, LaPlace transforms, frequency response along with control components and PLC programming.

Academic Level (Course Level)

Undergraduate

MECH437 - Heat Transfer II

Overview

Course Subject Code	Course Number
MECH	437

Department

Manufacturing & Mechanical Eng

Course Description

A study of experimental heat transfer. Methods and instrumentation used for investigating heat transfer systems will be considered. Laboratory investigations include studies of heat exchangers, forced and free convection experiments, and determination of radiation and convection coefficients.

Academic Level (Course Level)

Undergraduate

MECH475 - Parametric Modeling

Overview

Course Subject Code	Course Number
MECH	475

Department

Manufacturing & Mechanical Eng

Course Description

Introduces feature-based parametric solid modeling techniques as applied to Mechanical Design. Emphasizes the concepts and practices of parametric modeling from the user's perspective. Theoretical and developmental backgrounds are also covered.

Academic Level (Course Level)

Undergraduate

MECH480 - Mechanical Vibrations

Overview

Course Subject Code	Course Number
MECH	480

Department

Manufacturing & Mechanical Eng

Course Description

An introduction to mechanical vibration. Topics include the equations of motion, resonant frequencies, mode shapes, damping and applications. The laboratory will introduce vibration instrumentation.

Academic Level (Course Level)

Undergraduate

MECH485 - Fund of Engineering Exam Prep

Overview

Course Subject Code	Course Number
MECH	485

Department

Manufacturing & Mechanical Eng

Course Description

A preparation course covering the requirements of, and providing a review for, the NCEES FE exam. Senior standing in major required.

Academic Level (Course Level)

Undergraduate

MECH490 - Senior Project I

Overview

Course Subject Code	Course Number
MECH	490

Department

Manufacturing & Mechanical Eng

Course Description

The first course of a three-term sequence that offers a capstone experience for students in an MMET program. This experience involves the application of knowledge and skills acquired from prior coursework to an engineered system, system optimization, project management, and material related to a group engineering project. This course will be focused on the proposal and planning stages of the project assigned. Senior standing in the BSME program and instructor consent required.

Academic Level (Course Level)

Undergraduate

MECH491 - Senior Projects II

Overview

Course Subject Code	Course Number
MECH	491

Department

Manufacturing & Mechanical Eng

Course Description

The second course of a three-term sequence that offers a capstone experience for students in an MMET program. This experience involves the application of knowledge and skills acquired from prior coursework to an engineered system, system optimization, project management, and material related to a group engineering project. This course will be focused on the design and analysis of the project assigned. Prerequisites: MECH 490 previous term from same instructor or advisor and instructor consent.

Academic Level (Course Level)

Undergraduate

MECH492 - Senior Project III

Overview

Course Subject Code	Course Number
MECH	492

Department

Manufacturing & Mechanical Eng

Course Description

The third course of a three-term sequence that offers a capstone experience for students in an MMET program. This experience involves the application of knowledge and skills acquired from prior coursework to an engineered system, system optimization, project management, and material related to a group engineering project. This course will be focused on the implementation and assessment stages of the project assigned.. Prerequisites: MECH 491 previous term from same instructor or advisor and instructor consent.

Academic Level (Course Level)

Undergraduate

MECH507 - Seminar

Overview

Course Subject Code	Course Number
MECH	507

Department

Manufacturing & Mechanical Eng

Academic Level (Course Level)

Graduate

MET102P - Engineering Drawing II

Overview

Course Subject Code	Course Number
MET	102P

Department

Manufacturing & Mechanical Eng

Academic Level (Course Level)

Undergraduate

MET107 - Seminar

Overview

Course Subject Code	Course Number
MET	107

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MET162P - Materials I Lab

Overview

Course Subject Code	Course Number
MET	162P

Department

Manufacturing & Mechanical Eng

Academic Level (Course Level)

Undergraduate

MET207 - Seminar

Overview

Course Subject Code	Course Number
MET	207

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MET241 - CAD for Mechanical Design I

Overview

Course Subject Code	Course Number
MET	241

Department

Manufacturing & Mechanical Eng

Course Description

Computer aided drafting (CAD) for mechanical design. The focus of this course is the construction of 2-D drawings using current industry software. Topics include construction principles, input schemes, command structures, and data management. Prerequisite: ENGR 111 or Instructor Consent.

Academic Level (Course Level)

Undergraduate

MET242 - CAD for Mechanical Design II

Overview

Course Subject Code	Course Number
MET	242

Department

Manufacturing & Mechanical Eng

Course Description

Computer aided drafting (CAD) for mechanical design. The focus of this course is the construction of drawing sets using current industry software. Topics include detail part drawings, assembly drawings, and an introduction to 3-D drafting.

Academic Level (Course Level)

Undergraduate

MET307 - Seminar

Overview

Course Subject Code	Course Number
MET	307

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MET326 - Electric Power Systems

Overview

Course Subject Code	Course Number
MET	326

Department

Manufacturing & Mechanical Eng

Course Description

Study related to theory and application of industrial electric power systems. Topics covered include transformers, motors, generators, motor controls, and protective devices.

Academic Level (Course Level)

Undergraduate

MET375 - Solid Modeling

Overview

Course Subject Code	Course Number
MET	375

Department

Manufacturing & Mechanical Eng

Course Description

Introduces solid modeling techniques as applied to mechanical design. Topics include extruded and swept shapes, Boolean operations, and other construction techniques.

Academic Level (Course Level)

Undergraduate

MET407 - Seminar

Overview

Course Subject Code	Course Number
MET	407

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MET492 - Senior Projects III

Overview

Course Subject Code	Course Number
MET	492

Department

Manufacturing & Mechanical Eng

Course Description

The third of a three-term comprehensive group design project, focusing on project construction and testing. Prerequisite: MET 491 previous term from same instructor or advisor and instructor consent.

Academic Level (Course Level)

Undergraduate

MFG103 - Intro Welding Proc

Overview

Course Subject Code	Course Number
MFG	103

Department

Manufacturing & Mechanical Eng

Course Description

Applications of welding in modern industry. Topics include: Oxyacetylene welding and cutting, shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, and robotic welding. Prerequisite: Enrolled in any MMET Program or Instructor Consent.

Academic Level (Course Level)

Undergraduate

MFG107 - Seminar

Overview

Course Subject Code	Course Number
MFG	107

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MFG112 - Intro to Mfg Processes

Overview

Course Subject Code	Course Number
MFG	112

Department

Manufacturing & Mechanical Eng

Course Description

A survey of common manufacturing processes, including a history of manufacturing technology. Manufacturing economic considerations. Influence of product design on process selection. Manufacturing taxonomy, surface finish, tolerances, and functional specifications.

Academic Level (Course Level)

Undergraduate

MFG120 - Intro Machining Proc

Overview

Course Subject Code	Course Number
MFG	120

Department

Manufacturing & Mechanical Eng

Course Description

An introductory course in metal removal processes emphasizing drilling, milling, and lathe processes. Included tool bit grinding. Emphasis on production speeds and feeds.

Academic Level (Course Level)

Undergraduate

MFG207 - Seminar

Overview

Course Subject Code	Course Number
MFG	207

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MFG271 - Numerical Control Prog

Overview

Course Subject Code	Course Number
MFG	271

Department

Manufacturing & Mechanical Eng

Course Description

Introduction to manual numerical control programming. Includes interpreting part drawings, process planning, machining setup and sequence. Program debugging and introduction to tool path simulation and computer-aided programming tools.

Academic Level (Course Level)

Undergraduate

MFG272 - Computer Aided Machining

Overview

Course Subject Code	Course Number
MFG	272

Department

Manufacturing & Mechanical Eng

Course Description

Development of CNC machine tool manufacturing programs using computer-aided process planning and advanced CAD/CAM software. Emphasis on analysis and planning required for successful CNC production, development of CAD drawings and solid models for CAM program development, toolpath simulation, and manufacturing engineering issues.

Academic Level (Course Level)

Undergraduate

MFG307 - Seminar

Overview

Course Subject Code	Course Number
MFG	307

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MFG313 - Mfg Analysis & Planning

Overview

Course Subject Code	Course Number
MFG	313

Department

Manufacturing & Mechanical Eng

Course Description

Overview of business analytics, the value of data in decision making through analysis. Students will evaluate data quality, cleansing, statistical interpretation and data visualization. Develop measurement tools and metrics to address key business questions and evaluate implementation.

Academic Level (Course Level)

Undergraduate

MFG314 - Geom Dimension/Tolerance

Overview

Course Subject Code	Course Number
MFG	314

Department

Manufacturing & Mechanical Eng

Course Description

The study and application of ANSI and ISO geometric dimensioning and tolerancing principles and practices relative to product design and manufacturing operations.

Academic Level (Course Level)

Undergraduate

MFG331 - Industrial Controls

Overview

Course Subject Code	Course Number
MFG	331

Department

Manufacturing & Mechanical Eng

Course Description

Fundamentals of control of manufacturing processes. Applications of relay logic, input and output devices, and programmable logic controllers (PLC). Design of complete control circuits, selection of components, and cost estimation. PLC programming for discrete event control and for analog applications.

Academic Level (Course Level)

Undergraduate

MFG333 - Stat Methods Qual/Improv

Overview

Course Subject Code	Course Number
MFG	333

Department

Manufacturing & Mechanical Eng

Course Description

Strategies for continuous manufacturing process improvement. Graphical and numerical methods for data analysis. Methods for manufacturing process control and acceptance criteria.

Academic Level (Course Level)

Undergraduate

MFG343 - Manufacturing Tool Dsgn

Overview

Course Subject Code	Course Number
MFG	343

Department

Manufacturing & Mechanical Eng

Course Description

Fundamentals of jig and fixture design. Locating and clamping methods for manufacturing production. Design of sheet-metal stamping, piecing, and forming tools. Study of the effect of manufacturing machines and production methods on tooling design.

Academic Level (Course Level)

Undergraduate

MFG344 - Dsgn of Mfg Tooling

Overview

Course Subject Code	Course Number
MFG	344

Department

Manufacturing & Mechanical Eng

Course Description

Using material from prior courses students work in individual and team design projects. Design and analyze a variety of manufacturing fixtures, jigs, molds, and stamping dies.

Academic Level (Course Level)

Undergraduate

MFG407 - Seminar

Overview

Course Subject Code	Course Number
MFG	407

Department

Manufacturing & Mechanical Eng

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

MFG428 - MFG Engr Certification

Overview

Course Subject Code	Course Number
MFG	428

Department

Manufacturing & Mechanical Eng

Course Description

Students are required to take the Certified Manufacturing Engineer Exam or Certified Manufacturing Technician Exam offered by the Society of Manufacturing Engineers. Prerequisite: Graduating Senior.

Academic Level (Course Level)

Undergraduate

MFG447 - Lean Manufacturing

Overview

Course Subject Code	Course Number
MFG	447

Department

Manufacturing & Mechanical Eng

Course Description

Introduction of principles, techniques, and skills of lean manufacturing. Process optimization and quality improvement for manufacturing. Plant layout, design and job scheduling. JIT skills, such as Kaizen, Kanban, value added analysis and one piece flow to reduce inventory and waste.

Academic Level (Course Level)

Undergraduate

MFG453 - Automation & Robotics

Overview

Course Subject Code	Course Number
MFG	453

Department

Manufacturing & Mechanical Eng

Course Description

Study of the appropriate level of manufacturing automation based upon economics and productivity. Discussion of robotics and a study of automated manufacturing including automatic machine design and material handling. Senior standing in MET or MFG or instructor consent required.

Academic Level (Course Level)

Undergraduate

MFG454 - Thermal Manufacturing Process

Overview

Course Subject Code	Course Number
MFG	454

Department

Manufacturing & Mechanical Eng

Course Description

Fundamentals of thermal energy analysis, including introduction to thermodynamics and heat transfer. Emphasis is on solving manufacturing related problems in thermal process control and analysis.

Academic Level (Course Level)

Undergraduate

MFG463 - Sr Project III

Overview

Course Subject Code	Course Number
MFG	463

Department

Manufacturing & Mechanical Eng

Course Description

The final term of a three-term project. Process refinement and production of the product agreed to during the proposal phase. Requires formal reporting and presentation.

Academic Level (Course Level)

Undergraduate

MFG507 - Seminar

Overview

Course Subject Code	Course Number
MFG	507

Department

Manufacturing & Mechanical Eng

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Graduate

MFG563 - Inventory/Supply Train Mgt

Overview

Course Subject Code	Course Number
MFG	563

Department

Manufacturing & Mechanical Eng

Course Description

Introduction of concepts, principles, techniques, strategies and applications related to demand forecasting, production planning, performance measurements, quality control, inventory control and continuous improvement for manufacturing systems.

Academic Level (Course Level)

Graduate

MFG595 - Selected Grad Topics in Manf

Overview

Course Subject Code	Course Number
MFG	595

Department

Manufacturing & Mechanical Eng

Course Description

Manufacturing related topics in engineering science and design.
Manufacturing related topics in software and computer integration.
Manufacturing related topics in business and management. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

MFG596 - Selected Topics/Eng Sci&Design

Overview

Course Subject Code	Course Number
MFG	596

Department

Manufacturing & Mechanical Eng

Course Description

Manufacturing related topics in engineering science and design.
Course may be repeated for credit.

Academic Level (Course Level)

Graduate

MFG597 - Selected Topics/Comp Integrat

Overview

Course Subject Code	Course Number
MFG	597

Department

Manufacturing & Mechanical Eng

Course Description

Manufacturing related topics in software and computer integration.
Course may be repeated for credit.

Academic Level (Course Level)

Graduate

MFG598 - Selected Topics/Mat & Process

Overview

Course Subject Code	Course Number
MFG	598

Department

Manufacturing & Mechanical Eng

Course Description

Manufacturing related topics in materials and processing technology.
Course may be repeated for credit.

Academic Level (Course Level)

Graduate

MFG599 - Selected Topics/Finance & Mngt

Overview

Course Subject Code	Course Number
MFG	599

Department

Manufacturing & Mechanical Eng

Course Description

Manufacturing related topics in business and management. Course may be repeated for credit.

Academic Level (Course Level)

Graduate

Medical Imaging Technology Department

Leah Jolly, *Department Chair*

Professors: V. Bennett, R. Cole, R. Hoylman, D. McCollam, D. McDonnell

Associate Professors: R. Carson, T. Guthrie, L. Jolly

Assistant Professors: C. Groves, M. Packer

Instructors: W. Rogers, N. Santos

Provisional Instructors: E. Schlecht

Participating Faculty: J. Steenport (Online PACs)

Degrees Offered

- Bachelor of Science in Diagnostic Medical Sonography
- Bachelor of Science in Echocardiography
- Bachelor of Science in Nuclear Medicine and Molecular Imaging Technology
- Bachelor of Science in Radiologic Science
- Bachelor of Science in Vascular Technology

Certificates Offered

- Picture Archiving and Communication Systems (PACS)

Accreditation

Oregon Institute of Technology is accredited by Northwest Commission on Colleges and Universities, 8060 165th Ave. NE, Suite 100, Redmond, WA 98052-3981, an institutional accrediting body recognized by the Council for Higher Education Accreditation and/or the Secretary of the U.S. Department of Education.

The Diagnostic Medical Sonography, Echocardiography and Vascular Technology programs are programmatically accredited through the Commission on Accreditation of Allied Health Education Programs (CAAHEP), upon review of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS).

Echocardiography - Goal and Mission Statement

To prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the Adult cardiac sonography concentration.

Diagnostic Medical Sonography - Goal and Mission Statement

To prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the following concentration(s) it offers: Abdominal sonography - Extended and Obstetrics and gynecology sonography.

Vascular Technology - Goal and Mission Statement

To prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the Vascular sonography concentration.

Bachelor of Science Program Descriptions

The Department of Medical Imaging Technology offers bachelor's degrees in five professional programs, which encompass the spectrum of imaging sciences. The curriculum of each bachelor's degree program provides the technical, scientific, and communication skills essential for the application of learned concepts. Each program prepares students for immediate employment and for successfully passing the national and state registry examinations in each field.

Diagnostic Medical Sonography (also called sonography, ultrasound, or general ultrasound)

Sonography uses high frequency sound wave imaging and Doppler instrumentation to aid in the diagnosis of pathology and disease processes. The sonographer gathers pertinent patient history, creates images, and submits preliminary findings to the reading physician. Common exams include: obstetric, gynecological, peritoneal, retroperitoneal, pelvic, thoracic, musculoskeletal, extremity, neurological, and superficial procedures. Invasive applications are also performed in most clinical settings.

Program Learning Outcomes

- Effective oral, visual, and written communication skills.
- The ability to work effectively in teams.
- The ability to provide basic patient care and comfort while utilizing ethical, professionalism and HIPAA guidelines.
- Knowledge and understanding of human gross and sectional anatomy relative to normal and abnormal sonographic imaging.
- Knowledge and understanding of human physiology, pathology and pathophysiology.
- Knowledge and understanding of ultrasound physical principles and instrumentation.
- Knowledge of sonographic biological effects, proper application of sonographic instrumentation relative to imaging and image quality.
- Appropriate ergonomic scanning applications.
- An understanding of diverse cultural and humanistic traditions in the global society.

DMS Program Educational Objectives

The following are the faculty expectations of graduates from the Diagnostic Medical Sonography program:

- Employ diagnostic sonographic imaging techniques, critical thinking skills, effective communication skills, and professional judgment.
- Effectively apply ergonomically correct scanning techniques.
- Successfully complete nationally recognized credential examinations.
- Develop a dedication to independent life-long learning and professional contributions.

Echocardiography

Echocardiography is a safe method of obtaining ultrasound images for diagnosis of cardiac pathology in adult and pediatric patient populations. Echocardiographers perform imaging exams that include acquisition of detailed images of heart anatomy, evaluation of pathologies, and measurement/analysis of hemodynamic flow patterns within the heart and the heart's major vessels. The Echocardiographer prepares the study images and reports pertinent findings to the interpreting cardiologist as part of the diagnostic process.

Program Learning Outcomes

Graduates from this program will be able to:

1. Demonstrate the ability to communicate effectively in oral, written and visual forms.
2. Demonstrate the ability to work effectively in teams.
3. Demonstrate an ability to provide basic patient care and comfort.
4. Demonstrate professional judgment, discretion, and ethics.
5. Demonstrate knowledge and understanding of human gross anatomy, sectional anatomy, and normal and abnormal cardiovascular anatomy.
6. Demonstrate knowledge and understanding of cardiovascular physiology, pathology, and pathophysiology.
7. Demonstrate knowledge and understanding of cardiovascular physical principles and instrumentation.
8. Demonstrate knowledge and understanding of clinical echocardiographic diagnostic procedures and testing.
9. Demonstrate an understanding of diverse cultural and humanistic traditions in the global society.

Echocardiography Program Educational Objectives

1. The program prepares students to utilize diagnostic techniques, sound judgment and good decision making to provide patient services.
2. The program communicates the importance of being credentialed (RDCS, RCS) in the profession of echocardiography.
3. The program prepares students who think critically, communicate effectively, and exemplify professional ethics.
4. The program conveys the importance of becoming life-long learners and responsible citizens.

Nuclear Medicine and Molecular Imaging Technology

Nuclear Medicine and Molecular Imaging Technology is an imaging science that demonstrates pathology through physiologic processes using radioactive compounds. Sometimes these data are fused with anatomical data such as Computed Tomography (CT) and Magnetic Resonance Imaging (MRI). This branch of imaging science has been in existence for over four decades. This training also prepares the future Nuclear Medicine Technologist with skills in CT, MRI, PET/ CT, and Spect/CT.

Program Learning Outcomes

Students completing the Nuclear Medicine and Molecular Imaging Technology program should possess the following abilities, measured by observation throughout the students' educational experience at Oregon Tech:

1. The student will apply knowledge, judgement and critical thinking when problem solving
2. The student will demonstrate ethical reasoning through a variety of scenarios in lecture and lab, and adherence to professional responsibilities identified on their Professional Evaluation performed at the end of each term.
3. The student will demonstrate teamwork by contributing equally to team goals, and interacting with peers and faculty in a respectful and supportive manner.
4. The student will demonstrate effective communication with other students, staff, and faculty in a respectful manner and at an appropriate time.
5. The student demonstrate emotional intelligence competencies when working with others.

Radiologic Science

This program has been in existence at Oregon Tech for 70 years. The training prepares the future radiologic technologist with a wide variety of skills, including radiography, fluoroscopy, mobile and surgical radiography, Computed Tomography (CT), Mammography, Cardiovascular Interventional Technology (CIT), Quality Assurance, and imaging department management.

Program Learning Outcomes

Students completing the Radiologic Science program should possess the following abilities and are measured by observation throughout the students' educational experience at Oregon Tech:

- An ability to practice organizational skills using prioritization.
- An ability to demonstrate quality work in the didactic and laboratory settings.
- An ability to comprehend radiologic theory and principles and apply them in the laboratory setting.
- An ability to work in a stressful environment and perform effectively in under pressure.
- An ability to use good judgement and critical thinking skills.
- An ability to demonstrate confidence in their knowledge and skills.
- An ability to demonstrate attention to details and follow instructions.
- An ability to practice initiative.
- An ability to approach tasks and duties with a positive attitude.
- An ability to accept and apply constructive criticism.
- An ability to be punctual and reliable.
- An ability to practice positive interpersonal skills with faculty, classmates, other professionals.
- An ability to effectively work in a team setting.

Program Educational Objectives

The following are the faculty expectations of graduates from the Radiologic Science program:

- Be compassionate, caring healthcare professionals.
- Be eligible, well prepared, and able to pass the ARRT credentialing examination.
- Have immediate job placement potential within six months of graduation.

- Work in advanced imaging fields and complete advanced imaging registries.

Vascular Technology

Vascular technology is a profession which utilizes ultrasound, Doppler, color Doppler and various physiologic testing procedures to aid in the diagnosis of disease of the vascular system. Vascular technologists conduct patient interviews, compile health histories and determine risk assessments pertaining to vascular disease. The technologists choose appropriate testing modalities and provide referring physicians with preliminary interpretation of results.

Program Learning Outcomes

1. The ability to communicate effectively in oral, written and visual forms.
2. The ability to work effectively in teams.
3. An ability to provide basic patient care and comfort.
4. Professional judgment and discretion including ethics.
5. Knowledge and understanding of human gross anatomy sectional anatomy and normal and abnormal vascular anatomy.
6. Knowledge and understanding of vascular physiology, pathology, and pathophysiology.
7. Knowledge and understanding of vascular physical principles and instrumentation.
8. Knowledge and understanding of clinical vascular diagnostic procedures and testing
9. An understanding of diverse cultural and humanistic traditions in the global society.

Facilities

Oregon Tech's state-of-the-art imaging equipment allows medical imaging students to become familiar with a wide variety of imaging procedures like those performed in most medical centers. Students may also spend significant time at Sky Lakes Medical Center where they will gain experience directly with patients, prior to externship. This experience plus the academic coursework prepares the student well for the medical imaging professions.

Externships

All five of the bachelor's degree programs in medical imaging culminate in a senior year of clinical externship at a medical center. The 11-month externship is spent at the affiliate institution under the supervision of a clinical instructor. Students do not have classes on the Oregon Tech campus during this year. The location of externship will be determined by a lottery conducted by medical imaging faculty. All students will be guaranteed an externship subject to the following:

1. All academic requirements must be met before externship assignments will be made.
2. Students must satisfy Oregon requirements for clinical placement as listed in Oregon Administrative Rules (OAR 409-030-0100 to 409-030-0250).

Upon successful completion of the externship year, imaging students will be eligible to sit for the professional registry pertaining to their degree.

Admission Requirements

Pre-Medical Imaging Technology: Freshman Year

Enrollment is open to all students who meet the general entry requirements to the university. Students will be listed as Pre-Medical Imaging Technology (Pre-MIT) students. Admittance to the Oregon Tech Pre-MIT Program does not mean the student has been accepted into a specific MIT program.

Program Selection Criteria

Selection criteria are available on the MIT website at www.oit.edu/mit. Students must complete all the courses, including general education, in the specified freshman year (pre-medical imaging) curriculum. Selection will be made at the end of the spring term of the pre-medical imaging technology year. The number of students selected each year will be determined by the number of qualified applicants, and by the availability of clinical sites. Therefore, the number of qualified applicants may exceed the number of spaces available. Prior acceptance does not guarantee future acceptance into any MIT Program. Students must reapply yearly.

Selection will be based upon the following criteria and point system:

1. **GPA:** Students must have a total of a 2.95 **weighted** GPA (though a 3.0 or higher is highly recommended), in the following courses (or equivalent transfer courses) to apply to one of the five MIT Programs.
 - BIO 200 - Medical Terminology
 - BIO 231 - Human Anatomy/Physiology I
 - BIO 232 - Human Anatomy/Physiology II
 - BIO 233 - Human Anatomy/Physiology III
 - CHE 101 - Intro to General Chemistry

- CHE 104 - Intro to General Chemistry Lab
- MATH 110 - Applied Math: Natural Sciences or MATH 111Z - College Algebra or MATH 112Z - Precalculus II: Trigonometry or MATH 251Z - Differential Calculus
- MIT 103 - Intro to Med Imaging

GPA points are calculated as GPA x 10. (For example, a 3.5 GPA x 10 = 35). To determine how to calculate weighted GPA, see website at www.oit.edu/mit.

2. All applicants must attend an Oregon Tech hosted selection event at the end of spring term. Several activities are conducted during this event to allow students to demonstrate communication skills, and professionalism. Faculty from the MIT Department and industry leaders are present at the selection event to evaluate those skills.

Application Requirements

Applications are available on the MIT website at www.oit.edu/mit.

Applications are due spring term. Incomplete applications will not be accepted. An application fee of \$75 is required. There are no refunds of the application fee. Repeat applicants must follow the same procedures as first-time applicants.

The application form allows ranking of programs by choice (first and second) and only one application per student will be accepted.

Transfer Students

Transfer students who meet the academic requirements of the pre-medical imaging technology year, will not find a course at another college which substitutes for MIT 103 - Intro to Med Imaging. This course may be taken as a distance learning course. It must be completed in the summer, fall, winter or spring term prior to the application to a professional program. The MIT application is available at www.oit.edu/mit. Transfer students must apply to both Oregon Tech and MIT using two separate application processes.

Graduation Requirements

All credits listed in the curriculum for the catalog year a student begins a program must be fulfilled.

Students must maintain a 2.00 GPA to be eligible for graduation. In addition, a final grade of "C" or better must be earned in all professional courses (DMS, ECHO, NMT, RDSC, VAS), and science/mathematics courses to continue in the program. A final grade of "C" or better must be also earned in all required communications courses by the end of the junior year to continue on in the program. Once the student is admitted into a professional program as a sophomore, all curricular requirements must be met within four academic years. Rare exceptions to the time limitation will be considered on a case by case basis, at the discretion of the re-admittance committee described below. When a student unsuccessfully attempts a programmatic course fall term, sophomore year, they must reapply to the program or another imaging program. If the student has an unsuccessful attempt subsequent to fall term sophomore year the student must submit a letter of intent to the program director of the specific program they seek to re-enter. The MIT re-admittance committee will determine if another opportunity will be granted. If re-admittance is approved additional requirements will be prescribed by the MIT committee.

Other requirements such as auditing courses, attending labs, and/or remedial work will be specified by the committee. The student must remain in compliance with committee's recommendations and requirements to satisfy degree progress. When a student attempts unsuccessfully a second time in the same or a different programmatic course, they are terminated from that program. Additionally, if a student receives a "D," "F" or "W" in two or more programmatic courses in one term, they will be dismissed from that program. The student may apply for admittance to a second imaging program under the same application criteria as other applicants. After two unsuccessful attempts to complete two different programs, the student may not apply for a third program.

Career Opportunities

There continues to be a high demand for bachelor's degree prepared medical imaging professionals. Graduates have excellent opportunities for employment in hospitals, clinics, private practice, state and federal agencies, and with appropriate experience, in supervision, education and industry.

Degree Completion Programs

The Echocardiography program offers degree completion programs for registered technologists (in good standing) who wish to pursue a bachelor's degree in their field. These programs are fully online. There is no requirement to come to campus. Diagnostic Medical Sonography, Radiologic Science, and Vascular Technology degree completion programs are not currently enrolling new students.

Programs

Echocardiography, BS

Overview

Program Long Title

Echocardiography

Program Title

Echocardiography

Department(s)

Medical Imaging Technology

Degree Designation

BS

Program Level

UG

CIP Code

510910

Degree Maps

Degree Map Name

Advising Guide - Echocardiography

Total Degree Map Credits

191

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

Pre Medical Imaging Technology - Freshman Year

- [MIT103 Intro to Medical Imaging](#)- Intro to Med Imaging (must be taken at Oregon Tech)
- [BIO200 Medical Terminology](#) - Medical Terminology
- [BIO231 Human Anatomy/Physiology I](#) - Human Anatomy/Physiology I
- [BIO232 Human Anatomy/Physiology II](#)- Human Anatomy/Physiology II
- [BIO233 Human Anatomy/Physiology III](#)- Human Anatomy/Physiology III
- [CHE101 Intro to General Chemistry](#)- Intro to General Chemistry
- [CHE104 Intro to General Chemistry Lab](#) - Intro to General Chemistry Lab
- [MATH111Z Precalculus I: Functions](#) - Precalculus I: Functions (or higher)
- [COM111Z Public Speaking](#)- Public Speaking
- [WRI121Z Composition I](#)- Composition I
- Humanities Elective - Credit Hours: 3
- Social Science Electives - Credit Hours: 6

Once you have completed all of the Pre-MIT courses above, you must apply to your specific MIT program of choice through the Medical Imaging Technology Department. For current selection information, refer to the Oregon Tech Medical Imaging Technology web site at www.oit.edu/MIT.

A grade of C or better is required in all courses

Professional Courses list below

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14	0

Requirement Select

- [BIO220 - Cardiovascular Physiology](#)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- [ECHO231 - Echocardiography I](#)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- [PHY217 - Physics of Med Imaging](#)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIT225 - Patient Care in Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	14	0

Requirement Select

- BIO446 - Pathophysiology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- ECHO232 - Echocardiography II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIT231 - Sonographic Princ & Instru I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	17	0

Requirement Select

- BIO447 - Pathophysiology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECHO320 - Cardiographic Methods

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECHO332 - Invasive Cardiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIT232 - Sonographic Princ & Instru II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	16	0

Requirement Select

- BUS316 - Total Quality Health Care
- OR**
- BUS317 - Health Care Management
- OR**
- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECHO333 - Echocardiography III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

• ECHO321 - Stress & Transesophageal Echo

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Communication Electives

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	12	0

Requirement Select

• CHE360 - Clinical Pharmacology/Hlth Prf

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• ECHO325 - Pediatric Echo

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• ECHO376 - Survey of Vascular Testing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 5

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- ECHO334 - Echocardiography IV

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- ECHO385 - Echo Lab Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ECHO388 - Externship Preparation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	15	0

Requirement Select

- ECHO420 - Echo Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- ECHO420 - Echo Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- ECHO420 - Echo Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- ECHO420 - Echo Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Required Coursework	43	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- **AND** BIO232 - Human Anatomy/Physiology II
- **AND** BIO233 - Human Anatomy/Physiology III
- **AND** BIO135 - Prep for Human A&P

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	13
Progress Credits	-
Contact Hours	1 - 19
Clinical	-
Criticality	No

Requirement Select

- CHE101 - Intro to General Chemistry
- **AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WR1121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MIT103 - Intro to Medical Imaging

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No
Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Echocardiography, Degree Completion, BS

Overview

Program Long Title

Echocardiography

Program Title

Echocardiography

Department(s)

Medical Imaging Technology

Degree Designation

BS

Program Level

UG

CIP Code

510910

Nuclear Medicine and Molecular Imaging Technology, BS

Overview

Program Long Title

Nuclear Med Molecular Imaging

Program Title

Nuclear Med Molecular Imaging

Department(s)

Medical Imaging Technology

Degree Designation

BS

Program Level

UG

CIP Code

510905

Degree Maps

Degree Map Name
Advising Guide - Nuclear Med Molecular Imaging
Total Degree Map Credits
183
Degree Map Effective Catalog Year
2425 -
Degree Map Narrative
<u>Pre Medical Imaging Technology - Freshman Year</u>
<u>MIT103 Intro to Medical Imaging</u>- Intro to Med Imaging (must be taken at Oregon Tech) <u>BIO200 Medical Terminology</u> - Medical Terminology <u>BIO231 Human Anatomy/Physiology I</u> - Human Anatomy/Physiology I <u>BIO232 Human Anatomy/Physiology II</u>- Human Anatomy/Physiology II <u>BIO233 Human Anatomy/Physiology III</u>- Human Anatomy/Physiology III <u>CHE101 Intro to General Chemistry</u>- Intro to General Chemistry <u>CHE104 Intro to General Chemistry Lab</u> - Intro to General Chemistry Lab <u>MATH111Z Precalculus I: Functions</u> - Precalculus I: Functions (or higher) <u>COM111Z Public Speaking</u>- Public Speaking <u>WRI121Z Composition I</u>- Composition I - Humanities Elective - Credit Hours: 3 - Social Science Electives - Credit Hours: 6

Once you have completed all of the Pre-MIT courses above, you must apply to your specific MIT program of choice through the Medical Imaging Technology Department. For current selection information, refer to the Oregon Tech Medical Imaging Technology web site at www.oit.edu/MIT.

A grade of C or better is required in all courses

Professional Courses list below

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	13	0

Requirement Select

- CHE360 - Clinical Pharmacology/Hlth Prf

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- NMT212 - Nuc Med Phy/Radiation Biophy

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- NMT217 - Patient Care

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY217 - Physics of Med Imaging

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	14	0

Requirement Select

- NMT205 - Nuclear Med Admin

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- NMT215 - Radiochem/Radiopharmacy

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

• WRI122Z - Composition II

OR

• WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Communication Electives

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	13	0

Requirement Select

• NMT225 - Nuclear Phy/Instrumtn

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• NMT256 - Cardiovascular Imaging

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• Communication Electives

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	14	0

Requirement Select

- BUS316 - Total Quality Health Care
OR
- BUS317 - Health Care Management
OR
- BUS313 - Health Care Systems & Policy

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIT341 - Magnetic Resonance Imaging

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- NMT311 - Imaging Procedures I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- NMT367 - PET Imaging

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	17	0

Requirement Select

- BIO335 - Cross-Sectional Anatomy

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BIO446 - Pathophysiology I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- NMT312 - Imaging Procedures II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- NMT355 - Computed Tomography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- NMT313 - Therapeutic Procedures

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- NMT325 - SPECT Imaging/Comp Appl

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- NMT388 - Externship Preparation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	15	0

Requirement Select

- NMT410 - Nuclear Med Tech Extern

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- NMT410 - Nuclear Med Tech Extern

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- NMT410 - Nuclear Med Tech Extern

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- NMT410 - Nuclear Med Tech Extern

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Required Coursework	36	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- **AND** BIO232 - Human Anatomy/Physiology II
- **AND** BIO233 - Human Anatomy/Physiology III
- **AND** BIO135 - Prep for Human A&P

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	13
Progress Credits	-
Contact Hours	1 - 19
Clinical	-
Criticality	No

Requirement Select

- CHE101 - Intro to General Chemistry
- **AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours -

Clinical -

Criticality No

Total General Education Credits0

Total Minor Credits0

Total Major Credits0

Total Elective Credits0

Radiologic Science, BS

Overview

Program Long Title

Radiologic Science

Program Title

Radiologic Science

Department(s)

Medical Imaging Technology

Degree Designation

BS

Program Level

UG

CIP Code

510911

Degree Maps

Degree Map Name

Advising Guide - Radiologic Science

Total Degree Map Credits

192 - 193

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

Pre Medical Imaging Technology - Freshman Year

- MIT103 Intro to Medical Imaging- Intro to Med Imaging (must be taken at Oregon Tech)
- BIO200 Medical Terminology - Medical Terminology
- BIO231 Human Anatomy/Physiology I - Human Anatomy/Physiology I
- BIO232 Human Anatomy/Physiology II- Human Anatomy/Physiology II
- BIO233 Human Anatomy/Physiology III- Human Anatomy/Physiology III
- CHE101 Intro to General Chemistry- Intro to General Chemistry
- CHE104 Intro to General Chemistry Lab - Intro to General Chemistry Lab
- MATH111Z Precalculus I: Functions - Precalculus I: Functions (or higher)
- COM111Z Public Speaking- Public Speaking
- WRI121Z Composition I- Composition I
- Humanities Elective - Credit Hours: 3
- Social Science Electives - Credit Hours: 6

Once you have completed all of the Pre-MIT courses above, you must apply to your specific MIT program of choice through the Medical Imaging Technology Department. For current selection information, refer to the Oregon Tech Medical Imaging Technology web site at www.oit.edu/MIT.

A grade of C or better is required in all courses

Professional Courses list below

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16	0

Requirement Select

- PHY217 - Physics of Med Imaging

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- RDSC201 - Imaging Techniques I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC235 - Equipment Operation & Maint

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- RDSC202 - Imaging Techniques II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• RDSC205 - Patient Care	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• RDSC210 - Radiograph Position I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• RDSC366 - Radiographic Pathology	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	17	0

Requirement Select	
• BIO335 - Cross-Sectional Anatomy	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• RDSC211 - Radiograph Position II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• RDSC233 - Contrast Media Proc	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC272 - Radiation Protection

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- BIO336 - Essentials of Pathophysiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- RDSC301 - Radiograph Position III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC320 - Surg/Trauma/Mobl Rdgrph

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC355 - Computed Tomography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	14	0

Requirement Select

- BUS313 - Health Care Systems & Policy
OR
- BUS316 - Total Quality Health Care
OR
- BUS317 - Health Care Management

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MIT341 - Magnetic Resonance Imaging

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
OR
- WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	12 - 13	0

Requirement Select

- MIT342 - Mag. Resonance Imaging II
OR
- MIT356 - Computed Tomography II
OR
- RDSC354 - Mammography

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC326 - Crdvscrlr/Interv Tech

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- RDSC388 - Externship Preparation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	15	0

Requirement Select

- RDSC410 - Rad Science Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- RDSC410 - Rad Science Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- RDSC410 - Rad Science Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- RDSC410 - Rad Science Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Required Coursework	43	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- **AND** BIO232 - Human Anatomy/Physiology II
- **AND** BIO233 - Human Anatomy/Physiology III
- **AND** BIO135 - Prep for Human A&P

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	13
Progress Credits	-
Contact Hours	1 - 19
Clinical	-
Criticality	No

Requirement Select

- CHE101 - Intro to General Chemistry
- **AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MIT103 - Intro to Medical Imaging

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Radiologic Science, Degree Completion, BS

Overview

Program Long Title
Radiologic Science, Degree Completion, BS

Program Title
Radiologic Science

Department(s)
Medical Imaging Technology

Degree Designation
BS

Program Level

UG

CIP Code

510911

Diagnostic Medical Sonography, BS

Overview

Program Long Title
Diagnostic Medical Sonography

Program Title
Diagnostic Medical Sonography

Department(s)
Medical Imaging Technology

Degree Designation
BS

Program Level
UG

CIP Code
510910

Degree Maps

Degree Map Name
Advising Guide - Diagnostic Medical Sonography

Total Degree Map Credits
189

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
Pre Medical Imaging Technology - Freshman Year

- MIT103 Intro to Medical Imaging- Intro to Med Imaging (must be taken at Oregon Tech)
- BIO200 Medical Terminology - Medical Terminology
- BIO231Z - Missing course - Human Anatomy/ Physiology I
- BIO232Z - Missing course - Human Anatomy/ Physiology II
- BIO233Z - Missing course - Human Anatomy/ Physiology III
- CHE104Z - Missing course - Intro to General Chemistry
- CHE124Z - Missing course - Intro to General Chemistry Lab
- MATH111Z Precalculus I: Functions - Precalculus I: Functions (or higher)
- COM111Z Public Speaking- Public Speaking
- WRI121Z Composition I- Composition I
- Humanities Elective - Credit Hours: 3
- Social Science Electives - Credit Hours: 6

Once you have completed all of the Pre-MIT courses above, you must apply to your specific MIT program of choice through the Medical Imaging Technology Department. For current selection information, refer to the Oregon Tech Medical Imaging Technology web site at www.oit.edu/MIT.

A grade of C or better is required in all courses

Professional Courses list below

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- DMS223 - App of Abdominal Sonogr I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 3

Clinical -

Criticality No

Requirement Select

- DMS252 - Sophomore Lab I

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 1

Progress Credits -

Contact Hours 0 - 3

Clinical -

Criticality No

Requirement Select

- MIT225 - Patient Care in Sonography

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade -

Area -

Actual Credits 3

Progress Credits -

Contact Hours 0 - 5

Clinical -

Criticality No

Requirement Select

- PHY217 - Physics of Med Imaging

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- WR1122Z - Composition II
- OR**
- WR1227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	14	0

Requirement Select

- DMS224 - App of Abdominal Sonogr II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS253 - Sophomore Lab II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIT231 - Sonographic Princ & Instru I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select

- DMS225 - App of Abdominal Sonogr III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	5
Clinical	-
Criticality	No

Requirement Select

- DMS234 - Pelvic Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS254 - Sophomore Lab III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIT232 - Sonographic Princ & Instru II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- BIO335 - Cross-Sectional Anatomy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS346 - Musculoskeletal Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS352 - Junior Lab I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- DMS365 - Sonographic Pathology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS337 - Breast Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	13	0

Requirement Select

- BUS316 - Total Quality Health Care
OR
- BUS317 - Health Care Management
OR
- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS316 - Survey of Vascular Tech

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS353 - Junior Lab II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- DMS370 - Obstetrical Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS375 - Fetal Echocardiography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- DMS343 - Neonatal/Pediatric Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS354 - Junior Lab III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- DMS373 - Obstetrical Pathology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- DMS388 - Externship Preparation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	15	0

Requirement Select

- DMS430 - DMS Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- DMS430 - DMS Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- DMS430 - DMS Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- DMS430 - DMS Externship

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Required Coursework	43	0

Requirement Select

- Course Not Found
- **AND** Course Not Found
- **AND** Course Not Found
- **AND** BIO135 - Prep for Human A&P

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	13
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- Course Not Found
- **AND** Course Not Found

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

• WRI121Z - Composition I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• BIO200 - Medical Terminology

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

2

Clinical

-

Criticality

No

Requirement Select

• MIT103 - Intro to Medical Imaging

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Minor Credits

0

Total Major Credits

0

Total Elective Credits

0

Diagnostic Medical Sonography, Degree Completion, BS

Overview

Program Long Title
Diagnostic Medical Sonography

Program Title
Diagnostic Medical Sonography

Department(s)
Medical Imaging Technology

Degree Designation
BS

Program Level	CIP Code
UG	510910

Vascular Technology, BS

Overview

Program Long Title
Vascular Technology

Program Title
Vascular Technology

Department(s)
Medical Imaging Technology

Degree Designation
BS

Program Level	CIP Code
UG	510910

Degree Maps

Degree Map Name
Advising Guide - Vascular Technology

Total Degree Map Credits
186

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
Pre Medical Imaging Technology - Freshman Year

- MIT103 Intro to Medical Imaging- Intro to Med Imaging (must be taken at Oregon Tech)
- BIO200 Medical Terminology - Medical Terminology
- BIO231 Human Anatomy/Physiology I - Human Anatomy/Physiology I
- BIO232 Human Anatomy/Physiology II- Human Anatomy/Physiology II
- BIO233 Human Anatomy/Physiology III- Human Anatomy/Physiology III
- CHE101 Intro to General Chemistry- Intro to General Chemistry
- CHE104 Intro to General Chemistry Lab - Intro to General Chemistry Lab
- MATH111Z Precalculus I: Functions - Precalculus I: Functions (or higher)
- COM111Z Public Speaking- Public Speaking
- WRI121Z Composition I- Composition I
- Humanities Elective - Credit Hours: 3
- Social Science Electives - Credit Hours: 6

Once you have completed all of the Pre-MIT courses above, you must apply to your specific MIT program of choice through the Medical Imaging Technology Department. For current selection information, refer to the Oregon Tech Medical Imaging Technology web site at www.oit.edu/MIT.

A grade of C or better is required in all courses

Professional Courses list below

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	14	0

Requirement Select

- BIO220 - Cardiovascular Physiology

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MIT225 - Patient Care in Sonography

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PHY217 - Physics of Med Imaging

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- VAS214 - Vascular Anatomy

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	13	0

Requirement Select

- BIO446 - Pathophysiology I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- MIT231 - Sonographic Princ & Instru I

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• VAS246 - Perphrl Arterial Disease	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	14	0

Requirement Select	
• BIO447 - Pathophysiology II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• MIT232 - Sonographic Princ & Instru II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• VAS245 - Periphrl Venous Disease	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- BUS316 - Total Quality Health Care
OR
- BUS317 - Health Care Management
OR
- BUS313 - Health Care Systems & Policy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- VAS365 - Abdominal Vasc Disease

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- VAS375 - Survey Abdom Sonography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	14	0

Requirement Select

- VAS366 - Spec Circulatory Problms

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- VAS337 - Survey of Echocardiography

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- VAS367 - Cerebrovascular Disease

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- VAS385 - Vascular Lab Mgmt

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- VAS388 - Externship Preparation

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Communication Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Summer	15	0

Requirement Select

- VAS420 - Vascular Tech Extern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- VAS420 - Vascular Tech Extern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- VAS420 - Vascular Tech Extern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	15	0

Requirement Select

- VAS420 - Vascular Tech Extern

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	15
Progress Credits	-
Contact Hours	0 - 40
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Required Coursework	43	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- **AND** BIO232 - Human Anatomy/Physiology II
- **AND** BIO233 - Human Anatomy/Physiology III
- **AND** BIO135 - Prep for Human A&P

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	13
Progress Credits	-
Contact Hours	1 - 19
Clinical	-
Criticality	No

Requirement Select

- CHE101 - Intro to General Chemistry
- **AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- MIT103 - Intro to Medical Imaging

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• Social Science Elective Credits	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Magnetic Resonance Imaging (MRI), Certificate

Overview

Program Long Title
Magnetic Resonance Imagng Cert

Program Title
Magnetic Resonance Imagng Cert

Department(s)
Medical Imaging Technology

Degree Designation
CERT

Program Level	CIP Code
UG	510920

Picture Archiving and Communication Systems (PACS), Certificate

Overview

Program Long Title
Picture Archive/Comm Sys Cert

Program Title
Picture Archive/Comm Sys Cert

Department(s)
Medical Imaging Technology

Degree Designation
CERT

Program Level	CIP Code
UG	510907

Vascular Technology, Degree Completion, BS

Overview

Program Long Title
Vascular Technology

Program Title
Vascular Technology

Department(s)
Medical Imaging Technology

Degree Designation
BS

Program Level	CIP Code
UG	510910

Pre-Medical Imaging Requirments

Overview

Program Long Title
Pre-Medical Imaging Gen Study

Program Title
Pre-Medical Imaging Gen Study

Department(s)
Medical Imaging Technology

Degree Designation
000000

Program Level
UG

CIP Code
510907

Degree Maps

Degree Map Name
Advising Guide - Pre-Medical Imaging Gen Study

Total Degree Map Credits
43

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	16	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- AND** BIO135 - Prep for Human A&P

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	1 - 7
Clinical	-
Criticality	No

- Requirement Select**
- CHE101 - Intro to General Chemistry
 - AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

- Requirement Select**
- MATH111Z - Precalculus I: Functions

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

- Requirement Select**
- Social Science Elective Credits

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	14	0

Requirement Select

- BIO232 - Human Anatomy/Physiology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WR1121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- MIT103 - Intro to Medical Imaging

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	13	0

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- BIO233 - Human Anatomy/Physiology III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits

0

Total Major Credits

0

Total Minor Credits

0

Total Elective Credits

0

Courses

BIO220 - Cardiovascular Physiology

Overview

Course Subject Code	Course Number
BIO	220

Department
Medical Imaging Technology

Course Description
Application of principles of fluid dynamics to the human vascular system. Detailed considerations of cardiac function and its regulation, analysis of flow in arterial, venous and capillary systems, and integration of cardiovascular regulation.

Academic Level (Course Level)
Undergraduate

BIO335 - Cross-Sectional Anatomy

Overview

Course Subject Code	Course Number
BIO	335

Department
Medical Imaging Technology

Course Description
Cross-sectional anatomy correlated with computer tomography, ultrasonography, and magnetic resonance imaging.

Academic Level (Course Level)
Undergraduate

BIO375 - Cross Sectional Anatomy II

Overview

Course Subject Code	Course Number
BIO	375

Department

Medical Imaging Technology

Course Description

Continuation of cross section anatomy not including in BIO 335. This course covers MR images of the joints of the wrist, elbow, shoulder, ankle, knee, hip, thorax, spine and arterial system from the arch of the aorta to the Circle of Willis, as demonstrated by MRA.

Academic Level (Course Level)

Undergraduate

DMS107 - Seminar

Overview

Course Subject Code	Course Number
DMS	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

DMS207 - Seminar

Overview

Course Subject Code	Course Number
DMS	207

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

DMS223 - App of Abdominal Sonogr I

Overview

Course Subject Code	Course Number
DMS	223

Department

Medical Imaging Technology

Course Description

History of sonography. Orientation to patient history, abdominal cross-sectional anatomy, scanning, and normal sonographic presentations.

Academic Level (Course Level)

Undergraduate

DMS224 - App of Abdominal Sonogr II

Overview

Course Subject Code	Course Number
DMS	224

Department

Medical Imaging Technology

Course Description

Orientation to cross-sectional abdominal anatomy and pathology of organs and vessels. Procedures and techniques, including scanning.

Academic Level (Course Level)

Undergraduate

DMS225 - App of Abdominal Sonogr III

Overview

Course Subject Code	Course Number
DMS	225

Department

Medical Imaging Technology

Course Description

Advanced abdominal scanning procedures and techniques. Emphasis on superficial structures invasive procedures and Doppler correlation, including scanning.

Academic Level (Course Level)

Undergraduate

DMS234 - Pelvic Sonography

Overview

Course Subject Code	Course Number
DMS	234

Department

Medical Imaging Technology

Course Description

Orientation to male and female pelvic cross-sectional anatomy and pathology, differentiating between normal variations and abnormalities to include first trimester obstetrics and trans-vaginal scanning.

Academic Level (Course Level)

Undergraduate

DMS235 - DMS Patient Care

Overview

Course Subject Code	Course Number
DMS	235

Department

Medical Imaging Technology

Course Description

Sonographic management and applications of cognitive, psychomotor, and interpersonal skills as they relate to the health care consumer. Patient assessment and communication, body mechanics, medical and surgical asepsis, medical emergencies, pharmacology, and analysis of ethical and legal issues.

Academic Level (Course Level)

Undergraduate

DMS252 - Sophomore Lab I

Overview

Course Subject Code	Course Number
DMS	252

Department

Medical Imaging Technology

Course Description

Applied scanning of right upper quadrant anatomy stressing imaging planes. Gray scale instrumentation, system-optimization, preventive maintenance, and quality hard copy imaging. Sophomore standing in the DMS program required.

Academic Level (Course Level)

Undergraduate

DMS253 - Sophomore Lab II

Overview

Course Subject Code	Course Number
DMS	253

Department

Medical Imaging Technology

Course Description

Applied scanning of the remainder of the abdominal cavity stressing anatomy, standard imaging planes, and hard copy quality. Doppler instrumentation as applied to the cerebrovascular system stressing pulse wave Doppler, color Doppler, Doppler optimization and standard imaging planes. Imaging review of prior anatomical areas.

Academic Level (Course Level)

Undergraduate

DMS254 - Sophomore Lab III

Overview

Course Subject Code	Course Number
DMS	254

Department

Medical Imaging Technology

Course Description

DMS orientation to cross-sectional pelvic anatomy and pathology of the male and female pelvis. Procedures and techniques, including scanning.

Academic Level (Course Level)

Undergraduate

DMS307 - Seminar

Overview

Course Subject Code	Course Number
DMS	307

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

DMS316 - Survey of Vascular Tech

Overview

Course Subject Code	Course Number
DMS	316

Department

Medical Imaging Technology

Course Description

Orientation to vascular physics, equipment, and color flow imaging. Explanation of Doppler imaging in relation to vascular anatomy.

Academic Level (Course Level)

Undergraduate

DMS337 - Breast Sonography

Overview

Course Subject Code	Course Number
DMS	337

Department

Medical Imaging Technology

Course Description

Breast sonographic scanning procedures with an emphasis on sonographic applications. Correlation with other imaging modalities.

Academic Level (Course Level)

Undergraduate

DMS342 - Survey of Adult Echo

Overview

Course Subject Code	Course Number
DMS	342

Department

Medical Imaging Technology

Course Description

Survey of adult echocardiographic imaging applications with emphasis on parasternal, apical, subcostal and suprasternal 2-D views. Standard M-Mode measurements. Doppler and color Doppler. Common cardiac pathology.

Academic Level (Course Level)

Undergraduate

DMS343 - Neonatal/Pediatric Sonography

Overview

Course Subject Code	Course Number
DMS	343

Department

Medical Imaging Technology

Course Description

Fetal cardiac development and normal anatomy. Fetal echocardiographic 2D views, M-Mode, Doppler and Color Doppler. Common fetal cardiac pathology and anomalies. Neonatal topics include hip, abdominal and neurological sonographic applications. General sonographic pediatric pathologies and anomalies will be discussed.

Academic Level (Course Level)

Undergraduate

DMS346 - Musculoskeletal Sonography

Overview

Course Subject Code	Course Number
DMS	346

Department

Medical Imaging Technology

Course Description

Survey of sonographic musculoskeletal imaging with emphasis on normal and abnormal findings.

Academic Level (Course Level)

Undergraduate

DMS352 - Junior Lab I

Overview

Course Subject Code	Course Number
DMS	352

Department

Medical Imaging Technology

Course Description

Topics to include the male/female pelvis, first trimester, musculoskeletal, and breast stressing sonographic anatomy, standard imaging planes, and image quality.

Academic Level (Course Level)

Undergraduate

DMS353 - Junior Lab II

Overview

Course Subject Code	Course Number
DMS	353

Department

Medical Imaging Technology

Course Description

Topics to include normal first, second, third trimester, and cardiovascular stressing anatomy, standard imaging planes, and image quality.

Academic Level (Course Level)

Undergraduate

DMS354 - Junior Lab III

Overview

Course Subject Code	Course Number
DMS	354

Department

Medical Imaging Technology

Course Description

Applied sonographic laboratory procedures and techniques. Emphasis on protocols and case reviews.

Academic Level (Course Level)

Undergraduate

DMS365 - Sonographic Pathology

Overview

Course Subject Code	Course Number
DMS	365

Department

Medical Imaging Technology

Course Description

Differential diagnosis and concepts of disease processes as applied to sonographic examination. Junior standing in the DMS program required.

Academic Level (Course Level)

Undergraduate

DMS370 - Obstetrical Sonography

Overview

Course Subject Code	Course Number
DMS	370

Department

Medical Imaging Technology

Course Description

Orientation to obstetrical scanning procedures and techniques. Emphasis on normal obstetrical anatomy and fetal development.

Academic Level (Course Level)

Undergraduate

DMS373 - Obstetrical Pathology

Overview

Course Subject Code	Course Number
DMS	373

Department

Medical Imaging Technology

Course Description

Advanced obstetrical scanning of second and third trimester obstetrical patients with emphasis on pathology.

Academic Level (Course Level)

Undergraduate

DMS375 - Fetal Echocardiography

Overview

Course Subject Code	Course Number
DMS	375

Department

Medical Imaging Technology

Course Description

Survey of fetal echocardiographic imaging applications with emphasis on parasternal, apical, subcostal and suprasternal 2-D views. Standard M- Mode measurements, Doppler and color Doppler. Common congenital cardiac pathology.

Academic Level (Course Level)

Undergraduate

DMS388 - Externship Preparation

Overview

Course Subject Code	Course Number
DMS	388

Department

Medical Imaging Technology

Course Description

Presentation of key concepts related to Diagnostic Medical Sonography externship and required in-services. Focus is on patient care and interpersonal scenarios the externship student will likely face while in the clinical environment. Review and discussion of the DMS Externship Handbook.

Academic Level (Course Level)

Undergraduate

DMS407 - Seminar

Overview

Course Subject Code	Course Number
DMS	407

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

DMS430 - DMS Externship

Overview

Course Subject Code	Course Number
DMS	430

Department

Medical Imaging Technology

Course Description

All B.S. students must complete four terms (12 months) of clinical experience in sonography at an OIT approved clinical site. Students will work under the direct supervision of registered sonographers. Prerequisite: All academic course work in the Diagnostic Medical Sonography curriculum

Academic Level (Course Level)

Undergraduate

DMS430A - DMS Externship

Overview

Course Subject Code	Course Number
DMS	430A

Department

Medical Imaging Technology

Course Description

This two-term special externship is designed for the degree completion student. Students working in a clinical ultrasound setting will prepare clinical case studies. Must be an ARDMS sonographer in good standing and have completed all academic coursework in the Medical Imaging curriculum with grade "C" or better.

Academic Level (Course Level)

Undergraduate

DMS430B - DMS Externship

Overview

Course Subject Code	Course Number
DMS	430B

Department

Medical Imaging Technology

Course Description

This two-term special externship is designed for the degree completion student. Students working in a clinical ultrasound setting will prepare clinical case studies. Must be an ARDMS sonographer in good standing and have completed all academic coursework in the Medical Imaging curriculum with grade "C" or better

Academic Level (Course Level)

Undergraduate

ECHO107 - Seminar

Overview

Course Subject Code	Course Number
ECHO	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ECHO207 - Seminar

Overview

Course Subject Code	Course Number
ECHO	207

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ECHO225 - Cardio Patient Mgmt Practices

Overview

Course Subject Code	Course Number
ECHO	225

Department

Medical Imaging Technology

Course Description

Current issues in the practice of echocardiography with emphasis on the technologist's responsibilities to the patient, the patient's family and the professions of echocardiography. Transporting critically ill patients and recognizing emergency situations.

Academic Level (Course Level)

Undergraduate

ECHO231 - Echocardiography I

Overview

Course Subject Code	Course Number
ECHO	231

Department

Medical Imaging Technology

Course Description

An introduction to scanning techniques and tomographic views according to the American Society of Echocardiography standards. B-mode image, pulsed and continuous wave Doppler, and color flow imaging.

Academic Level (Course Level)

Undergraduate

ECHO232 - Echocardiography II

Overview

Course Subject Code	Course Number
ECHO	232

Department

Medical Imaging Technology

Course Description

An intermediate level of instruction in scanning techniques with tomographic views according to the American Society of Echocardiography standards. Emphasis on cardiac pathology and the echocardiography evaluation.

Academic Level (Course Level)

Undergraduate

ECHO307 - Seminar

Overview

Course Subject Code	Course Number
ECHO	307

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ECHO320 - Cardiographic Methods

Overview

Course Subject Code	Course Number
ECHO	320

Department

Medical Imaging Technology

Course Description

Recognition of ECG tracing with normal and abnormal arrhythmias, treadmill testing, Holter monitoring, phonocardiography, and heart auscultation. Review of case examples for analysis and synthesis. Integration of cardiographic monitoring methods with cardiac ultrasound imaging. Review of cardiac anatomy.

Academic Level (Course Level)

Undergraduate

ECHO321 - Stress & Transesophageal Echo

Overview

Course Subject Code	Course Number
ECHO	321

Department

Medical Imaging Technology

Course Description

Cardiac applications, protocols, and techniques related to stress echo and transesophageal echo. TEE anatomy, acquisition of images and the cardiovascular operating room. Particular emphasis on the mitral valve and surgical repairs. Prerequisite: Admission to Echocardiography program

Academic Level (Course Level)

Undergraduate

ECHO325 - Pediatric Echo

Overview

Course Subject Code	Course Number
ECHO	325

Department

Medical Imaging Technology

Course Description

Congenital heart disease, including neonate/infant and adult disorders. Congenital disorders including cardiac situs, ventricular morphology, great artery connections, valvular and subvalvular obstruction, atrial septal defect, ventricular septal defect.

Academic Level (Course Level)

Undergraduate

ECHO332 - Invasive Cardiology

Overview

Course Subject Code	Course Number
ECHO	332

Department

Medical Imaging Technology

Course Description

Cardiac catheterization testing. Coronary artery interventions such as percutaneous transluminal coronary intervention (PCI), and chamber pressure measurements.

Academic Level (Course Level)

Undergraduate

ECHO333 - Echocardiography III

Overview

Course Subject Code	Course Number
ECHO	333

Department

Medical Imaging Technology

Course Description

An advanced level of instruction in scanning techniques and tomographic views according to the American Society of Echocardiography standards. Cardiac pathology, and advanced methods in echocardiography.

Academic Level (Course Level)

Undergraduate

ECHO334 - Echocardiography IV

Overview

Course Subject Code	Course Number
ECHO	334

Department

Medical Imaging Technology

Course Description

An advanced level of instruction in scanning techniques and tomographic views according to the American Society of Echocardiography standards. Special topics including 3-D, 4-D, tissue Doppler, cardiac resynchronization and other technological advances.

Academic Level (Course Level)

Undergraduate

ECHO376 - Survey of Vascular Testing

Overview

Course Subject Code	Course Number
ECHO	376

Department

Medical Imaging Technology

Course Description

Basic vascular pathophysiology in carotid, arterial, and venous testing. Waveform recognition, interpretation, and protocols for testing.

Academic Level (Course Level)

Undergraduate

ECHO385 - Echo Lab Management

Overview

Course Subject Code	Course Number
ECHO	385

Department

Medical Imaging Technology

Course Description

Focus on human resource skills as necessary to manage an echocardiography laboratory. Includes the interview process, hiring and firing, as well as employee performance evaluation. Other topics will include reimbursement, licensure, accreditation and other management issues.

Academic Level (Course Level)

Undergraduate

ECHO388 - Externship Preparation

Overview

Course Subject Code	Course Number
ECHO	388

Department

Medical Imaging Technology

Course Description

Review and summarization of key concepts in Echocardiography. Focus on patient care and interpersonal scenarios the student will likely face in the hospital environment or independent echo lab. Review and interpretation of case studies in preparation for clinical analysis and documentation using structured reporting systems. Review and discussion of the Echocardiography Externship Handbook.

Academic Level (Course Level)

Undergraduate

ECHO407 - Seminar

Overview

Course Subject Code	Course Number
ECHO	407

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ECHO420 - Echo Externship

Overview

Course Subject Code	Course Number
ECHO	420

Department

Medical Imaging Technology

Course Description

Students work as registered professionals in the field and must complete nine months (three quarters) of experience in Echocardiography. Prerequisite: Admission to Echocardiography Degree Completion program

Academic Level (Course Level)

Undergraduate

ECHO420A - Echo Externship

Overview

Course Subject Code	Course Number
ECHO	420A

Department

Medical Imaging Technology

Course Description

Students work as registered professionals in the field. Patient echo exams with normal and abnormal stress tests, normal and abnormal wall motion. Case study presentation. Prerequisite: Admission to Echocardiography Degree Completion program

Academic Level (Course Level)

Undergraduate

ECHO420B - Echo Externship

Overview

Course Subject Code	Course Number
ECHO	420B

Department

Medical Imaging Technology

Course Description

Students work as registered professionals in the field. Cardiac surgical echoes (TEE) and contrast studies using various pharmacological agents. Case study presentation. Prerequisite: Admission to Echocardiography Degree Completion program

Academic Level (Course Level)

Undergraduate

MIT103 - Intro to Medical Imaging

Overview

Course Subject Code	Course Number
MIT	103

Department

Medical Imaging Technology

Course Description

Orientation to the art and science of medical imaging. History and development of radiologic science, diagnostic medical sonography, vascular technology, nuclear medicine technology, medical ethics, health care industry, related professional organizations and regulatory agencies.

Academic Level (Course Level)

Undergraduate

MIT107 - Seminar

Overview

Course Subject Code	Course Number
MIT	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term)

Academic Level (Course Level)

Undergraduate

MIT207 - Seminar

Overview

Course Subject Code	Course Number
MIT	207

Department

Medical Imaging Technology

Academic Level (Course Level)

Undergraduate

MIT209 - PACS I: Intro to PACS

Overview

Course Subject Code	Course Number
MIT	209

Department

Medical Imaging Technology

Course Description

An introduction to Picture Archiving Communications System (PACS). PACS Workflow within the department and interdepartmentally, PARCA and CIIP certification, procurement, and PACS system administration. Prerequisites: None.

Academic Level (Course Level)

Undergraduate

MIT219 - PACS II: Comm and Admin

Overview

Course Subject Code	Course Number
MIT	219

Department

Medical Imaging Technology

Course Description

Study of policies and procedures for PACS. Observation of the healthcare organization and PACS role within the organization. Overview of PACS components, image acquisition viewing of images, and image archiving. Prerequisites: None.

Academic Level (Course Level)

Undergraduate

MIT225 - Patient Care in Sonography

Overview

Course Subject Code	Course Number
MIT	225

Department

Medical Imaging Technology

Course Description

Basic concepts of patient care, infection control procedures, transport of critically ill patients, and recognition of emergency situations. Sonographer's responsibility to the patient, the patient's family, and the sonography profession.

Academic Level (Course Level)

Undergraduate

MIT229 - PACS III: Tech Req & Imag Qual

Overview

Course Subject Code	Course Number
MIT	229

Department

Medical Imaging Technology

Course Description

Overview of computer basics, technical requirements, and Operating System basics. An introduction to HIPAA and PACS image quality. Prerequisites: None.

Academic Level (Course Level)

Undergraduate

MIT231 - Sonographic Princ & Instru I

Overview

Course Subject Code	Course Number
MIT	231

Department

Medical Imaging Technology

Course Description

Properties of sound waves, propagation and interaction of ultrasound in tissue, basic ultrasound instrumentation, static, and real-time ultrasound imaging principles and artifacts are covered. Laboratory includes demonstration of wave characteristics and introduction to basic instrumentation of real-time ultrasound imaging.

Academic Level (Course Level)

Undergraduate

MIT232 - Sonographic Princ & Instru II

Overview

Course Subject Code	Course Number
MIT	232

Department

Medical Imaging Technology

Course Description

Advanced physical principles. Hemodynamics, Doppler physics, color imaging, and artifacts associated with them are covered. Digital signal and image processing and bio effects are also discussed. Laboratory develops instrumentation skills.

Academic Level (Course Level)

Undergraduate

MIT234 - Trauma/Sur Radiography

Overview

Course Subject Code	Course Number
MIT	234

Department

Medical Imaging Technology

Academic Level (Course Level)

Undergraduate

MIT239 - PACS IV: Implem & Sys Mgmt

Overview

Course Subject Code	Course Number
MIT	239

Department

Medical Imaging Technology

Course Description

Overview of implementing PACS. Starting from procurement to the Return of Investment (ROI). This will include the proposal, approval process, integration, a post install. Class will include the study of DICOM and HL7. Prerequisites: None.

Academic Level (Course Level)

Undergraduate

MIT249 - PACS V: DICOM

Overview

Course Subject Code	Course Number
MIT	249

Department

Medical Imaging Technology

Course Description

Study of the DICOM standard and how it allows for modalities to communicate inside and outside of a facility.

Academic Level (Course Level)

Undergraduate

MIT259 - PACS VI: PACS Security

Overview

Course Subject Code	Course Number
MIT	259

Department

Medical Imaging Technology

Course Description

Overview of Information Technology, IHE, security, structured reporting and networking fundamentals. Prerequisites: None.

Academic Level (Course Level)

Undergraduate

MIT307 - Seminar

Overview

Course Subject Code	Course Number
MIT	307

Department

Medical Imaging Technology

Course Description

Terms and hours to be arranged.

Academic Level (Course Level)

Undergraduate

MIT308 - Cadaver Imaging Problems

Overview

Course Subject Code	Course Number
MIT	308

Department

Medical Imaging Technology

Course Description

Cadaver imaging is a group centered project that allows imaging students to advance their technical, professional, and leadership skills. The process of imaging a human cadaver presents unique opportunities to identify and solve an infinite variety of complex problems.

Academic Level (Course Level)

Undergraduate

MIT310 - Cadaver Imaging Problems

Overview

Course Subject Code	Course Number
MIT	310

Department

Medical Imaging Technology

Course Description

Cadaver imaging is a group centered project that allows imaging students to advance their technical, professional, and leadership skills. The process of imaging a human cadaver presents unique opportunities to identify and solve an infinite variety of complex problems. Offered to all junior level medical imaging students.

Academic Level (Course Level)

Undergraduate

MIT341 - Magnetic Resonance Imaging

Overview

Course Subject Code	Course Number
MIT	341

Department

Medical Imaging Technology

Course Description

Physics and principles used in the production used in the production of magnetic resonance images and spectroscopy, including: safety issues, static and gradient magnetic fields, coils, resonance, frequencies, relaxation, and computer applications. Basic pulse sequences are examined in detail.

Academic Level (Course Level)

Undergraduate

MIT342 - Mag. Resonance Imaging II

Overview

Course Subject Code	Course Number
MIT	342

Department

Medical Imaging Technology

Course Description

Advanced principles used in the production of magnetic resonance images. MRI safety, coil function and selection, advanced pulse sequences, magnetic resonance angiography (MRA), motion control techniques, pathology, artifacts, functional magnetic resonance imaging (fMRI).

Academic Level (Course Level)

Undergraduate

MIT356 - Computed Tomography II

Overview

Course Subject Code	Course Number
MIT	356

Department

Medical Imaging Technology

Course Description

CT patient care, radiation dose reduction, and adverse effects of contrast media. Sectional anatomy and pathology of the abdomen, pelvis, chest, head, and spine. Laboratory simulation of imaging protocols and scan post processing. Preparation for ARRT CT registry examination.

Academic Level (Course Level)

Undergraduate

MIT365 - Mag. Resonance Imaging Review

Overview

Course Subject Code	Course Number
MIT	365

Department

Medical Imaging Technology

Course Description

Review of MR principles of image production for practicing and training MR technologists who intend to sit for the American Registry of Radiologic Technologists MRI examination.

Academic Level (Course Level)

Undergraduate

MIT407 - Seminar

Overview

Course Subject Code	Course Number
MIT	407

Department

Medical Imaging Technology

Course Description

Hours to be arranged each term.

Academic Level (Course Level)

Undergraduate

MIT411 - Magnetic Resonance Externship

Overview

Course Subject Code	Course Number
MIT	411

Department

Medical Imaging Technology

Course Description

This one-term (3-month) practicum is designed to develop the skills of the student in the special imaging modalities, i.e., computed tomography, magnetic resonance imaging, ultrasound, nuclear medicine and special radiographic procedures. The student is sent to an affiliated hospital that has the required special imaging equipment to give the hands-on experience to develop competency in each of three areas chosen by the student. The student will spend one month in each selected area.

Academic Level (Course Level)

Undergraduate

NMT107 - Seminar

Overview

Course Subject Code	Course Number
NMT	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

NMT205 - Nuclear Med Admin

Overview

Course Subject Code	Course Number
NMT	205

Department

Medical Imaging Technology

Course Description

Orientation to the principles of management, marketing nuclear medicine services, and administrative procedures. Prerequisite: MIT 103 with grade "C" or better.

Academic Level (Course Level)

Undergraduate

NMT207 - Seminar

Overview

Course Subject Code	Course Number
NMT	207

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

NMT212 - Nuc Med Phy/Radiation Biophy

Overview

Course Subject Code	Course Number
NMT	212

Department

Medical Imaging Technology

Course Description

Interactions of radiation with matter. Introduction to the cellular and systemic responses to radiation. Early and late somatic and genetic effects described. Critical organ dose calculations risks versus benefits. Overview of film processors, associated chemistry.

Academic Level (Course Level)

Undergraduate

NMT215 - Radiochem/Radiopharmacy

Overview

Course Subject Code	Course Number
NMT	215

Department

Medical Imaging Technology

Course Description

The design and function of radionuclide generators, labeling procedures, sterility and pyrogenicity considerations, radionuclide and radiochemical quality control procedures.

Academic Level (Course Level)

Undergraduate

NMT217 - Patient Care

Overview

Course Subject Code	Course Number
NMT	217

Department

Medical Imaging Technology

Course Description

Basic concepts of patient care, including consideration of physical and psychological needs of the patient and family. Routine and emergency patient care procedures. Infection control procedures utilizing Universal Precautions. Role of the nuclear medicine technologist in patient education.

Academic Level (Course Level)

Undergraduate

NMT225 - Nuclear Phy/Instrumtn

Overview

Course Subject Code	Course Number
NMT	225

Department

Medical Imaging Technology

Course Description

An in-depth examination of the physics in nuclear medicine, principles of detection, considerations of counting and imaging, collimators, planar imaging and associated quality assurance and control. Use of all major instrumentation in nuclear medicine departments.

Academic Level (Course Level)

Undergraduate

NMT256 - Cardiovascular Imaging

Overview

Course Subject Code	Course Number
NMT	256

Department

Medical Imaging Technology

Course Description

Introduction to Cardiovascular Imaging techniques in Nuclear Medicine including planar, SPECT, and PET imaging acquisition and processing protocols, radiopharmaceuticals, cardiac anatomy and physiology, exercise and pharmacological stress testing, and EKG principles.

Academic Level (Course Level)

Undergraduate

NMT307 - Seminar

Overview

Course Subject Code	Course Number
NMT	307

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

NMT311 - Imaging Procedures I

Overview

Course Subject Code	Course Number
NMT	311

Department

Medical Imaging Technology

Course Description

Proper patient care before, during, and after the procedure, identification and administration of prescribed radio pharmaceuticals. The use of imaging devices and external detectors for body organ imaging.

Academic Level (Course Level)

Undergraduate

NMT312 - Imaging Procedures II

Overview

Course Subject Code	Course Number
NMT	312

Department

Medical Imaging Technology

Course Description

Proper patient care before, during and after the procedure, identification and administration of prescribed radio pharmaceuticals. The use of imaging devices and external detectors for body organ imaging.

Academic Level (Course Level)

Undergraduate

NMT313 - Therapeutic Procedures

Overview

Course Subject Code	Course Number
NMT	313

Department

Medical Imaging Technology

Course Description

Common Therapeutic applications of radionuclides, dose ranges for each application, and proper techniques for calculating quantities of administered radiopharmaceuticals. Includes patient care, follow-up procedures and disposal of excreta.

Academic Level (Course Level)

Undergraduate

NMT315 - Breast Imaging

Overview

Course Subject Code	Course Number
NMT	315

Department

Medical Imaging Technology

Course Description

An in-depth analysis of breast anatomy and physiology, positioning, and interventional methods. Patient education and breast cancer statics will also be discussed at great lengths. Junior standing in Nuclear Medicine required.

Academic Level (Course Level)

Undergraduate

NMT325 - SPECT Imaging/Comp Appl

Overview

Course Subject Code	Course Number
NMT	325

Department

Medical Imaging Technology

Course Description

Single photon emission computed tomography (SPECT) imaging and computer applications as applied to nuclear medicine imaging. Demonstration of computer techniques and ECG monitoring and interpretation. Theoretic basis of computer operations and medical applications in nuclear medicine. Lab experience with computerized systems, including hospital sites.

Academic Level (Course Level)

Undergraduate

NMT346 - Magnetic Resonance

Overview

Course Subject Code	Course Number
NMT	346

Department

Medical Imaging Technology

Course Description

Physics and principles used in the production of magnetic resonance images and spectroscopy. Static magnetic fields, gradient magnetic fields, secondary coil fields, nuclear magnetic resonance (NMR), spatial domain, frequency domain, computer data acquisition, relaxation times, pulse sequence diagrams. Laboratory simulation is included.

Academic Level (Course Level)

Undergraduate

NMT355 - Computed Tomography

Overview

Course Subject Code	Course Number
NMT	355

Department

Medical Imaging Technology

Course Description

X-ray physics, scanner components, and data acquisition of computed tomography. Image reconstruction, manipulation, and artifacts. CT patient care and imaging procedures of the head, neck, spine, chest, abdomen, pelvis and musculoskeletal system. Laboratory simulator practice on image manipulation, scan post processing and reconstruction.

Academic Level (Course Level)

Undergraduate

NMT367 - PET Imaging

Overview

Course Subject Code	Course Number
NMT	367

Department

Medical Imaging Technology

Course Description

Introduction to Position Emission Tomography (PET) imaging techniques including acquisition protocols, processing protocols, quality control procedures, radiation protection, patient screening, radiopharmaceuticals, image fusion, and imaging procedures.

Academic Level (Course Level)

Undergraduate

NMT388 - Externship Preparation

Overview

Course Subject Code	Course Number
NMT	388

Department

Medical Imaging Technology

Course Description

Review and summarize key concepts in Nuclear Medicine. Focus is on patient care and interpersonal scenarios the externship student will likely face while in the hospital environment. Review and discussion of the NMT Externship Handbook and Procedures Log. Prerequisites: Third quarter junior-level status is required for this course.

Academic Level (Course Level)

Undergraduate

NMT407 - Seminar

Overview

Course Subject Code	Course Number
NMT	407

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

NMT410 - Nuclear Med Tech Extern

Overview

Course Subject Code	Course Number
NMT	410

Department

Medical Imaging Technology

Course Description

All students must complete four consecutive terms (12 months) of clinical experience in nuclear medicine technology at an OIT approved site. Students will work under the direct supervision of a registered Nuclear Medicine Technologist. Prerequisite: All NMT courses with grade "C" or better.

Academic Level (Course Level)

Undergraduate

RDSC107 - Seminar

Overview

Course Subject Code	Course Number
RDSC	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

RDSC201 - Imaging Techniques I

Overview

Course Subject Code	Course Number
RDSC	201

Department

Medical Imaging Technology

Course Description

Demonstration and practice with the phenomena and causes of image formation and visualization. The context includes studies of effects of technique-factor changes, effects of the use of various accessories and effects of chemicals in film processing. Causes of radiographic artifacts are discussed and explored. Includes the study of interactions of radiation and matter.

Academic Level (Course Level)

Undergraduate

RDSC202 - Imaging Techniques II

Overview

Course Subject Code	Course Number
RDSC	202

Department

Medical Imaging Technology

Course Description

Radiographic principles and principles of radiographic quality. Study of theory and practice in methods of protection against ionizing radiation.

Academic Level (Course Level)

Undergraduate

RDSC205 - Patient Care

Overview

Course Subject Code	Course Number
RDSC	205

Department

Medical Imaging Technology

Course Description

Basic concepts of patient care, including consideration of physical and psychological needs of the patient and family. Routine and emergency patient care procedures. Infection control procedures utilizing Universal Precautions. Role of the radiographer in patient education.

Academic Level (Course Level)

Undergraduate

RDSC207 - Seminar

Overview

Course Subject Code	Course Number
RDSC	207

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term)

Academic Level (Course Level)

Undergraduate

RDSC210 - Radiograph Position I

Overview

Course Subject Code	Course Number
RDSC	210

Department

Medical Imaging Technology

Course Description

Demonstration and practice of the routine and special radiographic positions of bones of the upper and lower extremities excluding the shoulder and pelvic girdles.

Academic Level (Course Level)

Undergraduate

RDSC211 - Radiograph Position II

Overview

Course Subject Code	Course Number
RDSC	211

Department

Medical Imaging Technology

Course Description

Demonstration and practice of routine and special radiographic positions of the axial skeleton, shoulder, and pelvic girdles.

Academic Level (Course Level)

Undergraduate

RDSC233 - Contrast Media Proc

Overview

Course Subject Code	Course Number
RDSC	233

Department

Medical Imaging Technology

Course Description

Routine radiographic examinations of the urinary system, gastrointestinal biliary system, respiratory system, and nervous system, using various contrast medias and filming techniques. All radiographically significant anatomy, physiology, pathology, terminology, and topography, including all contrast studies of these systems.

Academic Level (Course Level)

Undergraduate

RDSC235 - Equipment Operation & Maint

Overview

Course Subject Code	Course Number
RDSC	235

Department

Medical Imaging Technology

Course Description

Basic components and operation of radiographic, fluoroscopic, and mobile units. Evaluation, calibration, and maintenance of radiographic equipment and accessories.

Academic Level (Course Level)

Undergraduate

RDSC272 - Radiation Protection

Overview

Course Subject Code	Course Number
RDSC	272

Department

Medical Imaging Technology

Course Description

Basic properties, sources, units of measurement, dosimetry and biological effects of radiation. Methods of personnel protection and minimizing patient exposure. NCRP recommendations for protective devices and personnel monitoring.

Academic Level (Course Level)

Undergraduate

RDSC301 - Radiograph Position III

Overview

Course Subject Code	Course Number
RDSC	301

Department

Medical Imaging Technology

Course Description

Demonstration and practice of routine and special radiographic positions of the skull, facial bones, and paranasal sinuses.

Academic Level (Course Level)

Undergraduate

RDSC307 - Seminar

Overview

Course Subject Code	Course Number
RDSC	307

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

RDSC320 - Surg/Trauma/Mobl Rdgrph

Overview

Course Subject Code	Course Number
RDSC	320

Department

Medical Imaging Technology

Course Description

Routine radiographic examinations of the reproductive, muscular, nervous, skeletal and circulatory systems. Also including emergency and surgical procedures, using various contrast media and filming techniques. The comprehensive study of all radiographically significant anatomy, physiology, pathology, terminology, and topography including all contrast studies of these systems. Control of microorganism by physical and chemical means is incorporated as necessary.

Academic Level (Course Level)

Undergraduate

RDSC326 - Crdvsclr/Interv Tech

Overview

Course Subject Code	Course Number
RDSC	326

Department

Medical Imaging Technology

Course Description

Demonstration and practice of special radiographic examinations of nervous and vascular systems including use of serial film changers and pressure injectors, and other necessary equipment. Also includes related nursing procedures.

Academic Level (Course Level)

Undergraduate

RDSC354 - Mammography

Overview

Course Subject Code	Course Number
RDSC	354

Department

Medical Imaging Technology

Course Description

An in-depth analysis of mammographic positioning, exposure techniques, quality control, film critiquing, and radiation safety. Includes mock registry exam.

Academic Level (Course Level)

Undergraduate

RDSC355 - Computed Tomography

Overview

Course Subject Code	Course Number
RDSC	355

Department

Medical Imaging Technology

Course Description

X-ray physics, scanner components and data acquisition of computed tomography. Image reconstruction, manipulation and artifacts. CT patient care and imaging procedures of the head, neck, spine, chest, abdomen, pelvis and musculoskeletal system.

Academic Level (Course Level)

Undergraduate

RDSC356 - Magnetic Resonance

Overview

Course Subject Code	Course Number
RDSC	356

Department

Medical Imaging Technology

Course Description

Physics and principles used in the production of magnetic resonance images and spectroscopy. Static magnetic fields, gradient magnetic fields, secondary coil fields, nuclear magnetic resonance (NMR), spatial domain, frequency domain, computer data acquisition, relaxation times, pulse sequence diagrams.

Academic Level (Course Level)

Undergraduate

RDSC366 - Radiographic Pathology

Overview

Course Subject Code	Course Number
RDSC	366

Department

Medical Imaging Technology

Course Description

An overview of common pathological conditions encountered in the clinical setting, for RDSC students. Pathology is categorized by body systems. The students will learn the pathology as they relate to: signs and symptoms, etiology, imaging diagnosis and prognosis and treatment.

Academic Level (Course Level)

Undergraduate

RDSC388 - Externship Preparation

Overview

Course Subject Code	Course Number
RDSC	388

Department

Medical Imaging Technology

Course Description

Presentation of key concepts related to Radiologic Science externship and required in-services. Focus is on patient care and interpersonal scenarios the externship student will likely face while in the clinical environment. Review and discussion of the RDSC Externship Handbook. This course is a mandatory course that must be completed prior to externship.

Academic Level (Course Level)

Undergraduate

RDSC407 - Seminar

Overview

Course Subject Code	Course Number
RDSC	407

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term)

Academic Level (Course Level)

Undergraduate

RDSC410 - Rad Science Externship

Overview

Course Subject Code	Course Number
RDSC	410

Department

Medical Imaging Technology

Course Description

Students must complete four terms (12 months) of clinical experience in both general radiography and special imaging modalities to include computerized tomography, ultrasound, nuclear medicine and/or special radiographic procedures in an affiliated hospital. The student will complete all phases of general radiography and one month in each of three of the special imaging modalities. Affiliated hospitals are approved by the Joint Review Committee on Education in Radiologic Technology. The students are under the direct supervision of qualified radiographers and radiologists. Prerequisite: All academic course work in the Radiologic Science curriculum.

Academic Level (Course Level)

Undergraduate

RDSC411 - Special Rad Sci Extern

Overview

Course Subject Code	Course Number
RDSC	411

Department

Medical Imaging Technology

Course Description

This one-term (3-month) practicum is designed to develop the skills of the student in the special imaging modalities, i.e., computed tomography, magnetic resonance imaging, ultrasound, nuclear medicine and special radiographic procedures. The student is sent to an affiliated hospital that has the required special imaging equipment to give the hands-on experience to develop competency in each of three areas chosen by the student. The student will spend one month in each selected area. Prerequisite: The student must have completed all academic course work in the Medical Imaging program with grade "C" or better and be a Registered Technologist.

Academic Level (Course Level)

Undergraduate

RDSC411A - Special Rad Sci Extern

Overview

Course Subject Code	Course Number
RDSC	411A

Department

Medical Imaging Technology

Course Description

This two term practicum is designed to develop skills of the degree completion student in special imaging modalities of computed tomography, magnetic resonance imaging, cardiovascular/interventional technology, mammography, quality assurance, nuclear medicine technology, or sonography. The student selects a local hospital or medical center that has the necessary equipment. Upon approval of the facility, the student begins a supervised experience to develop competencies in each of three chosen areas. Must be an ARRT registered technologist in good standing, and have completed all the academic course work in the Medical Imaging curriculum with grade "C" or better.

Academic Level (Course Level)

Undergraduate

RDSC411B - Special Rad Sci Extern

Overview

Course Subject Code	Course Number
RDSC	411B

Department

Medical Imaging Technology

Course Description

This two term practicum is designed to develop skills of the degree completion student in special imaging modalities of computed tomography, magnetic resonance imaging, cardiovascular/interventional technology, mammography, quality assurance, nuclear medicine technology, or sonography. The student selects a local hospital or medical center that has the necessary equipment. Upon approval of the facility, the student begins a supervised experience to develop competencies in each of three chosen areas. Must be an ARRT registered technologist in good standing, and have completed all the academic course work in the Medical Imaging curriculum with grade "C" or better.

Academic Level (Course Level)

Undergraduate

VAS107 - Seminar

Overview

Course Subject Code	Course Number
VAS	107

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

VAS207 - Seminar

Overview

Course Subject Code	Course Number
VAS	207

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term)

Academic Level (Course Level)

Undergraduate

VAS214 - Vascular Anatomy

Overview

Course Subject Code	Course Number
VAS	214

Department

Medical Imaging Technology

Course Description

Detailed consideration of the gross and microscopic anatomy of arteries and veins throughout the human body. Laboratory includes cadaver dissection, anatomical models, and an introduction to instrumentation and basic ultrasound scanning techniques.

Academic Level (Course Level)

Undergraduate

VAS225 - Patient Mgmt Practices

Overview

Course Subject Code	Course Number
VAS	225

Department

Medical Imaging Technology

Course Description

Current issues in the practice of vascular technology with emphasis on basic concepts of patient care, infection control procedures, and the technologist's responsibility to the patient, the patient's family, and the vascular technology profession.

Academic Level (Course Level)

Undergraduate

VAS245 - Periphrl Venous Disease

Overview

Course Subject Code	Course Number
VAS	245

Department

Medical Imaging Technology

Course Description

Investigation to the pathophysiology of venous disease with emphasis on theoretical and practical considerations of diagnostic methods of venous testing. These include clinical assessment, plethysmograph, and Duplex Imaging of lower extremity veins.

Academic Level (Course Level)

Undergraduate

VAS246 - Perphrl Arterial Disease

Overview

Course Subject Code	Course Number
VAS	246

Department

Medical Imaging Technology

Course Description

Investigation of the pathophysiology of arterial occlusive disease with emphasis on the theoretical and practical considerations of diagnosis methods of arterial testing. These include clinical assessment, physiological evaluation, and Duplex imaging of lower extremity arteries.

Academic Level (Course Level)

Undergraduate

VAS307 - Seminar

Overview

Course Subject Code	Course Number
VAS	307

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

VAS335 - Radiographic Vascular Anatomy

Overview

Course Subject Code	Course Number
VAS	335

Department

Medical Imaging Technology

Course Description

Survey of medical imaging modalities ancillary to vascular sonography including angiography, digital subtraction angiography, computerized tomography and magnetic resonance angiography. Student teams will prepare case studies comparing the efficacy of these imaging modalities.

Academic Level (Course Level)

Undergraduate

VAS337 - Survey of Echocardiography

Overview

Course Subject Code	Course Number
VAS	337

Department

Medical Imaging Technology

Course Description

A survey of basic echocardiography with emphasis on normal cardiac anatomy and abnormal disease states. Standard sonographic imaging techniques of adult echocardiography, including instrumentation and protocols.

Academic Level (Course Level)

Undergraduate

VAS365 - Abdominal Vascular Disease

Overview

Course Subject Code	Course Number
VAS	365

Department

Medical Imaging Technology

Course Description

Diagnostic methods of abdominal and visceral vascular disease testing. Includes aorto-iliac, renal artery and kidney, mesenteric system, liver system and transplantations. Laboratory emphasizes advanced instrumentation and scanning techniques, patient interviews, clinical signs and symptoms, physical assessment and findings.

Academic Level (Course Level)

Undergraduate

VAS366 - Special Circulatory Problems

Overview

Course Subject Code	Course Number
VAS	366

Department

Medical Imaging Technology

Course Description

Diagnostic methods of testing the efficacy of vascular surgical procedures and interventions. To include arterial bypass grafts, organ transplants, and dialysis access grafts. Venous and arterial mapping, upper extremity venous and arterial disease testing, IVUS, pseudo aneurysm treatment, and compartment syndrome will also be covered.

Academic Level (Course Level)

Undergraduate

VAS367 - Cerebrovascular Disease

Overview

Course Subject Code	Course Number
VAS	367

Department

Medical Imaging Technology

Course Description

Theoretical and practical considerations of diagnostic methods of testing arterial and venous diseases affecting the vasculature of the head and neck including the intracerebral vessels. Laboratory includes advanced instrumentation and scanning techniques, and instruction on patient interviewing, clinical signs and symptoms, physical assessment and findings.

Academic Level (Course Level)

Undergraduate

VAS375 - Survey Abdom Sonography

Overview

Course Subject Code	Course Number
VAS	375

Department

Medical Imaging Technology

Course Description

A survey of basic abdominal sonography with emphasis on normal abdominal anatomy and abnormal disease states. Standard sonographic imaging techniques of general abdomen, instrumentation, and abdominal protocols. Corequisite: VAS 365.

Academic Level (Course Level)

Undergraduate

VAS385 - Vascular Lab Mgmt

Overview

Course Subject Code	Course Number
VAS	385

Department

Medical Imaging Technology

Course Description

Focus on human resource skills as necessary to manage a vascular laboratory. Includes the interview process, hiring and firing, as well as employee performance evaluation. Other topics will include reimbursement, licensure, accreditation and other management issues.

Academic Level (Course Level)

Undergraduate

VAS388 - Externship Preparation

Overview

Course Subject Code	Course Number
VAS	388

Department

Medical Imaging Technology

Course Description

Review and summarization of key concepts in Vascular Technology. Focus is on patient care and interpersonal scenarios the externship student will likely face while in the hospital environment or independent vascular lab. Review and discussion of the Vascular Technology Externship Handbook.

Academic Level (Course Level)

Undergraduate

VAS407 - Seminar

Overview

Course Subject Code	Course Number
VAS	407

Department

Medical Imaging Technology

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

VAS420 - Vascular Tech Extern

Overview

Course Subject Code	Course Number
VAS	420

Department

Medical Imaging Technology

Course Description

All B.S. students complete four terms (12 months) of clinical experience in Vascular Technology at an affiliated clinical site. Students work under the direct supervision of Registered Vascular Technologists and provide monthly log sheets and evaluation forms. Students prepare clinical case studies each term. Prerequisite: All academic course work in the Vascular Technology curriculum.

Academic Level (Course Level)

Undergraduate

VAS420B - Special Vas Tech Extern

Overview

Course Subject Code	Course Number
VAS	420B

Department

Medical Imaging Technology

Course Description

This two term special externship is designed for the degree completion student. Students working in a clinical vascular setting will prepare clinical case studies as well as rotate through special imaging modalities. Prerequisite: Be an ARDMS or CCI Registered Vascular Technologist in good standing, and have completed academic course work in the Medical Imaging curriculum with grade "C" or better.

Academic Level (Course Level)

Undergraduate

VAS420A - Special Vas Tech Extern

Overview

Course Subject Code	Course Number
VAS	420A

Department

Medical Imaging Technology

Course Description

This two term special externship is designed for the degree completion student. Students working in a clinical vascular setting will prepare clinical case studies as well as rotate through special imaging modalities. Prerequisite: Be an ARDMS or CCI Registered Vascular Technologist in good standing, and have completed academic course work in the Medical Imaging curriculum with grade "C" or better.

Academic Level (Course Level)

Undergraduate

Natural Sciences Department

Nate Bickford, *Department Chair*

Professors: H.-Y. Li, R. McClure, K. Usher, R. Wilde

Associate Professors: N. Bickford, K. Gandhi, J. Kellermann, J. Kinder, T. Lund, G. Pak

Assistant Professors: R. Edwards, T. Elliott, D. Grossnickle, W. Hung, D. Johnston, T. Owen, Y. Yang

Instructors: K. Farris, N. Pande

Degrees Offered

- Bachelor of Science in Biology-Health Sciences
- Bachelor of Science in Environmental Sciences
- Master of Science in Biomedical Sciences
- Master of Science in Natural Resources

Minors Offered

- Applied Physics
- Biology
- Chemistry
- Sustainability

The Department of Natural Sciences prepares students for challenging, rewarding careers in health, biological, and environmental sciences. The department also provides courses in biology, chemistry, and physics in support of degrees in nursing, medical imaging, dental hygiene, respiratory care, management and engineering programs.

Biology Programs

Many students have an interest in biology. At Oregon Tech we have designed two programs that prepare graduates for rewarding careers that require a strong foundation in biology. For outdoor or field-oriented options, please refer to the Environmental Sciences program in our department. It offers several emphases, which can readily be tailored to biological interests and student research projects. Graduates from our Environmental Sciences program often go on to careers with public and private agencies such as US Fish and Wildlife Service, US Forest Service and the Nature Conservancy. For medically-oriented options in biology, please see our Biology-Health Sciences program. It offers a strong preparation to apply to professional programs, exceeding the minimum requirements for highly competitive fields such as Medicine, Pharmacy, Dentistry, Veterinary Medicine, Physician Assistant, Physical Therapy, and others.

Biology-Health Sciences Program

Travis Lund, *Program Director*

Degree Offered

- Bachelor of Science in Biology-Health Sciences

Program Learning Outcomes

Upon graduating from the BHS program at Oregon Tech, students will be able to:

1. Demonstrate scientific knowledge and understanding.

a. Demonstrate foundational knowledge in the natural sciences (e.g., terminology, organization, classifications, appropriate use of units, methodologies, and fundamental principles).

b. Apply scientific principles to biological and medical examples/contexts.

2. Be proficient in scientific reasoning and critical thinking.

a. Analyze data to determine its relationship to principles, and evaluate the data for errors.

b. Analyze and evaluate content in biology.

3. Be able to effectively find and use resources from the literature.

4. Demonstrate effective oral, written and visual communication.

5. Demonstrate mathematical knowledge and skills in the biological sciences.

Objective and Career Opportunities

If you are interested in pre-medical, pre-dental, pre-veterinary, pre-pharmacy, pre-physical therapy, etc., then this is the major you want. The degree program provides an intensive course of study in the basic sciences, social sciences, humanities, communication, and mathematics to prepare students for entry into professional programs. The program will meet prerequisite requirements for graduate schools of medicine, dentistry, veterinary medicine, osteopathic medicine, optometry, pharmacy, podiatry, physician assistant, physical therapy and occupational therapy. These are all competitive graduate programs, and our graduates who apply to them have a strong record of acceptance. Our curriculum includes all of the core courses with labs in biology, anatomy & physiology, chemistry (general, organic, and biochemistry), and physics needed for applying to them, as well as upper-division science coursework that is tailored to medical fields, including cell biology, clinical pharmacology, medical genetics, medical microbiology, neuroscience, nutrition, parasitology, pathophysiology, virology, and immunology. We also have opportunities for undergraduate research that can engage students' interest and make them stand out as candidates for graduate programs. Courses in health management, medical microbiology, biochemistry, and molecular & cell biology also provide strong preparation for graduate work in biotechnology, public health, and medical administration. Some students transfer into Oregon Tech's Medical Laboratory Science program, before or after earning their Biology-Health Sciences degree. This major can also prepare one for a career in education with an emphasis in biology.

Student Preparation

The Biology-Health Sciences curriculum is a demanding instructional program requiring considerable effort in science and mathematics coursework. Prospective students are advised to complete at least three years of high school mathematics and a minimum of three years of high school science (biology, chemistry, and physics).

Pre-Professional Program in Dentistry

The pre-professional program in dentistry prepares the student for entrance into dental school and provides a B.S. degree in Biology-Health Sciences. The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that dental schools like to see, as well as upper-division coursework that is tailored to becoming a superior applicant. Most dental students have completed four years of college, and have a B.S. degree. Dental school typically lasts four years, although an accelerated degree may take only three years to finish. The length of a dental specialty residency depends on the specialty and the school it is affiliated with, so a specialty residency can range from two to six years.

Students are encouraged to work closely with their advisor to map out their curricular plan to prepare them for dental school application by sophomore year.

Admission to dental school is very competitive and requires strong academic achievement and extensive volunteering experience in dental settings. Students considering a career in dentistry should explore the websites of the schools they have interest in as the prerequisites for each may vary, and these can be tailored within our Biology-Health Sciences program. While our curriculum is very challenging, admission into dental school is highly competitive and requires strong academic achievement. The coursework at Oregon Tech helps students prepare for the dental admission test (DAT) offered by the American Dental Association. The test consists of a battery of four tests on the following: survey of the natural sciences, perceptual ability, reading comprehension, and quantitative reasoning.

The ADEA Associated American Dental Schools Application Service (ADEA AADSAS) is the centralized application service for U.S. dental schools. Please visit their website to find more information regarding dental school application.

For complete program requirements and a list of appropriate courses, please see the Biology-Health Sciences Program.

Pre-Professional Program in Medicine

The pre-professional program in medicine prepares the student for entrance into medical school and provides a B.S. degree in Biology-Health Sciences. The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that medical schools like to see as well as upper-division science coursework that is tailored to becoming a superior applicant. Admission into a medical school doctoral program requires a four-year bachelor's degree with a preference for a science major over a non-science major. Once accepted, medical school then requires approximately four years of education and three to six years of internship and residency.

Students are encouraged to work closely with an advisor in our program to map out their curricular and other plans by sophomore year to prepare them for medical school application. Students are urged to volunteer in medical settings, possibly during high school and especially during college. For students currently in high school, it is advised that the student enrolls in many sciences courses before college to help them prepare for future success. Increasingly, participation in undergraduate research, which is an optional part of the Biology-Health Sciences major, is recommended to develop and demonstrate strong scientific inquiry competency for medical school.

Students considering a career in medicine should explore the websites of the schools they have interest in as the prerequisites for each may vary, and these can be tailored within our Biology-Health Sciences program. While our curriculum is very challenging, admission into medical school is highly competitive and requires strong academic achievement. The coursework at Oregon Tech helps students prepare for the medical college admission test (MCAT) required by nearly all medical schools. The test, which is divided into four sections including: physical sciences, biological sciences, social sciences and critical reasoning sections, is used to predict a student's ability to succeed academically.

For complete program requirements and a list of appropriate courses please see the Biology-Health Sciences Program.

Pre-Professional Program in Pharmacy

The pre-professional program in pharmacy prepares the student for entrance into pharmacy school and provides a B.S. degree in Biology-Health Sciences. A doctor of pharmacy degree normally takes four years to complete. Most entering pharmacy students have completed four years of undergraduate education and possess a bachelor's degree in the sciences, including specific prerequisites for the pharmacy school. The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that pharmacy schools like to see as well as upper-division science coursework that is tailored to becoming a superior applicant. Oregon Tech has a cooperative agreement with Pacific University in Oregon that can allow qualifying students to complete their B.S. in Biology-Health Sciences from us and their Pharm.D. from Pacific University in as few as six years total.

Students are encouraged to work closely with their advisor in our program to map out their curricular and other plans by sophomore year to prepare them for pharmacy school application. Students are urged to begin volunteering in pharmacy settings, possibly during high school and especially during college. For students currently in high school, it is recommended to shadow and talk with pharmacists and to take many science courses before college to help prepare for future success.

The application process to pharmacy school is done through the Pharmacy College Application Service (PharmCAS). Students are encouraged to look at their web site while also looking at the sites of schools they have an interest in. Some pharmacy schools require the Pharmacy College Admissions Test (PCAT), but Oregon State University and the pharmacy schools in California do not. Admission to school is competitive so a strong undergraduate GPA, community service, and communication and leadership skills will help.

For complete program requirements and a list of appropriate courses please see the Biology-Health Sciences Program.

Pre-Professional Program in Physical Therapy

The pre-professional program in physical therapy prepares the student for applying for doctor of physical therapy (DPT) program and provides a B.S. degree in Biology-Health Sciences. The curriculum at The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that physical therapy schools like to see as well as upper-division science coursework that is tailored to becoming a superior applicant. Most DPT programs require applicants to earn a B.S. degree prior to admission. The length of professional DPT programs is typically three years. Oregon Tech is tentatively launching its DPT program in summer 2023. Students graduated from The Biology-Health Sciences will have advantage in admission to the program.

Each institution may require different courses and students are encouraged to work with their academic advisor to plan course schedule. Most DPT programs require applicants to meet minimum GPA and complete the Graduate Record Examination (GRE). Many programs require applicants to have volunteer or paid experiences working with patients under the supervision of a licensed physical therapist. This experience may be an important factor in the admissions process.

Most, but not all professional DPT programs, participate in the Physical Therapist Centralized Application Service (PTCAS). Applicants who wish to apply to a nonparticipating PTCAS program must apply directly to the institution using the DPT program's local application.

For complete program requirements and a list of appropriate courses, please see the Biology-Health Sciences Program.

Pre-Professional Program for Physician Assistant Studies

The pre-professional program for Physician Assistants (PA) prepares the student for entrance into that Master's program and provides a B.S. degree in Biology-Health Sciences. A Master's degree in PA Studies normally takes 2.5 years to complete. Most entering PA students have completed four years of undergraduate education and possess a bachelor's degree in the sciences, including specific prerequisites for the PA school. The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that PA schools like to see as well as upper-division science coursework that is tailored to becoming a superior applicant. In addition to strong academics, applying to P.A. programs requires a substantial amount of patient care experience, often over 1000 hours. Our pre-professional students often work nearby in healthcare settings during their undergraduate education. Some students choose to get a degree in an allied health major such as medical imaging or respiratory care, along with an additional year or more of science pre-requisites for applying to PA school, and our advisors help advise those students as well.

Students are encouraged to work closely with their advisor in our program to map out their curricular and other plans by sophomore year to prepare them for PA school application. Students are urged to begin volunteering in patient care settings, possibly during high school and especially during college. For students currently in high school, it is recommend to shadow and talk with PA's and other medical providers and to take many science courses before college to help prepare for future success.

For complete program requirements and a list of appropriate courses please see the Biology-Health Sciences Program.

Pre-Professional Program in Veterinary Medicine

The pre-professional program in veterinary medicine prepares students for entrance into veterinary school. A doctor of veterinary medicine program typically lasts four years and features in-depth training in animal sciences. Most veterinary colleges accept applicants have a B.S. degree at a four-year university. The Biology-Health Sciences curriculum at Oregon Tech provides a pathway to complete all the prerequisites that pharmacy schools like to see as well as upper-division science coursework that is tailored to becoming a superior applicant.

The prerequisites for each veterinary school vary slightly. Students are encouraged to work closely with their advisor in our program to map out their curricular and other plans by sophomore year to prepare them for veterinary school application. Admission to veterinary school is competitive and requires a good undergraduate GPA in addition to shadowing or working with a veterinarian, volunteering in an animal shelter, or working at a zoo or rehabilitation facility while completing their undergraduate courses. Experience in 4-H, FFA or a similar group is also great for the application. Graduate Record Examination (GRE) is required by most veterinary schools, and some also require the Biology GRE. The Medical College Admission Test (MCAT) is also accepted by some schools in place of the GRE.

Association of American Veterinary Medical Colleges (VMCAS) is the centralized application service for Colleges of Veterinary Medicine. Please visit their website to find more information regarding veterinary school application. Being a resident of a state that has a veterinary school is also a major advantage to being accepted since most schools take few out-of-state applicants. The WICHE program in the western United States allows out-of-state students to attend veterinary school at Colorado State University at Fort Collins, Oregon State University, Washington State University or the Midwestern University at Glendale, AZ veterinary schools for in-state tuition.

For complete program requirements and a list of appropriate courses please see the Biology – Health Sciences Program.

Master of Science in Biomedical Sciences

The graduate program leading to the degree of Master of Science in Biomedical Sciences prepares students to apply basic scientific principles to the practical scientific problems encountered in health industry, professional school, business, industry, government, and education. Graduates from the program will be able to apply the techniques of scientific research to real-world health problems. Course work may include several important areas relevant to biology and chemistry, including biomedicine, statistics, molecular, and cellular biology.

Thesis Option

For students interested in biological research, private sector jobs, and professional schools where research experience is valued. The thesis option requires successful completion of the on-campus core course, thesis research, and an approved thesis, as well as elective coursework. Thesis option students are required to defend their research results before a thesis defense committee.

3+2 graduate

A unique feature of the program is its 3+2 plan for undergraduate Biology-Health Sciences students. The 3+2 plan allows a student to simultaneously receive a BS and an MS degree in five years. With this plan, students are moved quickly toward expanding their academic and scientific horizons based on the student's abilities and personal motivation. Students in the 3+2 plan are expected to successfully complete the requirements for both the BS and MS degrees by the end of their fifth year in college.

Specific Admission Requirements for 3+2

Students are simultaneously awarded both the BS and MS degrees in five years, thus shortening the normal time to receive both degrees from six years to five years. They must apply and be admitted into the MS program by the Spring semester of their junior year (preferred) or by the start of the Fall semester of the senior year, and must meet the course requirements listed below. Students applying to the 3+2 plan must have a minimum 3.0 overall GPA and a minimum 3.25 GPA in their science coursework.

The application file for admission to the 3+2 plan must include:

1. A completed MS application form;
2. An Oregon Tech transcript;
3. Two letters of recommendation from faculty;
4. A statement of research interests; and
5. Satisfactory scores in 300 and 400 level classes

Non-Thesis Option

Available for a broad range of career professionals including science teachers requiring graduate coursework and individuals with positions in which an MS in Biomedical Sciences will qualify them for promotion. The Biomedical Sciences MS non-thesis option requires completion of the core, capstone, and elective coursework. The program of study for each student must be approved by a graduate committee and the Program Director.

Expected Student Learning Outcomes

Upon completion of the MS, students will have achieved the following goals:

Mastery of the Scientific Method

Independent development and mastery of problem-solving skills including experimental design, execution, critical analysis, and interpretation of the results of original scientific experimentation (thesis) or experiential learning (internship).

Dissemination of Scientific Products

Persuasive communication and defense of significant results of original scientific investigation presented in both written and oral format at a graduate peer-professional level.

Utilization of the Literature

Critical evaluation of an independently accessed comprehensive body of scientific literature which is project relevant and foundational in supporting and explaining research findings in both written and oral format.

Development of a Relevant Knowledge Base

Development of intrinsically held fundamental field-specific knowledge which will be applied to explain and defend research findings at a level of mastery expected by peer-professionals.

Professionalism & Self Responsibility

Maintain a consistent professional work ethic of independently taking the initiative and motivation to produce tangible products of a quality commensurate with peer-standards in graduate or professional schools or in the career field being pursued.

Outcomes Assessment Activities

The faculty will use a variety of methods for evaluating student learning outcomes. Students completing this degree program will give a public research seminar that will be evaluated by cognizant faculty members. A research thesis project will be designed, conducted, and publicly presented in writing and orally prior to defense and evaluation by the student's Graduate Advisory Committee.

Environmental Sciences Program

Degree Offered

- Bachelor of Science in Environmental Sciences

Dual Major Options

- Bachelor of Science in Civil Engineering and Environmental Sciences
- Bachelor of Science in Renewable Energy Engineering and Environmental Sciences

The Bachelor of Science degree in Environmental Sciences focuses on interdisciplinary scientific study of ecology, natural resources, wildlife, data analysis, and sustainability with emphases on management, research, and communication. Active learning is central to our program which is why many ES classes have labs or field components.

The program offers numerous and diverse opportunities for students to engage in applied research, resource management projects, and community education events with the support of faculty and professionals through local and regional partnerships.

The core curriculum for all BES tracks consists of three major options:

- **Introduction to Science:** Biology, Ecology, Chemistry, Intro Environmental Science, Physical geography, Physics
- **Data analysis:** Statistics, Geographic Information Systems, R – modeling
- **General Education:** Math, Writing, Speech, Humanities, Social Sciences

Environmental sciences encompass a broad range of opportunities for students after graduation which is why in their second year, students select a specific track to focus their education for their career aspirations. The BES program currently offers five options: Wildlife, Fisheries and Natural Resources; Water and Wetland Resources; Recreation and Science Ambassador; Environmental Business and Economics; Environmental Policy and Governance. See descriptions below.

Wildlife, Fisheries, and Natural Resources

Students gather, analyze, and interpret data on wildlife and their habitats to promote organismic success and sustainable natural resources. They evaluate ecosystems to determine environmental impacts from proposed actions while applying standards established through various environmental laws. Examples of track specific courses include Wildlife, Mammalogy, Fisheries, Ornithology, Policy and Management, Conservation Biology, and Ecological Restoration and Monitoring.

Potential careers associated with this option: wildlife tech, wildlife biologist, fisheries biologist, wildlife management, forestry tech, rangeland management.

Water and Wetland Resources

Prepares individuals to apply the principles of aquatic ecology, hydrology, and natural resources management to the development, conservation, and management of freshwater environments. Within this track students will use surveying, remote sensing, geographic information systems, and analytical chemistry techniques to collect data on lentic and lotic systems. Examples of track specific courses include Aquatic Ecology, Watershed Science and Technology, Water Resources, and Treatment Wetlands.

Potential careers associated with this option: hydrologic tech, environmental scientist, wetland scientist, environmental lab technician, water conservation specialist.

Recreation and Science Ambassador

This track prepares students for environmental education and recreation leadership careers. Students educate diverse audiences on environmental and recreation topics and empower their audience to get involved. Within this track students will design and implement standards aligned curriculum for environmental education programs. Examples of track specific courses include Environmental Education, Risk Assessment and Wilderness First Aid, Coaching in Application, and Wilderness Navigation.

Potential careers associated with this option: Interpretive Park Ranger, Environmental Educator, Recreation Ambassador, Park or Resource Specialist, Outreach Specialist.

Environmental Business and Economics

In business there is increasing demand to consider the environmental impact of corporate actions for compliance and conservation purposes. In this track students will develop the analytical skills to assess, allocate, and sustainably manage natural resources. Examples of track specific courses include Environmental Ethics, Principals of Business Management, Globalization, and Marketing.

Potential careers associated with this option: Sustainability Management, Environmental Reporting Specialist, Corporate Environmental Professional, Environmental Consultant, Natural Resource Manager.

Environmental Policy and Governance

The emphasis in this track is to examine the social dimensions of environmental issues. Students will gain the tools needed to inform environmental policy decisions. They will interpret current environmental laws and policies and advocate sustainable practices. Examples of track specific courses include Environmental Economics, Medical Sociology, Community Program Planning, and Leadership.

Potential careers associated with this option: Environmental Planning/Policy, Environmental Policy Analyst, Environmental Program Specialist, Compliance Analyst.

Environmental Chemistry

This emphasis is structured to provide a strong foundation for working in government, industrial or university labs studying the behavior of chemicals in the environment while emphasizing analytical skills. Provides students with tools to: (1) understand the processes governing chemical transformation in soil, water and air; (2) analyze for the key chemicals in the environment; and, (3) make meaningful predictions about the fates of these chemicals. This emphasis draws on subjects outside of a classical chemistry degree to include courses in atmospheric science, soil microbiology, environmental toxicology and mineralogy.

Graduates will be able to successfully pursue their career objectives in advanced education in graduate programs in areas such as atmospheric chemistry, geochemistry, toxicology and environmental chemistry and in a range of scientific careers including regulatory agencies, environmental consulting firms and industries concerned with the environmental impact and fate of their products.

Program Learning Outcomes

Upon completion of the program, students will have demonstrated the following abilities:

1. Attain applicable foundational knowledge, technical skills, and information literacy in several core areas of ecology, natural resources, & environmental sciences.
1. Actively collaborate with local and regional agencies, organizations, and community members that represent a diversity of perspectives.
1. Make and advocate for science-based and sustainable solutions to local and global environmental issues.
1. Apply, interpret, and communicate appropriate analytical and statistical techniques to answer data driven scientific questions.
1. Demonstrate geospatial literacy through the utilization of appropriate technology to identify and address environmental problems.

Student Preparation

We believe there is a place in our program for everyone with an interest in natural resources, environmental issues, business management, conservation and sustainability, environmental education, or just being in the great outdoors! Environmental sciences is a huge field that can accommodate a wide range of individual interests and skill whether it's working with wild animals, plants, people, or computers and technology. We encourage students to explore the diversity of job opportunities with federal, state, and tribal agencies, non-governmental organizations (NGOs), and private industries to help guide your studies.

Career Opportunities

Our faculty and partners are here to help you build an impressive resume of academic and work experience that will place you in the job or graduate program of your choice. Graduates can expect to find employment in federal, state, and tribal government agencies, non-governmental organizations (NGOs), and education and research institutions. Students are also well prepared to enter graduate school. Students graduating from our program have taken positions with the U.S. Geological Survey, U.S. Bureau of Reclamation, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, Oregon Department of Forestry, Oregon State Police Wildlife Enforcement, Klamath County Health Department, Klamath Irrigation District, Klamath County Soil and Water Conservation District, the Nature Conservancy, and JELD-WEN Windows and Doors.

Degree Requirements

Students must meet the general education requirements, as stated elsewhere in this catalog, and complete the courses listed in the curriculum to obtain a Bachelor of Science in Environmental Sciences. Students are encouraged to develop a option area based on their own interests.

Students are required to pass each science course with a grade of "C" or better. This requirement is based on the quantitative skills needed in later courses as well as the degree of integration in subject material that is present throughout the program.

Masters Natural Resources

The graduate program leading to the degree of Master of Science in Natural Resources prepares students to apply basic scientific principles to the practical scientific problems encountered in business, industry, government, and education. Graduates from the program will be able to apply the techniques of scientific research to real-world environmental problems. Course work may include several important areas relevant to biology, including conservation, statistics, environmental, molecular, and cellular biology.

Students are simultaneously awarded both the BS and MS degrees in five years, thus shortening the normal time to receive both degrees from six years to five years. With this plan, students are moved quickly toward expanding their academic and scientific horizons based on the student's abilities and personal motivation. Students in the 3+2 plan are expected to successfully complete the requirements for both the BS and MS degrees by the end of their fifth year in college.

Specific Admission Requirements for 3+2

Students are simultaneously awarded both the BS and MS degrees in five years, thus shortening the normal time to receive both degrees from six years to five years. They must apply and be admitted into the MS program by the Spring semester of their junior year (preferred) or by the start of the Fall semester of the senior year and meet the course requirements listed below. Students applying to the 3+2 plan must have a minimum 3.0 GPA in their science coursework.

The application file for admission to the 3+2 plan must include:

1. A completed MS application form;
2. An Oregon Tech transcript;
3. Two letters of recommendation from faculty;
4. A statement of research interests; and
5. Satisfactory scores in 300 and 400 level classes

For students interested in environmental research, agency jobs, and professional schools where research experience is valued. The thesis option requires successful completion of the on-campus core, thesis research and an approved thesis, as well as elective coursework.

Expected Student Learning Outcomes

Upon completion of the MS, students will have achieved the following goals:

Mastery of the Scientific Method

Independent development and mastery of problem solving skills including experimental design, execution, critical analysis, and interpretation of the results of original scientific experimentation (thesis) or experiential learning (internship).

Dissemination of Scientific Products

Persuasive communication and defense of significant results of original scientific investigation presented in both written and oral format at a graduate peer-professional level.

Utilization of the Literature

Critical evaluation of an independently accessed comprehensive body of scientific literature which is project relevant and foundational in supporting and explaining research findings in both written and oral format.

Development of a Relevant Knowledge Base

Development of intrinsically held fundamental field-specific knowledge which will be applied to explain and defend research findings at a level of mastery expected by peer-professionals.

Professionalism & Self Responsibility

Maintain a consistent professional work ethic of independently taking the initiative and motivation to produce tangible products of a quality commensurate with peer-standards in graduate or professional schools or in the career field being pursued.

Outcomes Assessment Activities

The faculty will use a variety of methods for evaluating student learning outcomes. Students completing this degree program will give a public research seminar that will be evaluated by cognizant faculty members. A research thesis project will be designed, conducted, and publicly presented in writing and orally prior to defense and evaluation by the student's Graduate Advisory Committee.

Applied Physics Minor

Students wishing to pursue the minor in Applied Physics should consult with physics faculty in the Natural Sciences Department for advising.

The Minor in Applied Physics is available to any student and is especially recommended for individuals interested in pursuing careers or graduate studies in physical or applied sciences and engineering. The Minor in Applied Physics requires completion of 32 credits of coursework as outlined below. A grade of "C" or better is required in all courses applied toward the minor.

Required Coursework:

- PHY 221 - General Physics w/Calculus Credit Hours: 4
- PHY 222 - General Physics w/Calculus Credit Hours: 4
- PHY 223 - General Physics w/Calculus Credit Hours: 4

- MATH 254 - Vector Calculus I Credit Hours: 4
- MATH 321 - Appl Diff Equation I Credit Hours: 4
-
- At least 12 credits of upper-division physics Electives (PHY prefix)

Approved Upper-Division Electives:

Up to six credits of the upper-division elective coursework may be satisfied by approved non-PHY electives that utilize the technical application of physics (see list below; other courses must be approved by the physics faculty and the chair of the Natural Sciences department on a case-by-case basis). Of the 12 upper-division elective credits, six cannot be counted toward the student's major program.

Any course 300-level or higher that has a PHY prefix.

Examples include:

- PHY 311 - Intro to Modern Physics Credit Hours: 3
- PHY 330 - Electricity & Magnetism Credit Hours: 3
- PHY 448 - Geometric Optics Credit Hours: 4
- PHY 449 - Radiometry & Optical Detect Credit Hours: 4
- PHY 450 - Physical Optics Credit Hours: 4
- PHY 451 - Lasers Credit Hours: 4
- PHY 452 - Waveguides and Fiber Optics Credit Hours: 4
- PHY 453 - Optical Metrology Credit Hours: 4
- PHY 410 - Math Meth: Fourier Optics Credit Hours: 3

Approved non-PHY Electives:

- EE 341 - Electricity/Magnetism w/Transm Credit Hours: 4
- EE 343 - Solid State Electronic Devices Credit Hours: 3
- REE 344 - Nuclear Energy Credit Hours: 3
- REE 345 - Wind Power Credit Hours: 3
- MECH 318 - Fluid Mechanics Credit Hours: 4
- MECH 323 - Heat Transfer I Credit Hours: 3
- MECH 417 - Fluid Mechanics II Credit Hours: 3
- MECH 480 - Mechanical Vibrations Credit Hours: 3
- MECH 313 - Thermodynamics II Credit Hours: 3

Note:

Not all courses are offered every year or on every campus. Additional prerequisites may be required; see catalog descriptions and recent course schedules for details.

Biology Minor

The biology minor is open to all majors except Biology-Health Sciences majors. It is especially recommended for students who want to further their knowledge in biology as it relates to their chosen field. The minor offers specialized courses in biology and will document student proficiency in specific areas of biology. A minimum of 24 credits is required to complete the minor. Any substitution for elective courses must be approved by an advisor in the Natural Sciences Department. Students are advised to pay strict attention to prerequisites when selecting courses for the biology minor.

Requirements of Minor

Required Core Courses:

- BIO 211 - Principles of Biology Credit Hours: 4
- BIO 212 - Principles of Biology Credit Hours: 4
- BIO 213 - Principles of Biology Credit Hours: 4

And a minimum of 12 credits upper-division course work from the following list:

a Courses offered in alternating years.

- BIO 313 - Botany and Plant Taxonomy Credit Hours: 4 a
- BIO 331 - Human Anatomy/Physiology I Credit Hours: 5
- BIO 332 - Human Anatomy/Physiology II Credit Hours: 5
- BIO 333 - Human Anatomy/Physiology III Credit Hours: 5
- BIO 337 - Aquatic Ecology Credit Hours: 4 a
- BIO 341 - Medical Genetics Credit Hours: 3
- BIO 443 - Cell Biology Credit Hours: 4

- BIO 345 - Medical Microbiology Credit Hours: 5
- BIO 352 - Developmental Biology Credit Hours: 4
- BIO 357 - Intro to Neuroscience Credit Hours: 3
- BIO 426 - Evolutionary Biology Credit Hours: 3
- BIO 436 - Immunology Credit Hours: 4
- BIO 495 - Research Project in Biology Credit Hours: Varies (1-4)
- BIO 455 - Senior Research Class Credit Hours: 1
- BIO 355 - Junior Research Class Credit Hours: 1

Biology-Health Sciences, Biology Research Sciences option, BS

Students will learn to apply concepts from a range of biological concepts such as biochemistry, molecular biology, genetics, and cell biology to a diverse array of questions ranging from how plants move towards light to the molecular basis of cancer. Students will also be exposed to interdisciplinary approaches to biology, such as bioinformatics, which combines genetics, and molecular biology. The broad scope of the Molecular and Cell Biology major makes it ideal for students interested in a wide variety of careers including medicine, postgraduate training in basic or translational research, biotechnology, science writing and policy, public health, and science education. Training in these areas is beneficial for careers in biological research, a number of high-tech industries, graduate school, and science professions. This challenging major requires creativity, rigor, and the ability to analyze, distill, and interpret data. A love of living systems and a level of comfort with complexity are both essential.

Programs

Overview

Program Long Title
Biology-Health Sciences

Program Title
Biology-Health Sciences

Department(s)
Natural Sciences

Degree Designation
BS

Program Level CIP Code
UG 260101

Degree Maps

Degree Map Name
Advising Guide - Biology-Health Sciences

Total Degree Map Credits
493 - 1089

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
This map shows required courses for the degree and recommended terms to take each course *(the term sequence is subject to change depending on transfer courses, AP/IB/CLEP credit, and course availability).*

Notes:

- MATH 361 may be replaced by STAT 243Z
- Minimum of 2 credits of lower-division health biology elective must be completed, chosen from the lower-division list above. Alternately, an additional elective from the upper-division list may be taken, in which case a total of at least 23 credits of upper-division health biology electives are required
- Minimum of 21 credits of upper-division health biology electives must be completed, chosen from the upper-division list above
- PHY 221, PHY 222, PHY 223, may be replaced by PHY 201, PHY 202, PHY 203 with advisor consent
- Advisor approval of all elective choices is required. Additional courses from the health biology lists above, and/or suitable courses from BUS, COM, ENV, MATH, PSY, or SOC are recommended
- SPE 321 may be replaced by COM 205 or COM 218Z
- WRI 327 may be replaced by WRI 345 or WRI 410

Year	Semester	Actual Credits	Progress
------	----------	----------------	----------

Freshman	Fall	340 - 934	Credits 0
Requirement Select MATH111Z - Precalculus I: Functions			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select WRI121Z - Composition I			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		4	
Progress Credits		-	
Contact Hours		4	
Clinical		-	
Criticality		No	

Requirement Select BIO222Z - Principles of Bio: Organisms			
Course Requirement Group			
Course Requirement Group - (Free Text)			
Minimum Grade		-	
Area		-	
Actual Credits		5	
Progress Credits		-	
Contact Hours		0 - 7	
Clinical		-	
Criticality		No	

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	327 - 921
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	12 - 14	0

Requirement Select

- BIO223Z - Principles of Biology: Ecology and Evolution

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- BIO109 - Intro to Medical Sciences

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	0 - 2
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	14	0

Requirement Select

- BIO221Z - Principles of Biology: Cells

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lower Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- BIO345 - Medical Microbiology

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- CHE221Z - General Chemistry I
- AND CHE227Z - General Chemistry I Lab

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	13	0

Requirement Select

- BIO209 - Current Research Tpc Med Sci I

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- **AND** CHE228Z - General Chemistry II Lab

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- CHE223Z - General Chemistry III
- **AND** CHE229Z - General Chemistry III Lab

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II

OR

- WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- BIO331 - Human Anatomy/Physiology I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CHE331 - Organic Chemistry I

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	16	0

Requirement Select

- BIO332 - Human Anatomy/Physiology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CHE332 - Organic Chemistry II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY222 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	16	0

Requirement Select

- BIO333 - Human Anatomy/Physiology III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 9
Clinical	-
Criticality	No

Requirement Select

- CHE333 - Organic Chemistry III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHY223 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	10	0

Requirement Select

- CHE450 - Biochemistry I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	12	0

Requirement Select

- BIO446 - Pathophysiology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- BIO409 - Crnt Rsch Tpcs in Med Sci II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

2

Progress Credits

-

Contact Hours

2

Clinical

-

Criticality

No

Requirement Select

- CHE451 - Biochemistry II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

- Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select • Advisor Approved Elective Credits (Generic)	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No
Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Overview

Program Long Title
Bio-Health Sci Research Option

Program Title
Bio-Health Sci Research Option

Department(s)
Natural Sciences

Degree Designation
BS

Program Level	CIP Code
UG	260101

Degree Maps

Degree Map Name
Advising Guide - Bio-Health Sci Research Option
Total Degree Map Credits
185
Degree Map Effective Catalog Year
2425 -
Degree Map Narrative
This map shows required courses for the degree and recommended terms to take each course <i>(the term sequence is subject to change depending on transfer courses, AP/IB/CLEP credit, and course availability).</i>
Notes:
1. <u>MATH 361</u> may be replaced by <u>STAT 243Z</u>
2. Minimum of 2 credits of lower-division health biology elective must be completed, chosen from the lower-division list above. Alternately, an additional elective from the upper-division list may be taken, in which case a total of at least 23 credits of upper-division health biology electives are required
3. Minimum of 21 credits of upper-division health biology electives must be completed, chosen from the upper-division list above
4. <u>PHY 221</u> , <u>PHY 222</u> , <u>PHY 223</u> , may be replaced by <u>PHY 201</u> , <u>PHY 202</u> , <u>PHY 203</u> with advisor consent
5. Advisor approval of all elective choices is required. Additional courses from the health biology lists above, and/or suitable courses from BUS, COM, ENV, MATH, PSY, or SOC are recommended
6. <u>SPE 321</u> may be replaced by <u>COM 205</u> or <u>COM 218Z</u>
7. <u>WRI 327</u> may be replaced by <u>WRI 345</u> or <u>WRI 410</u>
Year
Semester
Actual Credits
Progress

Freshman	Fall	16	Credits 0
Requirement Select BIO223Z - Principles of Biology: Ecology and Evolution			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 5 Progress Credits - Contact Hours 0 - 7 Clinical - Criticality No			
Requirement Select MATH111Z - Precalculus I: Functions			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 4 Progress Credits - Contact Hours 4 Clinical - Criticality No			
Requirement Select WRI121Z - Composition I			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 4 Progress Credits - Contact Hours 4 Clinical - Criticality No			

Requirement Select Social Science Elective Credits			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 3 Progress Credits - Contact Hours - Clinical - Criticality No			
Year Freshman	Semester Winter	Actual Credits 15	Progress Credits 0
Requirement Select BIO222Z - Principles of Bio: Organisms			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 5 Progress Credits - Contact Hours 0 - 7 Clinical - Criticality No			
Requirement Select MATH112Z - Precalculus II: Trigonometry			
Course Requirement Group Course Requirement Group - (Free Text) Minimum Grade - Area - Actual Credits 4 Progress Credits - Contact Hours 4 Clinical - Criticality No			

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Lower Division Health Biology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	16	0

Requirement Select

- BIO221Z - Principles of Biology: Cells

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I
- OR
- STAT243Z - Elementary Statistics I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Lower Division Health Biology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- BIO345 - Medical Microbiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- CHE221Z - General Chemistry I
- **AND** CHE227Z - General Chemistry I Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- MATH251Z - Differential Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16	0

Requirement Select

- BIO209 - Current Research Tpc Med Sci I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- **AND** CHE228Z - General Chemistry II Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- MATH252Z - Integral Calculus

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	16	0

Requirement Select

- CHE223Z - General Chemistry III
- **AND** CHE229Z - General Chemistry III Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	15	0

Requirement Select

- CHE331 - Organic Chemistry I

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- PHY221 - General Physics w/Calculus

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	15	0

Requirement Select

- CHE332 - Organic Chemistry II

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

•

PHY222 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

•

Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

•

Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

•

CHE333 - Organic Chemistry III

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

•

PHY223 - General Physics w/Calculus

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

•

WRI327 - Advanced Tech Writing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

- Lower Division Health Biology Electives

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	16	0

Requirement Select

- CHE450 - Biochemistry I

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Upper Division Health Biology Electives

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Advisor Approved Electives
(Generic)

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	15	0

Requirement Select

- BIO409 - Crnt Rsch Tpcs in Med Sci II

Course Requirement Group**Course Requirement Group -**

(Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

• BIO346 - Pathophysiology I (Inactive)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• CHE451 - Biochemistry II

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Advisor Approved Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	14	0

Requirement Select

• Upper Division Health Biology Electives

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

11

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Advisor Approved Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Environmental Sciences, BS

Overview

Program Long Title
Environmental Sciences

Program Title
Environmental Sciences

Department(s)
Natural Sciences

Degree Designation
BS

Program Level
UG

CIP Code
030104

Degree Maps

Degree Map Name
Advising Guide - Environmental Sciences

Total Degree Map Credits
182

Degree Map Effective Catalog Year
2425 -

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	17	0

Requirement Select

- BIO222Z - Principles of Bio: Organisms

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- ENV108 - Mentorship & Team Building

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 1
Clinical	-
Criticality	No

Requirement Select

- ENV111 - Intro to Env Sciences

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- GEOG105 - Physical Geography

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	16	0

Requirement Select

- BIO223Z - Principles of Biology: Ecology and Evolution

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- GIS134 - Geographic Info Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- MATH111Z - Precalculus I: Functions
- OR**
- MATH105Z - Math in Society

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	13	0

Requirement Select

- BIO221Z - Principles of Biology: Cells

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- GIS351 - GIS for Natural Resources

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- MATH112Z - Precalculus II: Trigonometry
- OR**
- MATH110 - Applied Math: Natural Sciences

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	17	0

Requirement Select

- CHE221Z - General Chemistry I
- **AND** CHE227Z - General Chemistry I Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- ENV217 - Intro to Natural Resource Mgmt

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Requirement Select

- Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Technical Electives

OR

- Environmental Sciences, Water and Wetland Resources option Required Courses

OR

- Environmental Sciences, Water and Wetland Resources option Required Courses

OR

- Environmental Sciences, Environmental Chemistry option Required Courses

OR

- Environmental Sciences, Environmental Policy and Governance option Required Courses

OR

- Environmental Sciences, Recreation and Science option Required Courses

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	15	0

Requirement Select

- ENV224 - Scientific Reason & Method

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ENV226 - Environmental Data Analysis

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- WRI122Z - Composition II
- OR**
- WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- **AND** CHE228Z - General Chemistry II Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	17	0

Requirement Select

- ECO201Z - Principles of Microeconomics
OR
- ECO202Z - Principles of Macroeconomics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CHE223Z - General Chemistry III
- **AND** CHE229Z - General Chemistry III Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- Environmental Sciences, Environmental Policy and Governance option Required Courses
OR
- Environmental Sciences, Environmental Business & Economics Required Courses
OR
- Environmental Sciences, Water and Wetland Resources option Required Courses
OR
- Environmental Sciences, Recreation and Science option Required Courses
OR
- Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses
OR
- Environmental Sciences, Environmental Chemistry option Required Courses

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	13	0

Requirement Select

- ENV108 - Mentorship & Team Building

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	1
Progress Credits	-
Contact Hours	0 - 1
Clinical	-
Criticality	No

Requirement Select

- ENV355 - Careers and Prof. in Env. Sci.

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Environmental Sciences, Environmental Policy and Governance option Required Courses
OR
- Environmental Sciences, Environmental Business & Economics Required Courses
OR
- Environmental Sciences, Water and Wetland Resources option Required Courses
OR
- Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses
OR
- Environmental Sciences, Recreation and Science option Required Courses
OR
- Environmental Sciences, Environmental Chemistry option Required Courses

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	14	0

Requirement Select

- ENV314 - Environmental Policy & Law

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

• ENV434 - Advanced Data Analysis

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• PHY201 - General Physics

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

0 - 6

Clinical

-

Criticality

No

Requirement Select

• Environmental Sciences, Environmental Policy and Governance option Required Courses

OR

• Environmental Sciences, Environmental Business & Economics Required Courses

OR

• Environmental Sciences, Water and Wetland Resources option Required Courses

OR

• Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses

OR

• Environmental Sciences, Recreation and Science option Required Courses

OR

• Environmental Sciences, Environmental Chemistry option Required Courses

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

• Environmental Sciences, Environmental Business & Economics Required Courses

OR

• Environmental Sciences, Environmental Policy and Governance option Required Courses

OR

• Environmental Sciences, Water and Wetland Resources option Required Courses

OR

• Environmental Sciences, Recreation and Science option Required Courses

OR

• Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses

OR

• Environmental Sciences, Environmental Chemistry option Required Courses

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

12

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Upper Division Writing Elective

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	12	0

Requirement Select

• SPE321 - Small Group/Team Communication

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• Social Science Elective Credits

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Environmental Sciences, Recreation and Science option Required Courses
OR
- Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses
OR
- Environmental Sciences, Environmental Chemistry option Required Courses
OR
- Environmental Sciences, Environmental Policy and Governance option Required Courses
OR
- Environmental Sciences, Environmental Business & Economics Required Courses
OR
- Environmental Sciences, Water and Wetland Resources option Required Courses

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- ENV485 - Habitat Management

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- Social Science Elective Credits

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Technical Electives
OR
- Environmental Sciences, Environmental Policy and Governance option Technical Electives
OR
- Environmental Sciences, Environmental Chemistry option Technical Electives
OR
- Environmental Sciences, Recreation and Science option Technical Electives
OR
- Environmental Sciences, Water and Wetland Resources option Technical Electives
OR
- Environmental Science, Environmental Business & Economics Optional Technical Electives

Course Requirement Group**Course Requirement Group - (Free Text)**

Minimum Grade	-
Area	-
Actual Credits	8
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	19	0

Requirement Select	
• ENV484 - Sustainable Human Ecology	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select	
• Humanities Elective Credits	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select	
• Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Technical Electives	
OR	
• Environmental Science, Environmental Business & Economics Optional Technical Electives	
OR	
• Environmental Sciences, Water and Wetland Resources option Technical Electives	
OR	
• Environmental Sciences, Recreation and Science option Technical Electives	
OR	
• Environmental Sciences, Environmental Chemistry option Technical Electives	
OR	
• Environmental Sciences, Environmental Policy and Governance option Technical Electives	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	12
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Allied Health, BS

Overview

Program Long Title
Bachelor of Science Allied Health

Program Title
Allied Health

Department(s)
Natural Sciences

Degree Designation
BS

Program Level
UG

CIP Code
510000 - Hlth Srv/Allied Health/
Hlth Sc

Degree Maps

Degree Map Name
Advising Guide, Allied Health Medical Imaging, Dental Hygiene, Respiratory Care Track

Total Degree Map Credits
181 - 182

Degree Map Effective Catalog Year
2425 -

Degree Map Narrative
This advising guide is for students that are pursuing Medical Imaging, Dental Hygiene, or Respiratory Care.

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	13 - 14	0

Requirement Select

- BIO231 - Human Anatomy/Physiology I
- AND** BIO135 - Prep for Human A&P

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	1 - 7
Clinical	-
Criticality	No

Requirement Select

- SOC225 - Medical Sociology

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- MIT103 - Intro to Medical Imaging
- OR**
- DHE100 - Intro to Dental Hygiene I
- OR**
- RCP100 - Matriculation

Course Requirement Group
Course Requirement Group Select course based on
(Free Text) intended professional program

Minimum Grade	-
Area	-
Actual Credits	2 - 3
Progress Credits	-
Contact Hours	2 - 3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- BIO232 - Human Anatomy/Physiology II

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CHE101 - Intro to General Chemistry
- AND** CHE104 - Intro to General Chemistry Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	14	0

Requirement Select

- BIO233 - Human Anatomy/Physiology III

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- COM111Z - Public Speaking

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	12	0

Requirement Select

- PSY202Z - Intro to Psychology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- BA211Z - Principles of Financial Account

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- STAT243Z - Elementary Statistics I
- OR**
- MATH361 - Statistical Methods I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	19	0

Requirement Select

- PSY330 - Social Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BIO234 - Microbiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY311 - Human Growth & Dev I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	18	0

Requirement Select

- BIO205 - Nutrition

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

• PSY312 - Human Growth & Dev II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• PSY331 - Social Psychology II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• Advisor-Approved Elective

(Generic)

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	16	0

Requirement Select

• SOC335 - Hlth Inequal & Cult Competency

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Requirement Select

• WRI227Z - Technical Writing

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

• Humanities Elective Credits

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- Advisor-Approved Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	17	0

Requirement Select

- MIS113 - Intro to Database Systems

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication
- OR**
- COM205 - Intercultural Communication
- OR**
- COM218Z - Interpersonal Communication

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3 - 4
Clinical	-
Criticality	No

Requirement Select

- BIO222Z - Principles of Bio: Organisms

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BUS337 - Prin of Health Care Marketing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	15	0

Requirement Select

- BIO221Z - Principles of Biology: Cells

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- SOC305 - Rural Health
- OR**
- SOC345 - Aging and Society

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	15	0

Requirement Select

- PSY339 - Biopsychology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI345 - Science Writing
- OR**
- WRI410 - Proposal & Grant Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	9
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- BIO341 - Medical Genetics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	8
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

- BIO436 - Immunology

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PHIL305 - Medical Ethics
OR
- PHIL331 - Ethics in the Professions
OR
- PHIL342 - Business Ethics

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective (Generic)

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Degree Map Name

Advising Guide, Medical Lab Science Track

Total Degree Map Credits

186 - 189

Degree Map Effective Catalog Year

2425 -

Degree Map Narrative

This advising guide is for students that are pursuing Medical Lab Science

Year	Semester	Actual Credits	Progress Credits
Freshman	Fall	17	0
Requirement Select • BIO231 - Human Anatomy/Physiology I • AND BIO135 - Prep for Human A&P			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade	-		
Area	-		
Actual Credits	4		
Progress Credits	-		
Contact Hours	1 - 7		
Clinical	-		
Criticality	No		

Requirement Select

- CHE221Z - General Chemistry I
- **AND** CHE227Z - General Chemistry I Lab

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- MATH110 - Applied Math: Natural Sciences

Course Requirement Group

Course Requirement Group -
(Free Text)

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- WRI121Z - Composition I

Course Requirement Group

Course Requirement Group Select course based on
(Free Text) intended professional program

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Winter	15	0

Requirement Select

- BIO232 - Human Anatomy/Physiology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CHE222Z - General Chemistry II
- AND** CHE228Z - General Chemistry II Lab

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Freshman	Spring	20	0

Requirement Select

- BIO233 - Human Anatomy/Physiology III

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PSY201Z - Intro to Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• COM111Z - Public Speaking	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• CHE223Z - General Chemistry III	
• AND CHE229Z - General Chemistry III Lab	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	7
Clinical	-
Criticality	No

Requirement Select	
• SOC225 - Medical Sociology	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Fall	16 - 17	0

Requirement Select	
• BIO345 - Medical Microbiology	
OR	
• BIO234 - Microbiology	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4 - 5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select	
• WRI122Z - Composition II	
OR	
• WRI227Z - Technical Writing	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• STAT243Z - Elementary Statistics I	
OR	
• MATH361 - Statistical Methods I	
Course Requirement Group	
Course Requirement Group - (Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- CHE331 - Organic Chemistry I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	6
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Winter	16 - 18	0

Requirement Select

- BIO341 - Medical Genetics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- CHE332 - Organic Chemistry II
- OR**
- BIO335 - Cross-Sectional Anatomy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	3 - 6
Clinical	-
Criticality	No

Requirement Select

- SPE321 - Small Group/Team Communication
- OR**
- COM205 - Intercultural Communication
- OR**
- COM218Z - Interpersonal Communication

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3 - 4
Progress Credits	-
Contact Hours	3 - 4
Clinical	-
Criticality	No

Requirement Select

- PSY202Z - Intro to Psychology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select

- Humanities Elective Credits

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Sophomore	Spring	20	0

Requirement Select

- BIO436 - Immunology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- CHE333 - Organic Chemistry III
- OR**
- CHE451 - Biochemistry II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- WRI327 - Advanced Tech Writing
- OR**
- WRI345 - Science Writing
- OR**
- WRI410 - Proposal & Grant Writing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY311 - Human Growth & Dev I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PHIL331 - Ethics in the Professions
- OR**
- PHIL342 - Business Ethics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Fall	14	0

Requirement Select

- MIS113 - Intro to Database Systems

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- BIO200 - Medical Terminology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- BIO336 - Essentials of Pathophysiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- ALH105 - Intro to Allied Health Prof

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	6
Progress Credits	-
Contact Hours	1
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Winter	14	0

Requirement Select

- PSY330 - Social Psychology I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BUS316 - Total Quality Health Care

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- BIO222Z - Principles of Bio: Organisms
OR
- BIO223Z - Principles of Biology: Ecology and Evolution

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- PSY312 - Human Growth & Dev II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Junior	Spring	14	0

Requirement Select

- BIO221Z - Principles of Biology: Cells

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	0 - 7
Clinical	-
Criticality	No

Requirement Select

- BUS317 - Health Care Management

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY331 - Social Psychology II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective (Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Fall	13	0

Requirement Select

- PSY339 - Biopsychology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- SOC345 - Aging and Society

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- BA211Z - Principles of Financial Account

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Senior	Winter	14	0

Requirement Select

- BIO205 - Nutrition

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PSY347 - Organizational Behavior

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- Advisor-Approved Elective
(Generic)

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	5
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- BUS337 - Prin of Health Care Marketing

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Senior	Spring	13	0

Requirement Select

- BA213Z - Princ of Managerial Accounting

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

4

Progress Credits

-

Contact Hours

4

Clinical

-

Criticality

No

Requirement Select

- Advisor-Approved Elective (Generic)

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

6

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

- SOC335 - Hlth Inequal & Cult Competency

Course Requirement Group

Course Requirement Group - (Free Text)

Minimum Grade

-

Area

-

Actual Credits

3

Progress Credits

-

Contact Hours

3

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Biology, Minor

Overview

Program Long Title

Biology

Program Title

Biology

Department(s)

Natural Sciences

Degree Designation

MINOR

Program Level

UG

CIP Code

260101

Chemistry , Minor

Overview

Program Long Title
Chemistry

Program Title
Chemistry

Department(s)
Natural Sciences

Degree Designation
MINOR

Program Level	CIP Code
UG	400501

Applied Physics, Minor

Overview

Program Long Title
Applied Physics

Program Title
Applied Physics

Department(s)
Natural Sciences

Degree Designation
MINOR

Program Level	CIP Code
UG	141201

Sustainability, Minor

Overview

Program Long Title
Sustainability

Program Title
Sustainability

Department(s)
Natural Sciences

Degree Designation
MINOR

Program Level	CIP Code
UG	410101

Biomedical Sciences, MS

Overview

Program Long Title
Biomedical Sciences

Program Title
Biomedical Sciences

Department(s)
Natural Sciences

Degree Designation
MS

Program Level	CIP Code
GR	260101

Natural Resources, MS

Overview

Program Long Title
Natural Resources

Program Title
Natural Resources

Department(s)
Natural Sciences

Degree Designation
MS

Program Level	CIP Code
GR	030104

Courses

ALH105 - Intro to Allied Health Prof

Overview

Course Subject Code	Course Number
ALH	105

Department
Natural Sciences

Course Description
This course provides the student with an overview of Allied Health Professions. It provides introductory educational preparation on information specific to health care services and reviews of careers in health care.

Academic Level (Course Level)
Undergraduate

BIO101 - Intro to Cell Biology

Overview

Course Subject Code	Course Number
BIO	101

Department
Natural Sciences

Course Description
Introduction to cell biology, genetics, basic chemistry of living organisms, and the scientific method.

Academic Level (Course Level)
Undergraduate

BIO102 - Diversity of Life

Overview

Course Subject Code	Course Number
BIO	102

Department
Natural Sciences

Course Description
Evolution and phylogenetics among all major groups of living organisms, including bacteria, protists, fungi, plants and animals.

Academic Level (Course Level)
Undergraduate

BIO103 - Intro to Human Anat & Phys

Overview

Course Subject Code	Course Number
BIO	103

Department
Natural Sciences

Course Description
Basic human anatomy and physiology, including a survey of all major bodily systems. (Cannot be used for graduation credit by students who have taken BIO 231, BIO 232, and BIO 233).

Academic Level (Course Level)
Undergraduate

BIO107 - Seminar

Overview

Course Subject Code	Course Number
BIO	107

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BIO109 - Intro to Medical Sciences

Overview

Course Subject Code	Course Number
BIO	109

Department
Natural Sciences

Course Description
Survey of medical and health-related occupations, including biomedical sciences. Discussion of health care structure, private and public entities, the research community, and trends in health education and practice.

Academic Level (Course Level)
Undergraduate

BIO135 - Prep for Human A&P

Overview

Course Subject Code	Course Number
BIO	135

Department
Natural Sciences

Course Description
Study techniques for a science course are explored using examples of Human Anatomy and Physiology.

Academic Level (Course Level)
Undergraduate

BIO200 - Medical Terminology

Overview

Course Subject Code	Course Number
BIO	200

Department
Natural Sciences

Course Description
Basic structure of medical works including prefixes, suffixes, roots and combining forms. Correct spelling, pronunciation, and meaning of terms are stressed.

Academic Level (Course Level)
Undergraduate

BIO201 - Organismic Biology

Overview

Course Subject Code	Course Number
BIO	201

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

BIO205 - Nutrition

Overview

Course Subject Code	Course Number
BIO	205

Department
Natural Sciences

Course Description
A study of the relationships of food and nutrition to health. An overview of the basic nutrition principles including the nutrients and how they function in the body, nutrient requirements, diet planning, and energy balance. Current topics and controversies are examined.

Academic Level (Course Level)
Undergraduate

BIO207 - Seminar

Overview

Course Subject Code	Course Number
BIO	207

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BIO209 - Current Research Tpc Med Sci I

Overview

Course Subject Code	Course Number
BIO	209

Department
Natural Sciences

Course Description
Introduces students to topics in medicine focusing on global health issues, infectious and chronic diseases. Projects in medical literature research, understanding scientific paper format, preparing technical presentations and public speaking. Prerequisite: Biology or Health Sciences major or instructor consent

Academic Level (Course Level)
Undergraduate

BIO211 - Principles of Biology

Overview

Course Subject Code	Course Number
BIO	211

Department
Natural Sciences

Course Description
Principles of modern biology emphasizing form and function of multicellular plants, major invertebrate phyla, and general vertebrate morphology and physiology.

Academic Level (Course Level)
Undergraduate

BIO212 - Principles of Biology

Overview

Course Subject Code	Course Number
BIO	212

Department
Natural Sciences

Course Description
Principles of modern biology emphasizing evolution, ecology, population genetics, and behavior of organisms.

Academic Level (Course Level)
Undergraduate

BIO213 - Principles of Biology

Overview

Course Subject Code	Course Number
BIO	213

Department
Natural Sciences

Course Description
Principles of modern biology emphasizing the biochemical basis for life processes, cell structure, and function. Molecular genetics, cell reproduction, metabolism, and form and function of microorganisms.

Academic Level (Course Level)
Undergraduate

BIO216 - Biology of Companion Animals

Overview

Course Subject Code	Course Number
BIO	216

Department
Natural Sciences

Course Description
Covers many aspects of animal health and their impact on society. Discussions of care, anatomy, preventive medicine, common diseases and behavioral problems of dogs, cats, and other companion animals. Labs will include some field trips and pets in class.

Academic Level (Course Level)
Undergraduate

BIO221Z - Principles of Biology: Cells

Overview

Course Subject Code	Course Number
BIO	221Z

Department
Natural Sciences

Course Description
Explores fundamental biological concepts and theories about the cellular and molecular basis of life including cell structure and function, metabolism, genetic basis of inheritance and how information flows from DNA to proteins, with a focus on the iterative process of science. Intended for science majors.

Academic Level (Course Level)
Undergraduate

BIO222Z - Principles of Bio: Organisms

Overview

Course Subject Code	Course Number
BIO	222Z

Department

Natural Sciences

Course Description

Explores fundamental biological concepts and theories about the structure and function of diverse organisms (including plants and animals), evolution and development, transformation of energy and matter, and body systems at a multicellular organismal level. Intended for science majors.

Academic Level (Course Level)

Undergraduate

BIO223Z - Principles of Biology: Ecology and Evolution

Overview

Course Subject Code	Course Number
BIO	223Z

Course Long Title

Principles of Biology: Ecology and Evolution

Department

Natural Sciences

Course Description

Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors.

Academic Level (Course Level)

Undergraduate

BIO225 - Riparian Assessment Methods

Overview

Course Subject Code	Course Number
BIO	225

Department

Natural Sciences

Academic Level (Course Level)

Undergraduate

BIO226 - Intro to Wildlife Rehab

Overview

Course Subject Code	Course Number
BIO	226

Department

Natural Sciences

Course Description

Principles of wildlife rehabilitation including state and federal laws, medical terminology, basic anatomy, natural history and diet, form and function, and euthanasia. Field captures, basic restraint, first aid, minimum housing requirements, and zoonotic diseases are also included.

Academic Level (Course Level)

Undergraduate

BIO227 - Intro to Forensic Science

Overview

Course Subject Code	Course Number
BIO	227

Department

Natural Sciences

Course Description

An entry level course exploring the methodologies and procedures utilized by crime scene investigators and forensic laboratories. Emphasis on crime scene investigation, recognition, documentation, and collecting of physical evidence. Laboratory exercises provide hands-on opportunities supplementing lecture topics.

Academic Level (Course Level)

Undergraduate

BIO231 - Human Anatomy/Physiology I

Overview

Course Subject Code	Course Number
BIO	231

Department

Natural Sciences

Course Description

Introduction to the systematic studies of human anatomy and physiology. Introduction to cytology and histology followed by the integumentary, skeletal, muscular and endocrine systems and the physiology of excitable tissues. The laboratory sessions emphasize human anatomy using models and human cadavers.

Academic Level (Course Level)

Undergraduate

BIO232 - Human Anatomy/Physiology II

Overview

Course Subject Code	Course Number
BIO	232

Department

Natural Sciences

Course Description

A continuation of the systematic study of human anatomy and physiology. The nervous, cardiovascular and immune systems are studied. The laboratory sessions emphasize human anatomy using models and human cadavers. Dissections and physiological experiments are conducted.

Academic Level (Course Level)

Undergraduate

BIO233 - Human Anatomy/Physiology III

Overview

Course Subject Code	Course Number
BIO	233

Department

Natural Sciences

Course Description

Conclusion of the sequence in human anatomy and physiology. Digestive, respiratory, renal and reproductive systems are examined. Metabolism, human genetics and development are also studied. Laboratory sessions emphasize physiological experiments and human anatomy using models and human cadavers.

Academic Level (Course Level)

Undergraduate

BIO234 - Microbiology

Overview

Course Subject Code	Course Number
BIO	234

Department

Natural Sciences

Course Description

Classification, morphology, reproduction, transmission, and control of micro-organisms causing disease in man. Laboratory practice in culturing methods, microscopic observation, and physical and chemical control.

Academic Level (Course Level)

Undergraduate

BIO235 - Human Genetics

Overview

Course Subject Code	Course Number
BIO	235

Department

Natural Sciences

Course Description

Genetic concepts using human examples, including the molecular and cellular basis of inheritance, patterns of inheritance, basic pedigree analysis, mutation, single-gene and polygenic diseases, and an introduction to genetic biotechnology.

Academic Level (Course Level)

Undergraduate

BIO247 - Forensic Anthropology

Overview

Course Subject Code	Course Number
BIO	247

Department
Natural Sciences

Course Description
The morphological characteristics unique to the human skeleton that are used in establishing population demographics will be discussed and demonstrated. The laboratories are designed as hands-on experience applying the methodologies as presented in the lecture session.

Academic Level (Course Level)
Undergraduate

BIO255 - Sophomore Research Class

Overview

Course Subject Code	Course Number
BIO	255

Department
Natural Sciences

Course Description
This research course is the first in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately finding funding for their research. This course for science majors requires submission of a written proposal for the research they will do based on critical evaluation of scientific literature. Students will also learn how scientists work (the scientific process), so that they can look at a problem objectively, and make relevant decisions concerning biological issues. Degree relevance: These courses are a(n) elective/ requirement, respectively for BHS or ENV.

Academic Level (Course Level)
Undergraduate

BIO265 - Field Methods Environ Science

Overview

Course Subject Code	Course Number
BIO	265

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

BIO301 - Int Sutdy Exp Ecology/Sustn I

Overview

Course Subject Code	Course Number
BIO	301

Department
Natural Sciences

Course Description
In this course students will experience and learn about the ecology, culture, and history of Iceland and Scandinavia as well as economic, technological, and management advancements toward sustainability.

Academic Level (Course Level)
Undergraduate

BIO302 - Inntl Study Exp Ecolo & Sustn

Overview

Course Subject Code	Course Number
BIO	302

Department
Natural Sciences

Course Description
In this course students will experience and learn about the ecology, culture, and history of Iceland and Scandinavia as well as economic, technological, and management advancements toward sustainability.

Academic Level (Course Level)
Undergraduate

BIO307 - Seminar

Overview

Course Subject Code	Course Number
BIO	307

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

BIO313 - Botany & Plant Taxonomy

Overview

Course Subject Code	Course Number
BIO	313

Department
Natural Sciences

Course Description
Introduction to classification and identification of vascular plants, emphasizing major plant families in California and Oregon; field and herbarium techniques. Weekend field trips required.

Academic Level (Course Level)
Undergraduate

BIO326 - Parasitology

Overview

Course Subject Code	Course Number
BIO	326

Department
Natural Sciences

Course Description
Parasitic infections of humans and animals (especially by protozoa and helminths). The course will cover parasite taxonomy, life cycles, epidemiology, clinical features, laboratory diagnosis, treatment and prevention. Students will practice various diagnostic techniques in the laboratory.

Academic Level (Course Level)
Undergraduate

BIO331 - Human Anatomy/Physiology I

Overview

Course Subject Code	Course Number
BIO	331

Department
Natural Sciences

Course Description
An in-depth systematic study of human anatomy and physiology of the integumentary, skeletal, and muscular systems. Laboratories include histology, examination of human bones, cadaver dissection, computer-aided physiology studies and other hands-on activities.

Academic Level (Course Level)
Undergraduate

BIO332 - Human Anatomy/Physiology II

Overview

Course Subject Code	Course Number
BIO	332

Department
Natural Sciences

Course Description
An in-depth systematic study of human anatomy and physiology of nervous, endocrine and cardiovascular systems. Laboratories will include histology, cadaver dissection, computer-aided physiology studies, and other hands-on activities.

Academic Level (Course Level)
Undergraduate

BIO333 - Human Anatomy/Physiology III

Overview

Course Subject Code	Course Number
BIO	333

Department
Natural Sciences

Course Description
An in-depth systematic study of human anatomy and physiology of the lymphatic, respiratory, digestive, urinary and reproductive systems and an overview of embryology. Laboratories will include histology, cadaver dissection, computer-aided physiology studies, and other hands-on activities.

Academic Level (Course Level)
Undergraduate

BIO336 - Essentials of Pathophysiology

Overview

Course Subject Code	Course Number
BIO	336

Department
Natural Sciences

Course Description
Study of dynamic aspects of disease process with emphasis on abnormal physiology. Detailed discussion of cellular alterations, normal immunology, neoplasia, inflammation, and alterations of the respiratory and skeletal systems, and Diabetes Mellitus.

Academic Level (Course Level)
Undergraduate

BIO337 - Aquatic Ecology

Overview

Course Subject Code	Course Number
BIO	337

Department

Natural Sciences

Course Description

Lotic and lentic ecosystems, hydrologic principles, processes and patterns of development, abiotic-biotic interactions, aquatic organisms and trophic structures, nutrient cycles and eutrophication, effects of disturbance, bio-assessment techniques, management and restoration case studies.

Academic Level (Course Level)

Undergraduate

BIO345 - Medical Microbiology

Overview

Course Subject Code	Course Number
BIO	345

Department

Natural Sciences

Course Description

Mechanisms of pathogenicity and virulence relating to disease-causing viruses, bacteria, fungi, and other microorganisms. Host-parasite relationships and immunology, microbial physiology and genetics. Laboratory procedures and identification of selected bacteria and parasites.

Academic Level (Course Level)

Undergraduate

BIO341 - Medical Genetics

Overview

Course Subject Code	Course Number
BIO	341

Department

Natural Sciences

Course Description

Principles of heredity, chromosome mechanisms and molecular genetics applied to disease processes in humans. Review of case histories of selected inherited disorders. Discussion of genetic intervention therapies.

Academic Level (Course Level)

Undergraduate

BIO352 - Developmental Biology

Overview

Course Subject Code	Course Number
BIO	352

Department

Natural Sciences

Course Description

This course will explore the developmental processes of selected invertebrate and vertebrate groups. The event of gametogenesis, fertilization, gastrulation, neurulation, and post-embryonic development will be discussed. The role of differential gene expression in developmental pathways will be covered.

Academic Level (Course Level)

Undergraduate

BIO342 - Cell Biology

Overview

Course Subject Code	Course Number
BIO	342

Department

Natural Sciences

Course Description

Organelle organization, protein sorting, cell signaling, cytoskeletal functions, cell division mechanics, and cell interactions in development and aging.

Academic Level (Course Level)

Undergraduate

BIO355 - Junior Research Class

Overview

Course Subject Code	Course Number
BIO	355

Department

Natural Sciences

Course Description

This research course is the second in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately finding funding for their research. In the first course they developed research and wrote a proposal. This upper division course will be focused on performing the research that was developed in the first course via the proposal. Students will continue to learn how scientists work (the scientific process), so that they can look at a problem objectively, and make relevant decisions concerning biological issues.

Academic Level (Course Level)

Undergraduate

BIO369 - Mammalogy

Overview

Course Subject Code	Course Number
BIO	369

Department

Natural Sciences

Course Description

This course examines the evolution, biogeography, systematics, anatomy, physiology, and ecology of mammals with an emphasis on species native to North America. Weekly laboratory sessions will focus on the identification, observation, and sampling of mammals in the field using techniques applicable to several professions including wildlife management and research.

Academic Level (Course Level)

Undergraduate

BIO377 - Wildlife Ecology & Management

Overview

Course Subject Code	Course Number
BIO	377

Department

Natural Sciences

Course Description

Fundamental concepts and applied methods in the study of wildlife populations. Focus on study design, habitat, and animal movements. Develop skills in wildlife data analysis, animal capture, marking and remote tracking.

Academic Level (Course Level)

Undergraduate

BIO386 - Ornithology

Overview

Course Subject Code	Course Number
BIO	386

Department

Natural Sciences

Course Description

Introduction to avian evolution, biology, ecology, and behavior with lab emphasis on the avian field studies and identification of birds in Oregon and Klamath Falls region and skills and concepts for careers in wildlife and natural resources.

Academic Level (Course Level)

Undergraduate

BIO407 - Seminar

Overview

Course Subject Code	Course Number
BIO	407

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

BIO409 - Crnt Rsch Tpcs in Med Sci II

Overview

Course Subject Code	Course Number
BIO	409

Department
Natural Sciences

Course Description
A continuation of BIO 209 covering topics in medicine focusing on global health issues, infectious and chronic diseases. Projects in medical literature research, understanding scientific paper format, preparing technical papers and presentations, and public speaking.

Academic Level (Course Level)
Undergraduate

BIO417 - Plant Ecology

Overview

Course Subject Code	Course Number
BIO	417

Department
Natural Sciences

Course Description
Overview of plant ecology including physiology, populations, communities, and ecosystems. Some topics covered are unique to plants, such as photosynthesis, and other topics, not necessarily unique to plants, emphasize the distinctive ways that plants deal with their environments. Weekend field trip required.

Academic Level (Course Level)
Undergraduate

BIO426 - Evolutionary Biology

Overview

Course Subject Code	Course Number
BIO	426

Department
Natural Sciences

Course Description
Principles of evolutionary science, including speciation, biogeography, biodiversity, population genetics, natural selection and coevolution.

Academic Level (Course Level)
Undergraduate

BIO427 - Special Topics in Neuroscience

Overview

Course Subject Code	Course Number
BIO	427

Department
Natural Sciences

Course Description
This course provides graduate students with an opportunity to explore, in depth, a variety of contemporary topics in neuroscience. Lectures will present background material and address current problems in the area related to the topic. Students will read and discuss review articles and current literature on the topic. This course also consists of exciting anatomical dissections of the brain and spinal cord.

Academic Level (Course Level)
Undergraduate

BIO428 - Fisheries

Overview

Course Subject Code	Course Number
BIO	428

Department
Natural Sciences

Course Description
This course will provide an overview to the structure and functioning of freshwater and marine aquatic ecosystems, and acquaint students with the basic biology and field techniques required to successfully manage fish populations. In addition, this course will expose students to a number of challenges facing aquatic ecosystems, and will provide an opportunity to discuss activities, approaches and strategies that can be used to solve these challenges. While many examples and scenarios discussed will be based on local/regional issues, the course will emphasize a global perspective to aquatic conservation issues and how regional differences in problems and solutions exist. Emphasis will be placed on the importance of using sound science to generate successful management strategies.

Academic Level (Course Level)
Undergraduate

BIO434 - Data Analysis Methods

Overview

Course Subject Code	Course Number
BIO	434

Department

Natural Sciences

Course Description

Advanced concepts and methods of data analysis from field projects, data archives and other courses. Statistical hypothesis testing; analysis of variance; multi-variate, regression, spatial- and time-series; principle component analysis; data visualization and infographics.

Academic Level (Course Level)

Undergraduate

BIO435 - Exercise Physiology

Overview

Course Subject Code	Course Number
BIO	435

Department

Natural Sciences

Course Description

Physiological responses to single bouts of exercise and longer term training, considering resistance and aerobic exercise effects on metabolism, skeletal muscle, the cardiovascular system, and the respiratory system. Additional applications of exercise and training in performance and human health.

Academic Level (Course Level)

Undergraduate

BIO436 - Immunology

Overview

Course Subject Code	Course Number
BIO	436

Department

Natural Sciences

Course Description

Cellular and humoral immunology including innate immunity, acquired immunity, antibodies, anatomy of immune response, production of effectors, adversarial strategies during infection, immunodeficiency, and transplantation.

Academic Level (Course Level)

Undergraduate

BIO438 - Conservation Biology

Overview

Course Subject Code	Course Number
BIO	438

Department

Natural Sciences

Course Description

Study of global patterns and threats to biodiversity. In-depth focus on ecosystem services, habitat fragmentation, design of conservation reserves, conservation funding and politics, and understanding and communicating of climate change.

Academic Level (Course Level)

Undergraduate

BIO441 - Genetic Engr & Gene Therapy

Overview

Course Subject Code	Course Number
BIO	441

Department

Natural Sciences

Course Description

Current topics in genetic engineering and gene therapy, explored via selected readings from primary and secondary literature.

Academic Level (Course Level)

Undergraduate

BIO442 - Biological Physics

Overview

Course Subject Code	Course Number
BIO	442

Department

Natural Sciences

Course Description

This course is an introduction to biological physics, or biophysics. In this course, we will use mathematical models to tackle this complexity. Throughout the course, we will learn by doing—by building and analyzing mathematical models, and by solving lots of problems with pencil, paper, and computer

Academic Level (Course Level)

Undergraduate

BIO443 - Cell Biology

Overview

Course Subject Code	Course Number
BIO	443

Department
Natural Sciences

Course Description
Organelle organization, protein sorting, cell signaling, cytoskeletal functions, cell division mechanics, and cell interactions in development and aging.

Academic Level (Course Level)
Undergraduate

BIO445 - Comparative Virology

Overview

Course Subject Code	Course Number
BIO	445

Department
Natural Sciences

Course Description
This course will explore the viral domain, and compare strategies that different viruses employ during their “life” cycle. Learn about mechanisms of infection and transmission utilized by different families of human viruses, and how these compare to examples of bacteriophage, plant viruses and insect viruses. The emphasis will be on those “abnormal” aspects of the molecular and cellular biology of viruses, not necessarily the clinical presentation of disease.

Academic Level (Course Level)
Undergraduate

BIO446 - Pathophysiology I

Overview

Course Subject Code	Course Number
BIO	446

Department
Natural Sciences

Course Description
Study of the dynamic aspects of the disease process with emphasis on abnormal physiology. Detailed discussion of cellular alterations, normal and abnormal immunology, neoplasia, inflammation, arteriosclerosis, hypertension, cardiac and vascular diseases.

Academic Level (Course Level)
Undergraduate

BIO447 - Pathophysiology II

Overview

Course Subject Code	Course Number
BIO	447

Department
Natural Sciences

Course Description
Study of the dynamic aspects of the disease process with emphasis on abnormal physiology. Detailed discussion of alterations of respiratory function, liver and digestive system, neurologic, urinary, musculoskeletal disorders, and Diabetes Mellitus.

Academic Level (Course Level)
Undergraduate

BIO451 - Zoology

Overview

Course Subject Code	Course Number
BIO	451

Department
Natural Sciences

Course Description
Organismal and integrative approach to the study of animal functional morphology, ecological physiology, behavior and interactions, development and evolution.

Academic Level (Course Level)
Undergraduate

BIO452 - Development Biology

Overview

Course Subject Code	Course Number
BIO	452

Department
Natural Sciences

Course Description
This course will explore the developmental processes of selected invertebrate and vertebrate groups. The event of gametogenesis, fertilization, gastrulation, neurulation, and post-embryonic development will be discussed. The role of differential gene expression in developmental pathways will be covered.

Academic Level (Course Level)
Undergraduate

BIO454 - Environmental Health

Overview

Course Subject Code	Course Number
BIO	454

Department
Natural Sciences

Course Description
A multidisciplinary exploration of environmental health across scales from local to global including the history of public health and infrastructure and linkages between air and water quality, environmental psychology, environmental justice, epidemiology, toxicology, food production, waste, genetics, and climate change.

Academic Level (Course Level)
Undergraduate

BIO455 - Senior Research Class

Overview

Course Subject Code	Course Number
BIO	455

Department
Natural Sciences

Course Description
This research course is the third in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research. In the second course they did the research and collected data. This upper division course will be focused on finishing data collection, data analysis and finally presenting and publishing the research. Students will continue to learn how scientists work (the scientific process), so that they can look at a problem objectively, and make relevant decisions concerning biological issues.

Academic Level (Course Level)
Undergraduate

BIO457 - Intro to Neuroscience

Overview

Course Subject Code	Course Number
BIO	457

Department
Natural Sciences

Course Description
This is an introductory course covering the organization and function of the human nervous system to build a foundation of general knowledge in a neurobiology of such topics as sensory/motor systems, the brain and behaviors, the biological basis of brain development, and learning of memory.

Academic Level (Course Level)
Undergraduate

BIO461 - Human Cadaver Dissection

Overview

Course Subject Code	Course Number
BIO	461

Department
Natural Sciences

Course Description
Study of human anatomy utilizing cadaver dissection. Attention will be given to three-dimensional relationships of structures, appreciation of textural differences, and development of palpation skills. Recognition of pathologic abnormalities and individual variations will be investigated.

Academic Level (Course Level)
Undergraduate

BIO462 - Human Cadaver Dissection

Overview

Course Subject Code	Course Number
BIO	462

Department

Natural Sciences

Course Description

Study of human anatomy utilizing cadaver dissection. Attention will be given to three-dimensional relationships of structures, appreciation of textural differences, and development of palpation skills. Recognition of pathologic abnormalities and individual variations will be investigated. Instructor consent required.

Academic Level (Course Level)

Undergraduate

BIO467 - BioMedical Devices

Overview

Course Subject Code	Course Number
BIO	467

Department

Natural Sciences

Course Description

Exploration of pathophysiology, design thinking and how they have been applied to restore bodily functions. Topics covered include the cardiovascular system, bones, brain, eyes, ears, and skin.

Academic Level (Course Level)

Undergraduate

BIO495 - Research Project in Biology

Overview

Course Subject Code	Course Number
BIO	495

Department

Natural Sciences

Course Description

Supports student-initiated research projects in biological sciences. Topics and scope must be reviewed and accepted by a faculty advisor. May be repeated for up to nine total credits. Instructor consent required.

Academic Level (Course Level)

Undergraduate

BIO501 - Intro to Graduate Studies

Overview

Course Subject Code	Course Number
BIO	501

Department

Natural Sciences

Course Description

Effective sourcing, use, and interpretation of the literature. Scientific methodology, writing, and review of research ethics. Development of a research plan.

Academic Level (Course Level)

Graduate

BIO507 - Seminar

Overview

Course Subject Code	Course Number
BIO	507

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Graduate

BIO509 - Introduction to Biomedical Sci

Overview

Course Subject Code	Course Number
BIO	509

Department

Natural Sciences

Course Description

An introduction to key topics in biomedical sciences. Topics and themes will be selected according to the expertise and interests of the students and faculty instructor. Typical topics include discussions of translational medicine, evidence-based clinical practices, US and global healthcare systems, US and global health disparities, biomedical informatics, biomedical ethics, professionalism and interview skills, test prep strategies, medical communication, and others.

Academic Level (Course Level)

Graduate

BIO510 - Current Iss in Biomedical Sci

Overview

Course Subject Code	Course Number
BIO	510

Department

Natural Sciences

Course Description

Students will discuss weekly student and faculty speakers, primary literature, and Ted Talks. This course is designed to introduce students to a number of scientific research areas. In this course, students learn about current issues in science, critically evaluate primary literature and scientific presentations, and present research to their peers.

Academic Level (Course Level)

Graduate

BIO512 - Current Iss in Natural Resourc

Overview

Course Subject Code	Course Number
BIO	512

Department

Natural Sciences

Course Description

Students will discuss weekly student and faculty speakers, primary literature, and Ted Talks. This course is designed to introduce students to a number of scientific research areas. In this course, students learn about current issues in science, critically evaluate primary literature and scientific presentations, and present research to their peers.

Academic Level (Course Level)

Graduate

BIO511 - Foundations in Conservation

Overview

Course Subject Code	Course Number
BIO	511

Department

Natural Sciences

Course Description

Fundamental ecological concepts in the conservation and management of natural resources, plant and animal population, and ecological processes. Reading, discussing and comprehension of primary literature and technical reports. Field experience in study design, sampling, and management techniques.

Academic Level (Course Level)

Graduate

BIO517 - Plant Ecology

Overview

Course Subject Code	Course Number
BIO	517

Department

Natural Sciences

Course Description

Overview of plant ecology including physiology, populations, communities, and ecosystems. Some topics covered are unique to plants, such as photosynthesis, and other topics, not necessarily unique to plants, emphasize the distinctive ways that plants deal with their environments. Weekend field trip required.

Academic Level (Course Level)

Graduate

BIO522 - Introduction to Neuroscience

Overview

Course Subject Code	Course Number
BIO	522

Department

Natural Sciences

Course Description

Course covers the organization and function of the human nervous system with cutting edge of neuroscience. The goal of this course is to build a strong base of general knowledge in neurobiology of such topic as sensory and motor systems, the brain and behavior, the cellular and molecular basis of brain development, and learning and memory. Overview of plant ecology including physiology, populations, communities, and ecosystems. Some topics covered are unique to plants, such as photosynthesis, and other topics, not necessarily unique to plants, emphasize the distinctive ways that plants deal with their environments. Weekend field trip required.

Academic Level (Course Level)

Graduate

BIO526 - Evolutionary Biology

Overview

Course Subject Code	Course Number
BIO	526

Department

Natural Sciences

Course Description

Principles of evolutionary science, including speciation, biogeography, biodiversity, population genetics, natural selection and coevolution.

Academic Level (Course Level)

Graduate

BIO527 - Special Topics in Neuroscience

Overview

Course Subject Code	Course Number
BIO	527

Department

Natural Sciences

Course Description

This course provides graduate students with an opportunity to explore, in depth, a variety of contemporary topics in neuroscience. Lectures will present background material and address current problems in the area related to the topic. Students will read and discuss review articles and current literature on the topic. This course also consists of exciting anatomical dissections of the brain and spinal cord.

Academic Level (Course Level)

Graduate

BIO535 - Exercise Physiology

Overview

Course Subject Code	Course Number
BIO	535

Department

Natural Sciences

Course Description

Physiological response to single bouts of exercise and longer term training, considering resistance and aerobic exercise effects on metabolism, skeletal muscle, the cardiovascular system, and the respiratory system. Additional applications of exercise and training in performance and human health.

Academic Level (Course Level)

Graduate

BIO536 - Immunology

Overview

Course Subject Code	Course Number
BIO	536

Department
Natural Sciences

Course Description
Cellular and humoral immunology including innate immunity, acquired immunity, antibodies, anatomy of immune response, production of effectors, adversarial strategies during infection, immunodeficiency, and transplantation.

Academic Level (Course Level)
Graduate

BIO538 - Conservation Biology

Overview

Course Subject Code	Course Number
BIO	538

Department
Natural Sciences

Course Description
Study of global patterns and threats to biodiversity. In-depth focus on ecosystem services, habitat fragmentation, design of conservation reserves, conservation funding and politics, and understanding and communicating of climate change.

Academic Level (Course Level)
Graduate

BIO537 - Advanced Data Analysis II

Overview

Course Subject Code	Course Number
BIO	537

Department
Natural Sciences

Course Description
Data analysis is an extremely crucial component of any scientific discipline, but proper data analysis in the environmental sciences is particularly vital. Scientific observations of the natural world are inherently fraught with complexity, variability, and a high degree of uncertainty. Consequently, effective statistical analyses must be applied with a thorough understanding of the pros and cons of each approach. This course aims to provide you with a broad overview of both traditional and modern statistical approaches commonly used to address the special needs of ecological data sets.

Academic Level (Course Level)
Graduate

BIO541 - Genetic Enginring&Gene Therapy

Overview

Course Subject Code	Course Number
BIO	541

Department
Natural Sciences

Course Description
Current topics in genetic engineering and gene therapy, explored via selected readings from primary and secondary literature.

Academic Level (Course Level)
Graduate

BIO542 - Biological Physics

Overview

Course Subject Code	Course Number
BIO	542

Department
Natural Sciences

Course Description
This course is an introduction to biological physics, or biophysics. In this course, we will use mathematical models to tackle this complexity. Throughout the course, we will learn by doing—by building and analyzing mathematical models, and by solving lots of problems with pencil, paper, and computer.

Academic Level (Course Level)
Graduate

BIO543 - Cell Biology

Overview

Course Subject Code	Course Number
BIO	543

Department

Natural Sciences

Course Description

A student entering this class will have the prerequisite of BIO 213 Principle of Biology, thus having been exposed the fundamental principles involving cell structure and function. This course will cover more in-depth topics involving: cell structure and function, protein sorting, cell signaling.

Academic Level (Course Level)

Graduate

BIO545 - Comparative Virology

Overview

Course Subject Code	Course Number
BIO	545

Department

Natural Sciences

Course Description

This course will explore the viral domain, and compare strategies that different viruses employ during their "life" cycle. Learn about mechanisms of infection and transmission utilized by different families of human viruses, and how these compare to examples of bacteriophage, plant viruses and insect viruses. The emphasis will be on those "abnormal" aspects of the molecular and cellular biology of viruses, not necessarily the clinical presentation of disease.

Academic Level (Course Level)

Graduate

BIO546 - Pathophysiology I

Overview

Course Subject Code	Course Number
BIO	546

Department

Natural Sciences

Course Description

Study of the dynamic aspects of the disease process with emphasis on abnormal physiology. Detailed discussion of cellular alterations, normal and abnormal immunology, neoplasia, inflammation, arteriosclerosis, hypertension, cardiac and vascular diseases.

Academic Level (Course Level)

Graduate

BIO547 - Pathophysiology II

Overview

Course Subject Code	Course Number
BIO	547

Department

Natural Sciences

Course Description

A study of the dynamic aspects of the disease process with emphasis on abnormal physiology.

Academic Level (Course Level)

Graduate

BIO551 - Zoology

Overview

Course Subject Code	Course Number
BIO	551

Department

Natural Sciences

Course Description

Through coordinated lectures, laboratory exercises and student-led discussions, this course will examine the structure, embryology, phylogeny, and biogeographic distribution of animals.

Academic Level (Course Level)

Undergraduate

BIO552 - Developmental Biology

Overview

Course Subject Code	Course Number
BIO	552

Department

Natural Sciences

Course Description

This course will explore the developmental processes of selected invertebrate and vertebrate groups. The event of gametogenesis, fertilization, gastrulation, neurulation, and post-embryonic development will be discussed. The role of differential gene expression in developmental pathways will be covered.

Academic Level (Course Level)

Graduate

BIO554 - Environmental Health

Overview

Course Subject Code	Course Number
BIO	554

Department

Natural Sciences

Course Description

A multidisciplinary exploration of environmental health across scales from local to global including the history of public health and infrastructure and linkages between air and water quality, environmental psychology, environmental justice, epidemiology, toxicology, food production, waste, genetics, and climate change.

Academic Level (Course Level)

Graduate

BIO557 - Introduction to Neuroscience

Overview

Course Subject Code	Course Number
BIO	557

Department

Natural Sciences

Course Description

Introduction to Neuroscience covers the organization and function of the human nervous system with cutting edge of neuroscience.

Academic Level (Course Level)

Undergraduate

BIO561 - Human Cadaver Dissection

Overview

Course Subject Code	Course Number
BIO	561

Department

Natural Sciences

Course Description

Study of human anatomy utilizing cadaver dissection. Attention will be given to three-dimensional relationships of structures, appreciation of textural differences, and development of palpation skills. Recognition of pathologic abnormalities and individual variations will be investigated.

Academic Level (Course Level)

Graduate

BIO562 - Human Cadaver Dissection

Overview

Course Subject Code	Course Number
BIO	562

Department

Natural Sciences

Course Description

Study of human anatomy utilizing cadaver dissection. Attention will be given to three-dimensional relationships of structures, appreciation of textural differences, and development of palpation skills. Recognition of pathologic abnormalities and individual variations will be investigated.

Academic Level (Course Level)

Graduate

BIO567 - Biomedical Devices

Overview

Course Subject Code	Course Number
BIO	567

Department

Natural Sciences

Course Description

Exploration of pathophysiology, design thinking and how they have been applied to restore bodily functions. Topics covered include the cardiovascular system, bones, brain, eyes, ears, and skin

Academic Level (Course Level)

Graduate

BIO585 - Ecoregional Studies

Overview

Course Subject Code	Course Number
BIO	585

Department

Natural Sciences

Course Description

Ten-week exposure to various Ecoregional studies around the world, and Environmental Protection Agency, Bureau of Land Management, and Nature Conservancy involvement in and utilization of Ecoregional studies. These studies consider similar ecosystems spanning multiple Federal and state resource management agencies, nearby North American countries, and selected other countries. Their designation is meant to serve as a spatial framework for research, assessment, and monitoring of ecosystems and ecosystem components.

Academic Level (Course Level)

Graduate

BIO595 - Graduate Research/Thesis

Overview

Course Subject Code	Course Number
BIO	595

Department

Natural Sciences

Academic Level (Course Level)

Graduate

BIO596 - Biomedical Capstone

Overview

Course Subject Code	Course Number
BIO	596

Department

Natural Sciences

Course Description

A semi-independent or directed-study course where the student completes a final original research project for the MS degree in Biomedical Sciences. This capstone project culminates the MS program and helps you to transition into the role of an academic scholar as well as a professional in your field.

Academic Level (Course Level)

Graduate

BIO597 - Internship/Shadowing

Overview

Course Subject Code	Course Number
BIO	597

Department

Natural Sciences

Course Description

An internship or shadowing course provides students with a structured experience in an organization whereby they can apply the knowledge and skills acquired in the classroom and extend them to a professional work environment. The experience also provides the opportunity for the student to gain new career-oriented knowledge, skills, and perspectives in a relevant career field. The internship or shadowing experience provides the opportunity to master career-related competencies not available in the classroom setting as they assume the responsibilities of being an integral team member in a workplace in their chosen field.

Academic Level (Course Level)

Graduate

CHE101 - Intro to General Chemistry

Overview

Course Subject Code	Course Number
CHE	101

Department

Natural Sciences

Course Description

A brief presentation of introductory chemical concepts including atomic structure, the chemical equation, the behavior of gases, the chemistry of solution, and acid-base chemistry. For students with good knowledge of algebra.

Academic Level (Course Level)

Undergraduate

CHE102 - Intro to Organic Chemistry

Overview

Course Subject Code	Course Number
CHE	102

Department

Natural Sciences

Course Description

A continuation of CHE 101 with emphasis on organic chemistry. The role of organic chemistry in life and industrial processes is discussed.

Academic Level (Course Level)

Undergraduate

CHE103 - Intro to Biochemistry

Overview

Course Subject Code	Course Number
CHE	103

Department

Natural Sciences

Course Description

A continuation of CHE 102 with emphasis on biochemistry. The organic chemistry of biochemicals including proteins, carbohydrates, and fats, as well as nucleic acids is discussed. Basic elements of metabolism are also explored.

Academic Level (Course Level)

Undergraduate

CHE104 - Intro to General Chemistry Lab

Overview

Course Subject Code	Course Number
CHE	104

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 101.

Academic Level (Course Level)

Undergraduate

CHE105 - Intro to Organic Chemistry Lab

Overview

Course Subject Code	Course Number
CHE	105

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 102.

Academic Level (Course Level)

Undergraduate

CHE106 - Elementary Chemistry Lab

Overview

Course Subject Code	Course Number
CHE	106

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 103.

Academic Level (Course Level)

Undergraduate

CHE107 - Seminar

Overview

Course Subject Code	Course Number
CHE	107

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CHE201 - General Chemistry I

Overview

Course Subject Code	Course Number
CHE	201

Department

Natural Sciences

Course Description

Atomic structure, chemical compounds, chemical equations and reaction stoichiometry, reactions in aqueous solutions (including acid/base, redox, and precipitation reactions) gas laws and kinetic-molecular theory, and thermochemistry. Emphasis on engineering applications. High school chemistry is accepted as a prerequisite.

Academic Level (Course Level)

Undergraduate

CHE202 - General Chemistry II

Overview

Course Subject Code	Course Number
CHE	202

Department

Natural Sciences

Course Description

Electronic structure of atoms, periodic trends, chemical bonding, molecular geometry, intermolecular forces, phase transitions, and properties of solutions. Emphasis on engineering applications.

Academic Level (Course Level)

Undergraduate

CHE203 - General Chemistry III

Overview

Course Subject Code	Course Number
CHE	203

Department

Natural Sciences

Course Description

Chemical kinetics and equilibrium, applications of aqueous equilibria (including acid-base reactions, buffers, solubility, and complexation reactions), thermodynamics, entropy and free energy, electrochemistry, and nuclear chemistry.

Academic Level (Course Level)

Undergraduate

CHE204 - General Chemistry I Lab

Overview

Course Subject Code	Course Number
CHE	204

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 201.

Academic Level (Course Level)

Undergraduate

CHE205 - General Chemistry II Lab

Overview

Course Subject Code	Course Number
CHE	205

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 202.

Academic Level (Course Level)

Undergraduate

CHE206 - General Chemistry III Lab

Overview

Course Subject Code	Course Number
CHE	206

Department

Natural Sciences

Course Description

Lab accompanying class content in CHE 203.

Academic Level (Course Level)

Undergraduate

CHE207 - Seminar

Overview

Course Subject Code	Course Number
CHE	207

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CHE210 - Clinical Pharmacology

Overview

Course Subject Code	Course Number
CHE	210

Department
Natural Sciences

Course Description
The drug action of selected pharmaceutical. Emphasis is placed on drug interactions, routes of administration, and effects on body systems.

Academic Level (Course Level)
Undergraduate

CHE221Z - General Chemistry I

Overview

Course Subject Code	Course Number
CHE	221Z

Department
Natural Sciences

Course Description
Explores and applies principles and applications of chemistry. Emphasis on measurement, components of matter, atomic and molecular structure, quantitative relationships including foundational stoichiometry, and major classes of chemical reactions. CHE 221Z is a lecture course; CHE 227Z is the laboratory component

Academic Level (Course Level)
Undergraduate

CHE222 - General Chemistry II

Overview

Course Subject Code	Course Number
CHE	222

Department
Natural Sciences

Course Description
Electronic structure of atoms, periodic trends, chemical bonding, molecular geometry, intermolecular forces, phase transitions, and properties of solutions. Includes lab component.

Academic Level (Course Level)
Undergraduate

CHE222Z - General Chemistry II

Overview

Course Subject Code	Course Number
CHE	222Z

Department
Natural Sciences

Course Description
Explores and applies principles presented in CHE 221Z to the study of the solid, liquid, and gaseous states of matter. Principles of stoichiometry, thermochemistry, kinetics, and foundational equilibrium are explored and applied to the study of aqueous and gas-phase chemical reactions. CHE 222Z is a lecture course; CHE 228Z is the laboratory component.

Academic Level (Course Level)
Undergraduate

CHE223 - General Chemistry III

Overview

Course Subject Code	Course Number
CHE	223

Department

Natural Sciences

Course Description

Chemical kinetics and equilibrium, applications of aqueous equilibria (including acid-base reactions, buffers, solubility, and complexation reactions), thermodynamics, entropy and free energy, electro chemistry, and nuclear chemistry. Includes lab component.

Academic Level (Course Level)

Undergraduate

CHE223Z - General Chemistry III

Overview

Course Subject Code	Course Number
CHE	223Z

Department

Natural Sciences

Course Description

Builds upon the principles presented in CHE 222Z, explores thermodynamics and chemical equilibrium, and applies them to the study of aqueous acid-base reactions, solubility, and electrochemistry. CHE 223Z is a lecture course; CHE 229Z is the laboratory component

Academic Level (Course Level)

Undergraduate

CHE227Z - General Chemistry I Lab

Overview

Course Subject Code	Course Number
CHE	227Z

Department

Natural Sciences

Course Description

Experiments correspond to the topics covered in CHE 221Z, including the fundamentals of chemical measurements, quantitative relationships in chemical analysis, and understanding atomic and molecular structure. CHE 227Z is the laboratory component; CHE 221Z is the lecture course.

Academic Level (Course Level)

Undergraduate

CHE228Z - General Chemistry II Lab

Overview

Course Subject Code	Course Number
CHE	228Z

Department

Natural Sciences

Course Description

Experiments correspond to the topics covered in CHE 222Z, including the fundamentals intermolecular interactions, stoichiometric relationships, chemical equilibria, and their application to the synthesis, identification, and analysis of chemical compounds. CHE 228Z is the laboratory component; CHE 222Z is the lecture course.

Academic Level (Course Level)

Undergraduate

CHE229Z - General Chemistry III Lab

Overview

Course Subject Code	Course Number
CHE	229Z

Department

Natural Sciences

Course Description

Experiments correspond to the topics covered in CHE 223Z, including the principles of chemical equilibria and their application to chemical analysis through the use of volumetric and electrochemical methods. CHE 229Z is the laboratory component; CHE 223Z is the lecture course.

Academic Level (Course Level)

Undergraduate

CHE255 - Sophomore Research Class

Overview

Course Subject Code	Course Number
CHE	255

Department

Natural Sciences

Course Description

This research course is the first in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)

Undergraduate

CHE260 - Electrochemistry for RE Applic**Overview**

Course Subject Code	Course Number
CHE	260

Department

Natural Sciences

Course Description

Development of electrochemistry concepts, including thermodynamics, reaction kinetics, charge transport and mass transport. Topics are presented in the context of fuel cells, electrolysis, electroplating and batteries. Also discussed, the chemistry of hydrogen; its properties, production, storage and transportation.

Academic Level (Course Level)

Undergraduate

CHE305 - Nanoscience & Nanotech**Overview**

Course Subject Code	Course Number
CHE	305

Department

Natural Sciences

Course Description

Survey of chemical and physical phenomena as applied to nanoscale materials, including metal and semiconductor nanoparticles and carbon nanostructures. Discussion of major synthesis and characterization techniques. Biological and engineering applications of nanoscale materials.

Academic Level (Course Level)

Undergraduate

CHE307 - Seminar**Overview**

Course Subject Code	Course Number
CHE	307

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

CHE315 - Environmental Analytical Chem.**Overview**

Course Subject Code	Course Number
CHE	315

Department

Natural Sciences

Course Description

Mechanisms and toxicological effects of chemical reactions in water, soil, and air. Global and regional concerns about atmospheric and marine contaminants, thermal pollution, pesticide and heavy metal disposal, radioisotope properties, and effects of pollutants on living organisms. Organic nomenclature and selected biochemistry principles.

Academic Level (Course Level)

Undergraduate

CHE325 - Soil Science**Overview**

Course Subject Code	Course Number
CHE	325

Department

Natural Sciences

Course Description

Nature, properties and distribution of soils and their relationship to the influence of vegetation, climate, landforms, and human activity. Understanding how soils form and how and why they vary horizontally across the landscape and vertically with depth. Emphasis upon North American patterns. Required field trips and labs.

Academic Level (Course Level)

Undergraduate

CHE331 - Organic Chemistry I**Overview**

Course Subject Code	Course Number
CHE	331

Department

Natural Sciences

Course Description

The structures and reactions of carbon compounds with emphasis on thermodynamics, reaction pathways and spectroscopy.

Academic Level (Course Level)

Undergraduate

CHE332 - Organic Chemistry II

Overview

Course Subject Code	Course Number
CHE	332

Department

Natural Sciences

Course Description

Organic stereochemistry with emphasis on biologically important molecules.

Academic Level (Course Level)

Undergraduate

CHE333 - Organic Chemistry III

Overview

Course Subject Code	Course Number
CHE	333

Department

Natural Sciences

Course Description

Free radical chemistry, pharmaceutical chemistry and the mechanistic aspects of enzymatic catalysis.

Academic Level (Course Level)

Undergraduate

CHE335 - Bioorganic Chemistry

Overview

Course Subject Code	Course Number
CHE	335

Department

Natural Sciences

Course Description

An overview of common organic chemistry mechanisms that occur in mammalian metabolism with a focus on molecular structure and reactivity of biological molecules and metabolites.

Academic Level (Course Level)

Undergraduate

CHE341 - Instr Methods/Data Acquistn I

Overview

Course Subject Code	Course Number
CHE	341

Department

Natural Sciences

Course Description

As introduction to the theory and practical applications of computer/instrument interfacing and data acquisition techniques and software. Includes a survey of optical measurement techniques.

Academic Level (Course Level)

Undergraduate

CHE342 - Instr Methods/Data Acquistn II

Overview

Course Subject Code	Course Number
CHE	342

Department

Natural Sciences

Course Description

Principles and techniques of instrumental methods and data analysis. Methods appropriate for chemical analysis including spectroscopy, gas chromatography, potentiometric and flame photometric methods. Emphasis on sample preparation, instrumental response, sensitivity, and accuracy.

Academic Level (Course Level)

Undergraduate

CHE345 - Corrosion Chemistry

Overview

Course Subject Code	Course Number
CHE	345

Department

Natural Sciences

Course Description

A survey of the chemical kinetics and thermodynamics of corrosion, the various types of corrosion, inhibition of corrosion, and industrial applications.

Academic Level (Course Level)

Undergraduate

CHE346 - Corrosion Chemistry Lab

Overview

Course Subject Code	Course Number
CHE	346

Department
Natural Sciences

Course Description
Laboratory accompanying CHE 345. Providing practical experience with electrochemical equipment used to measure corrosion processes.

Academic Level (Course Level)
Undergraduate

CHE355 - Junior Research Class

Overview

Course Subject Code	Course Number
CHE	355

Department
Natural Sciences

Course Description
This research course is the second in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)
Undergraduate

CHE360 - Clinical Pharmacology/Hlth Prf

Overview

Course Subject Code	Course Number
CHE	360

Department
Natural Sciences

Course Description
Principles of pharmacokinetics, pharmacodynamics and a survey of the major drug families developing familiarity with the most commonly prescribed drugs, their clinical application, mechanism of action and side effects.

Academic Level (Course Level)
Undergraduate

CHE407 - Seminar

Overview

Course Subject Code	Course Number
CHE	407

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

CHE450 - Biochemistry I

Overview

Course Subject Code	Course Number
CHE	450

Department
Natural Sciences

Course Description
Molecular and cellular biochemistry with emphasis on DNA structure, replication, the process and cellular regulation of RNA transcription, and analyzing and constructing DNA.

Academic Level (Course Level)
Undergraduate

CHE451 - Biochemistry II

Overview

Course Subject Code	Course Number
CHE	451

Department
Natural Sciences

Course Description
Molecular biochemistry with emphasis on protein conformation and function, mechanisms of enzyme action and control, and energy production via glycolysis.

Academic Level (Course Level)
Undergraduate

CHE452 - Biochemistry III

Overview

Course Subject Code	Course Number
CHE	452

Department

Natural Sciences

Course Description

Molecular and cellular biochemistry with emphasis on cell membranes, lipid metabolism, aerobic energy metabolism, anabolism, and the role of biochemistry in cellular signaling processes.

Academic Level (Course Level)

Undergraduate

CHE495 - Research Project in Chemistry

Overview

Course Subject Code	Course Number
CHE	495

Department

Natural Sciences

Course Description

Supports student-initiated research projects in biological sciences. Topics and scope must be reviewed and accepted by a faculty advisor. May be repeated for up to nine total credits. Instructor consent required.

Academic Level (Course Level)

Undergraduate

CHE455 - Senior Research Class

Overview

Course Subject Code	Course Number
CHE	455

Department

Natural Sciences

Course Description

This research course is the third in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)

Undergraduate

CHE522 - Biochemistry III

Overview

Course Subject Code	Course Number
CHE	522

Department

Natural Sciences

Course Description

Molecular and cellular biochemistry with emphasis on cell membranes, lipid metabolism, aerobic energy metabolism, anabolism, and the role of biochemistry in cellular signaling processes.

Academic Level (Course Level)

Graduate

CHE465 - Fate/Transport of Pollutants

Overview

Course Subject Code	Course Number
CHE	465

Department

Natural Sciences

Course Description

Application of principals learned in CHE 315. Mass Balance and the use of chemical equilibrium and kinetics to calculate pollutant transport in environmental compartments. Discussion and use of partitioning coefficients to determine fate of pollutants in water, soil, and air.

Academic Level (Course Level)

Undergraduate

CHE550 - Biochemistry I

Overview

Course Subject Code	Course Number
CHE	550

Department

Natural Sciences

Course Description

Molecular and cellular biochemistry with emphasis on DNA, RNA, regulation of DNA and RNA processes in cells, and on analyzing, constructing, and cloning DNA.

Academic Level (Course Level)

Graduate

CHE551 - Biochemistry II

Overview

Course Subject Code	Course Number
CHE	551

Department
Natural Sciences

Course Description
Molecular biochemistry with emphasis on protein conformation and function, mechanisms of enzyme action and control, and energy production via glycolysis.

Academic Level (Course Level)
Graduate

CHE552 - Biochemistry III

Overview

Course Subject Code	Course Number
CHE	552

Department
Natural Sciences

Course Description
Molecular and cellular biochemistry with emphasis on cell membranes, lipid metabolism, aerobic energy metabolism, anabolism, and the role of biochemistry in cellular signaling processes.

Academic Level (Course Level)
Graduate

CHE565 - Fate & Transport of Pollutants

Overview

Course Subject Code	Course Number
CHE	565

Department
Natural Sciences

Course Description
Mass balance. The use of equilibrium and chemical kinetics in the modeling of pollutant transport in water, soil, and air. Mixing zone analysis, the use of Darcy's law, flow nets, and the Gaussian Plume approximation. Discussion, development and use of selected modeling scenarios.

Academic Level (Course Level)
Graduate

ENV107 - Seminar

Overview

Course Subject Code	Course Number
ENV	107

Department
Natural Sciences

Course Description
(Hours to be arranged each term.) Prerequisite: ENV major or instructor consent.

Academic Level (Course Level)
Undergraduate

ENV108 - Mentorship & Team Building

Overview

Course Subject Code	Course Number
ENV	108

Department
Natural Sciences

Course Description
We develop a strong sense of community, trust, inclusion, and belonging within the Environmental Science program among all students and faculty. We introduce student mentorship opportunities and engage in team building exercises and environmental exploration during a weekend camping trip. Course is required every Fall. Can be taken multiple times for credit. No prerequisites.

Academic Level (Course Level)
Undergraduate

ENV111 - Intro to Env Sciences

Overview

Course Subject Code	Course Number
ENV	111

Department
Natural Sciences

Course Description
A topical overview of environmental sciences stressing the integration of the social, natural and physical sciences. Emphasis on active learning.

Academic Level (Course Level)
Undergraduate

ENV207 - Seminar

Overview

Course Subject Code	Course Number
ENV	207

Department

Natural Sciences

Course Description

(Hours to be arranged each term.) Prerequisite: ENV major or instructor consent.

Academic Level (Course Level)

Undergraduate

ENV214 - Watershed Sci & Tech

Overview

Course Subject Code	Course Number
ENV	214

Department

Natural Sciences

Course Description

Science and technology of watershed processes, monitoring, and assessment. Applications and case studies focused on sustainable management and restoration of water resources and their associated aquatic, riparian, and upland ecosystems. Local and regional sites of interest are highlighted.

Academic Level (Course Level)

Undergraduate

ENV217 - Intro to Natural Resource Mgmt

Overview

Course Subject Code	Course Number
ENV	217

Department

Natural Sciences

Course Description

An introduction to management of natural resources including water, air, forests, wildlife & fisheries, minerals and energy. Explore structured decision making, risk assessment, uncertainty, stakeholder engagement, adaptive management, conservation and scenario planning, and climate and environmental mitigation, adaptation, and resiliency.

Academic Level (Course Level)

Undergraduate

ENV224 - Scientific Reason & Method

Overview

Course Subject Code	Course Number
ENV	224

Department

Natural Sciences

Course Description

Fundamental principles and practices of scientific reasoning and methodology, including contrasts with other ways of making knowledge, the power of questions, theories versus hypotheses, understanding experiments, supporting claims, drawing inferences, reproducibility, and coping with uncertainty in typical uncontrolled natural experiments.

Academic Level (Course Level)

Undergraduate

ENV226 - Environmental Data Analysis

Overview

Course Subject Code	Course Number
ENV	226

Department

Natural Sciences

Course Description

Introduction to compilation, manipulation, and analysis of datasets common to environmental analysis. Includes measures of central tendency and spread; characterizing data distribution; linear regression; exceedance probability and cumulative frequency functions; understanding time series; and basic principles of graphical data displays.

Academic Level (Course Level)

Undergraduate

ENV265 - Field Methods Environ Science

Overview

Course Subject Code	Course Number
ENV	265

Department

Natural Sciences

Course Description

Basic principles of experimental design, site and instrument selection for field research. Basic instrumentation and data acquisition techniques are used to contribute to authentic research programs at different locations alongside environmental science professionals.

Academic Level (Course Level)

Undergraduate

ENV275 - Careers in Env. Sciences

Overview

Course Subject Code	Course Number
ENV	275

Department

Natural Sciences

Course Description

Survey of specialties and careers in environmental sciences, including educational requirements. Jobs in government, non-government (non-profit), and private sectors are presented and discussed. Faculty support for student job searches.

Academic Level (Course Level)

Undergraduate

ENV307 - Seminar

Overview

Course Subject Code	Course Number
ENV	307

Department

Natural Sciences

Course Description

(Hours to be arranged each term.) Prerequisite: ENV major or instructor consent.

Academic Level (Course Level)

Undergraduate

ENV314 - Environmental Policy & Law

Overview

Course Subject Code	Course Number
ENV	314

Department

Natural Sciences

Course Description

Overview of legislative, regulatory, and policy-based activities involving the development, management, and restoration of natural ecosystem services. Emphasis on the National Environmental Policy, Clean Water, and Endangered Species Acts, with illustrative case studies from local and regional environments.

Academic Level (Course Level)

Undergraduate

ENV321 - Water Resources

Overview

Course Subject Code	Course Number
ENV	321

Department

Natural Sciences

Course Description

This course will provide an overview of the science & policy related to managing fresh water resources in the Western United States. Fundamentals of hydrologic processes, riparian assessment, stream surveying techniques, water sampling methods, watershed delineation, adjudication processes, the environmental impacts of water use, and riverine restoration practices will be included.

Academic Level (Course Level)

Undergraduate

ENV336 - Environmental Hydrology

Overview

Course Subject Code	Course Number
ENV	336

Department

Natural Sciences

Course Description

Study of the hydrologic cycle; quantitative measurement of precipitation, infiltration, runoff, streamflow and storage in watersheds. Curve fitting, hydrographic analysis, statistical analysis of extreme flows, flood routing, and runoff modeling for small and urban watersheds.

Academic Level (Course Level)

Undergraduate

ENV355 - Careers and Prof. in Env. Sci.

Overview

Course Subject Code	Course Number
ENV	355

Department

Natural Sciences

Course Description

Practical seminar focusing on career opportunities in environmental sciences, professional standards, culture, ethics, and skills to enhance communication and collegiality. Assists students with workforce transition, including job search, preparation of resume packages and portfolios, interviewing tips, and job-offer negotiation.

Academic Level (Course Level)

Undergraduate

ENV365 - Adv Field Methods in Env Sci

Overview

Course Subject Code	Course Number
ENV	365

Department

Natural Sciences

Course Description

Basic principles of experimental design, site and instrument selection for field research. Basic instrumentation and data acquisition techniques are used to contribute to authentic research programs at different locations alongside environmental science professionals. Course may be repeated for credit.

Academic Level (Course Level)

Undergraduate

ENV407 - Seminar

Overview

Course Subject Code	Course Number
ENV	407

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

ENV412 - Human Dimensions

Overview

Course Subject Code	Course Number
ENV	412

Department

Natural Sciences

Course Description

The science of incorporating current human-natural resource relationships with traditional biological sciences information in the natural resource decision-making process.

Academic Level (Course Level)

Undergraduate

ENV420 - Extern Environmental Science

Overview

Course Subject Code	Course Number
ENV	420

Department

Natural Sciences

Academic Level (Course Level)

Undergraduate

ENV422 - Green Chemistry

Overview

Course Subject Code	Course Number
ENV	422

Department

Natural Sciences

Course Description

Advanced topics in green chemistry, including industrial applications, atom economy, safer solvent substitutions, alternatives assessment, green metrics (PMI, E-factor) basic life cycle analysis, and an introduction to chemical toxicology.

Academic Level (Course Level)

Undergraduate

ENV425 - Fire Ecology

Overview

Course Subject Code	Course Number
ENV	425

Department

Natural Sciences

Course Description

Wildland fire is on critical issue across communities of the western U.S. right now. It is a complex issue that integrates a wide range of challenges from unwanted destruction of valuable natural resources to the critical positive ecological role of fire in forests, rangeland and other ecosystems and habitats. Managing wildland fire has become even more complicated over the past several decades with expanding wildland-urban and rural interface and the use of prescribed fire as a management tool. The primary goal of this course is to provide and practice fundamental knowledge, comprehension and understanding, practice and application of wildland fire principles, concepts, and issues in ecological as well as sociopolitical contexts, as these are inextricably linked in our contemporary world! We will integrate this information into the context of natural resource management, protection, and stewardship.

Academic Level (Course Level)

Undergraduate

ENV433 - Environmental Education

Overview

Course Subject Code	Course Number
ENV	433

Department

Natural Sciences

Course Description

This course explores the field of environmental education through the lens of the North American Association of Environmental Education Guidelines for Excellence. Students will produce standards aligned outdoor lessons utilizing backwards design and implementing pedagogy for a diverse range of learners. These lessons will include formative and summative assessment techniques for evaluation of the experience.

Academic Level (Course Level)

Undergraduate

ENV434 - Advanced Data Analysis

Overview

Course Subject Code	Course Number
ENV	434

Department

Natural Sciences

Course Description

Overview of advanced concepts and methods of analysis specific to ecological data sets using program R. Bayesian and parametric methods, analysis of variance, linear regression, generalized linear modeling, generalized additive modeling, mixed-effect models, multi-model inference, ordination, and time-series analysis.

Academic Level (Course Level)

Undergraduate

ENV435 - Advanced Data Analysis II

Overview

Course Subject Code	Course Number
ENV	435

Department

Natural Sciences

Course Description

Data analysis is an extremely crucial component of any scientific discipline, but proper data analysis in the environmental sciences is particularly vital. Scientific observations of the natural world are inherently fraught with complexity, variability, and a high degree of uncertainty. Consequently, effective statistical analyses must be applied with a thorough understanding of the pros and cons of each approach. This course aims to provide you with a broad overview of both traditional and modern statistical approaches commonly used to address the special needs of ecological data sets.

Academic Level (Course Level)

Undergraduate

ENV444 - Pollinator Ecol Plants & Bees

Overview

Course Subject Code	Course Number
ENV	444

Department

Natural Sciences

Course Description

This course will examine interactions between bees and the plants that they pollinate, current threats to pollinator populations, and the conservation of pollinators in the Klamath Basin and beyond.

Academic Level (Course Level)

Undergraduate

ENV452 - Invertebrate Ecology

Overview

Course Subject Code	Course Number
ENV	452

Department

Natural Sciences

Course Description

Invertebrate ecology focuses on student-driven inquiry and discovery of the critical importance of invertebrates, their unknown diversity, and their unique adaptations to thrive in different environments.

Academic Level (Course Level)

Undergraduate

ENV460 - Risk Mgmt & Wildrnss First Aid

Overview

Course Subject Code	Course Number
ENV	460

Department

Natural Sciences

Course Description

This course will focus on the administrative elements necessary to design and implement safe and effective environmental education programs. Students will receive their Wilderness First Aid (WFA) certification as part of this course.

Academic Level (Course Level)

Undergraduate

ENV465 - Ecological Resto. & Monitoring

Overview

Course Subject Code	Course Number
ENV	465

Department

Natural Sciences

Course Description

Principles and practices of ecological restoration, including ecosystem assessment; evaluation; and restoration, planning, design, implementation, and monitoring. Labs including fields visits and evaluation of local restoration projects.

Academic Level (Course Level)

Undergraduate

ENV466 - Environmental Education

Overview

Course Subject Code	Course Number
ENV	466

Department

Natural Sciences

Course Description

This course explores the field of environmental education through the lens of the North American Association of Environmental Education Guidelines for Excellence. Students will produce standards aligned outdoor lessons utilizing backwards design and implementing pedagogy for a diverse range of learners. These lessons will include formative and summative assessment techniques for evaluation of the experience.

Academic Level (Course Level)

Undergraduate

ENV469 - Wetlands

Overview

Course Subject Code	Course Number
ENV	469

Department

Natural Sciences

Course Description

Treatment wetland features: biological, chemical, and physical properties. Planning, design, and performance assessment principles for municipal, agricultural, and storm water treatment wetlands. Considers vegetation and microbiology, aerobic and anaerobic biogeochemistry, hydraulics, and treatment efficiencies. Local case studies.

Academic Level (Course Level)

Undergraduate

ENV475 - Forest Ecology & Management

Overview

Course Subject Code	Course Number
ENV	475

Department

Natural Sciences

Course Description

Examine abiotic and biotic factors affecting the structure, function, composition, and distribution of forest communities including wildland fire; sustainable forest management practices and policies; and core concepts required for careers in forestry, wildland fire, natural resources, range, and wildlife.

Academic Level (Course Level)

Undergraduate

ENV477 - Entomology

Overview

Course Subject Code	Course Number
ENV	477

Department

Natural Sciences

Course Description

A study is made of insect morphology, taxonomy, development, and life histories. Collection and identification by use of keys are stressed.

Academic Level (Course Level)

Undergraduate

ENV479 - Ichthyology

Overview

Course Subject Code	Course Number
ENV	479

Department

Natural Sciences

Course Description

You will be introduced to the diversity of fishes and be exposed to the taxonomy, form and function, distribution, natural history, ecology, economic importance, and management of fishes with an emphasis on Oregon and regional species.

Academic Level (Course Level)

Undergraduate

ENV489 - Aquatic Inorganic Chemistry

Overview

Course Subject Code	Course Number
ENV	489

Department

Natural Sciences

Course Description

This course will teach you fundamental chemistry concepts for understanding the behavior of inorganic species, such as carbonate, nutrients, and trace metals, in both natural and engineered aquatic systems.

Academic Level (Course Level)

Undergraduate

ENV484 - Sustainable Human Ecology

Overview

Course Subject Code	Course Number
ENV	484

Department

Natural Sciences

Course Description

A multidisciplinary exploration of historic, contemporary, and future interactions of human communities, economies, technologies, and ecosystems from local to global scales and the biggest problems facing long-term planetary health including climate change, energy, food and water security, health and well-being. Prerequisite: ENV111 or BIO212 or Instructor Consent

Academic Level (Course Level)

Undergraduate

ENV495 - Research in Env. Sciences

Overview

Course Subject Code	Course Number
ENV	495

Department

Natural Sciences

Course Description

Supports student-initiated research projects in environmental sciences. Topic and scope must be reviewed and accepted by a faculty advisor. Registration by instructor consent. Counts as technical elective credit. May be repeated for up to nine total credits. (Hours to be arranged each term).

Academic Level (Course Level)

Undergraduate

ENV485 - Habitat Management

Overview

Course Subject Code	Course Number
ENV	485

Department

Natural Sciences

Course Description

Provides an individual and team-based synthesis of the influence of human activities on habitat. Illustrates linkage between climate-based habitats and their management and restoration by cooperation of land and aquatic management entities.

Academic Level (Course Level)

Undergraduate

ENV507 - Seminar

Overview

Course Subject Code	Course Number
ENV	507

Department

Natural Sciences

Academic Level (Course Level)

Graduate

ENV512 - Human Dimension

Overview

Course Subject Code	Course Number
ENV	512

Department

Natural Sciences

Course Description

The science of incorporating current human-natural resource relationships with traditional biological sciences information in the natural resource decision-making process.

Academic Level (Course Level)

Graduate

ENV522 - Green Chemistry

Overview

Course Subject Code	Course Number
ENV	522

Department

Natural Sciences

Course Description

Advanced topics in green chemistry, including industrial applications, atom economy, safer solvent substitutions, alternatives assessment, green metrics (PMI, E-factor), basic life cycle analysis, and an introduction to chemical toxicology.

Academic Level (Course Level)

Graduate

ENV525 - Fire Ecology

Overview

Course Subject Code	Course Number
ENV	525

Department

Natural Sciences

Course Description

The primary goal of this course is to provide and practice fundamental knowledge, comprehension and understanding, practice and application of wildland fire principles, concepts, and issues in ecological as well as sociopolitical contexts, as these are inextricably linked in our contemporary world. We will integrate this information into the context of natural resource management, protection, and stewardship.

Academic Level (Course Level)

Graduate

ENV534 - Advanced Data Analysis

Overview

Course Subject Code	Course Number
ENV	534

Department

Natural Sciences

Course Description

Data analysis is an extremely crucial component of any scientific discipline, but proper data analysis in the environmental sciences is particularly vital. This course aims to provide you with a broad overview of both traditional and modern statistical approaches commonly used to address the special needs of ecological data sets.

Academic Level (Course Level)

Graduate

ENV542 - Invertebrate Ecology

Overview

Course Subject Code	Course Number
ENV	542

Department

Natural Sciences

Course Description

Invertebrate ecology focuses on student-driven inquiry and discovery of the critical importance of invertebrates, their unknown diversity, and their unique adaptations to thrive in different environments.

Academic Level (Course Level)

Graduate

ENV544 - Pollinator Ecology Plants/Bees

Overview

Course Subject Code	Course Number
ENV	544

Department

Natural Sciences

Course Description

This course will examine interactions between bees and the plants that they pollinate, current threats to pollinator populations, and the conservation of pollinators in the Klamath Basin and beyond.

Academic Level (Course Level)

Graduate

ENV560 - Risk Mgmt/Wilderness First Aid

Overview

Course Subject Code	Course Number
ENV	560

Department

Natural Sciences

Course Description

This course will focus on the administrative elements necessary to design and implement safe and effective environmental education programs. Students will receive their Wilderness First Aid (WFA) certification as part of this course.

Academic Level (Course Level)

Graduate

ENV565 - Ecological Resto. & Monitoring

Overview

Course Subject Code	Course Number
ENV	565

Department

Natural Sciences

Course Description

Principles and practices of ecological restoration, including ecosystem assessment; evaluation; and restoration, planning, design, implementation, and monitoring. Labs including fields visits and evaluation of local restoration projects.

Academic Level (Course Level)

Graduate

ENV566 - Environmental Education

Overview

Course Subject Code	Course Number
ENV	566

Department

Natural Sciences

Course Description

This course explores the field of environmental education through the lens of the North American Association of Environmental Education Guidelines for Excellence. Students will produce standards aligned outdoor lessons utilizing backwards design and implementing pedagogy for a diverse range of learners. These lessons will include formative and summative assessment techniques for evaluation of the experience.

Academic Level (Course Level)

Graduate

ENV569 - Treatment Wetlands

Overview

Course Subject Code	Course Number
ENV	569

Department

Natural Sciences

Course Description

Treatment wetland features: biological, chemical, and physical properties. Planning, design, and performance assessment principles for municipal, agricultural, and stormwater treatment wetlands. Considers vegetation and microbiology, aerobic and anaerobic biogeochemistry, hydraulics, and treatment efficiencies. Local case studies.

Academic Level (Course Level)

Graduate

ENV575 - Forest Ecology & Management

Overview

Course Subject Code	Course Number
ENV	575

Department

Natural Sciences

Course Description

This course examines the fundamentals of terrestrial ecology, with an emphasis on forest ecosystems and their management. In addition to examining the abiotic and biotic factors affecting the structure, function, composition, and distribution of western forest communities, we will explore the diverse societal perspectives that drive the management of both public and private forests.

Academic Level (Course Level)

Graduate

ENV577 - Entomology

Overview

Course Subject Code	Course Number
ENV	577

Department

Natural Sciences

Course Description

A study is made of insect morphology, taxonomy, development, and life histories. Collection and identification by use of keys are stressed.

Academic Level (Course Level)

Graduate

ENV579 - Ichthyology

Overview

Course Subject Code	Course Number
ENV	579

Department

Natural Sciences

Course Description

You will be introduced to the diversity of fishes and be exposed to the taxonomy, form and function, distribution, natural history, ecology, economic importance, and management of fishes with an emphasis on Colorado and regional species. In laboratory, you will be introduced to approximately 100 representative species and will be expected to learn techniques to identify fish from lab and field collections.

Academic Level (Course Level)

Graduate

ENV584 - Sustainable Human Ecology

Overview

Course Subject Code	Course Number
ENV	584

Department

Natural Sciences

Course Description

This course combines two distinct and overlapping disciplines - Human Ecology & Sustainability. While the former is relatively easily defined, the later is not. At the heart of this course is an exploration and realistic discussion of who we are as a species, what it means to be human over the past 300,000 years, how we got to be where we are today, evolutionarily, ecologically, culturally, technologically, and how we can move forward in a way that supports and promotes the health of all living communities and the planet which we share.

Academic Level (Course Level)

Graduate

ENV585 - Habitat Management

Overview

Course Subject Code	Course Number
ENV	585

Department

Natural Sciences

Course Description

This course explores the principles and practices of wildlife habitat management with an emphasis on Oregon's most extensive terrestrial ecosystems. It provides an in-depth understanding of habitat requirements for native species, conservation strategies, and the impact of human activities on wildlife.

Academic Level (Course Level)

Graduate

ENV589 - Aquatic Inorganic Chemistry

Overview

Course Subject Code	Course Number
ENV	589

Department

Natural Sciences

Course Description

This course will teach you fundamental chemistry concepts for understanding the behavior of inorganic species, such as carbonate, nutrients, and trace metals, in both natural and engineered aquatic systems. We will focus on equilibrium concepts, including acid-base reactions, complexation, oxidation/reduction, open systems, precipitation/dissolution, and sorption. You will learn to determine the equilibrium composition of a system given its initial conditions, and you will be able to predict how perturbations will affect the system's chemistry.

Academic Level (Course Level)

Graduate

GEOG105 - Physical Geography

Overview

Course Subject Code	Course Number
GEOG	105

Department

Natural Sciences

Course Description

Comprehensive introduction to physical geography, including maps and representation of the earth's surface, the climate system and weather phenomena, plate tectonics, landform evolution and interpretation, and human-landscape interactions. Satisfies lab science.

Academic Level (Course Level)

Undergraduate

GEOG335 - Soils

Overview

Course Subject Code	Course Number
GEOG	335

Department

Natural Sciences

Course Description

Processes and patterns of soil genesis and evolution, including weathering; profile development and identification; soil classification and mapping; abiotic-biotic components and interactions; and tilth, soil quality, and conservation.

Academic Level (Course Level)

Undergraduate

GEOL107 - Seminar

Overview

Course Subject Code	Course Number
GEOL	107

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

GEOL201 - Physical Geology

Overview

Course Subject Code	Course Number
GEOL	201

Department
Natural Sciences

Course Description
A brief systematic description of the major rock-forming minerals and the three major rock groups. The events of erosion, transportation, and deposition of chemically altered and physically fragmented rocks and the resulting sculpturing of the earth's surface are discussed.

Academic Level (Course Level)
Undergraduate

GEOL207 - Seminar

Overview

Course Subject Code	Course Number
GEOL	207

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

GEOL307 - Seminar

Overview

Course Subject Code	Course Number
GEOL	307

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

GEOL407 - Seminar

Overview

Course Subject Code	Course Number
GEOL	407

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

OSLS207 - Overseas Lab Science

Overview

Course Subject Code	Course Number
OSLS	207

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

OSMS107 - Seminar

Overview

Course Subject Code	Course Number
OSMS	107

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

OSMS207 - Seminar

Overview

Course Subject Code	Course Number
OSMS	207

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

OSMS307 - Seminar

Overview

Course Subject Code	Course Number
OSMS	307

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

OSMS407 - Seminar

Overview

Course Subject Code	Course Number
OSMS	407

Department
Natural Sciences

Academic Level (Course Level)
Undergraduate

PHY107 - Seminar

Overview

Course Subject Code	Course Number
PHY	107

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

PHY201 - General Physics

Overview

Course Subject Code	Course Number
PHY	201

Department
Natural Sciences

Course Description
An introduction to physics with study of Newtonian mechanics, including kinematics, dynamics, work, energy, power and hydraulics. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY202 - General Physics

Overview

Course Subject Code	Course Number
PHY	202

Department
Natural Sciences

Course Description
Temperature systems, heat, kinetic theory of gasses, introductory thermodynamics, and the fundamentals of electricity and magnetism. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY203 - General Physics

Overview

Course Subject Code	Course Number
PHY	203

Department
Natural Sciences

Course Description
Wave motion, sound, introduction to geometrical and physical optics, and topics from modern physics. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY207 - Seminar

Overview

Course Subject Code	Course Number
PHY	207

Department
Natural Sciences

Course Description
(Hours to be arranged each term.)

Academic Level (Course Level)
Undergraduate

PHY215 - Topics in Astronomy

Overview

Course Subject Code	Course Number
PHY	215

Department
Natural Sciences

Course Description
Astronomy including a survey of the solar system, constellations, star characteristics, star groupings, galactic and extragalactic objects, stellar evolution, and instrumentation with emphasis on topics of maximum interest to the students.

Academic Level (Course Level)
Undergraduate

PHY217 - Physics of Med Imaging

Overview

Course Subject Code	Course Number
PHY	217

Department
Natural Sciences

Course Description
An introduction to physics for MIT majors. Topics include: basic mechanics, basic electrostatics, fundamentals of electronics, magnetism, sources and types of radiation, and image formation.

Academic Level (Course Level)
Undergraduate

PHY221 - General Physics w/Calculus

Overview

Course Subject Code	Course Number
PHY	221

Department
Natural Sciences

Course Description
Basic principles of physics with emphasis on applications of calculus. Newtonian mechanics, including kinematics, dynamics, work, energy, power, and hydraulics. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY222 - General Physics w/Calculus

Overview

Course Subject Code	Course Number
PHY	222

Department
Natural Sciences

Course Description
Temperature systems, heat, kinetic theory of gasses, thermodynamics and the fundamentals of electricity and magnetism. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY223 - General Physics w/Calculus

Overview

Course Subject Code	Course Number
PHY	223

Department
Natural Sciences

Course Description
Wave motion, sound, introduction to geometrical and physical optics, and selected topics from modern physics. All general physics students must register for a laboratory section.

Academic Level (Course Level)
Undergraduate

PHY255 - Sophomore Research

Overview

Course Subject Code	Course Number
PHY	255

Department

Natural Sciences

Course Description

This research course is the first in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)

Undergraduate

PHY305 - Nanoscience & Nanotech

Overview

Course Subject Code	Course Number
PHY	305

Department

Natural Sciences

Course Description

Survey of chemical and physical phenomena as applied to nanoscale materials, including metal and semiconductor nanoparticles and carbon nanostructures. Discussion of major synthesis and characterization techniques. Biological and engineering applications of nanoscale materials.

Academic Level (Course Level)

Undergraduate

PHY307 - Seminar

Overview

Course Subject Code	Course Number
PHY	307

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

PHY311 - Intro to Modern Physics

Overview

Course Subject Code	Course Number
PHY	311

Department

Natural Sciences

Course Description

An introduction to physics of the 20th century, including selected topics from atomic and nuclear physics and quantum theory with applications in science and industry.

Academic Level (Course Level)

Undergraduate

PHY312 - Intro to Modern Physics

Overview

Course Subject Code	Course Number
PHY	312

Department

Natural Sciences

Course Description

An introduction to physics of the 20th century, including selected topics from atomic and nuclear physics and quantum theory with applications in science and industry.

Academic Level (Course Level)

Undergraduate

PHY313 - Intro to Modern Physics

Overview

Course Subject Code	Course Number
PHY	313

Department

Natural Sciences

Course Description

An introduction to physics of the 20th century, including selected topics from atomic and nuclear physics and quantum theory with applications in science and industry.

Academic Level (Course Level)

Undergraduate

PHY330 - Electricity & Magnetism

Overview

Course Subject Code	Course Number
PHY	330

Department

Natural Sciences

Course Description

A study of electromagnetic phenomena leading to and using Maxwell's equations. Topics will include static fields in vacuum and in dielectric media, electric and magnetic potentials, and the energy density of electromagnetic fields.

Academic Level (Course Level)

Undergraduate

PHY355 - Junior Research

Overview

Course Subject Code	Course Number
PHY	355

Department

Natural Sciences

Course Description

This research course is the second in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)

Undergraduate

PHY407 - Seminar

Overview

Course Subject Code	Course Number
PHY	407

Department

Natural Sciences

Course Description

(Hours to be arranged each term.)

Academic Level (Course Level)

Undergraduate

PHY410 - Math Meth:Fourier Optics

Overview

Course Subject Code	Course Number
PHY	410

Department

Natural Sciences

Course Description

Linear systems, Fourier transforms, and their use in optics. Topics will include special functions, orthogonal expansions, Fourier series and transforms and spectra of functions, mathematical operators, convolution, autocorrelation, cross correlation, linear systems as filters, and signal processing.

Academic Level (Course Level)

Undergraduate

PHY448 - Geometric Optics

Overview

Course Subject Code	Course Number
PHY	448

Department

Natural Sciences

Course Description

Reflection and refraction at plane and curved surfaces; imaging properties of lenses; first-order Gaussian optics and thin-lens system layout; matrix optics; ray-tracing software; spherical and chromatic aberrations.

Academic Level (Course Level)

Undergraduate

PHY450 - Physical Optics

Overview

Course Subject Code	Course Number
PHY	450

Department

Natural Sciences

Course Description

Spherical and planar waves; scalar diffraction theory; Fresnel and Fraunhofer diffraction and application to measurement; interference and interferometers; optical transfer functions; coherent optical systems and holography.

Academic Level (Course Level)

Undergraduate

PHY451 - Lasers

Overview

Course Subject Code	Course Number
PHY	451

Department

Natural Sciences

Course Description

Laser radiation properties, laser cavities, coherence, atomic spectra, pumping rate, power gain, threshold conditions, beam shape, mode structure; ion, molecular, solid-state, dye, semiconductor, and fiber lasers.

Academic Level (Course Level)

Undergraduate

PHY455 - Senior Research

Overview

Course Subject Code	Course Number
PHY	455

Department

Natural Sciences

Course Description

This research course is the third in a series of three. Students will learn skills needed to succeed in science through exploration of research opportunities, developing a research project, and ultimately publishing their research.

Academic Level (Course Level)

Undergraduate

PHY452 - Waveguides and Fiber Optics

Overview

Course Subject Code	Course Number
PHY	452

Department

Natural Sciences

Course Description

Light propagation in fibers and waveguides; termination, coupling, and splicing of fibers; fiber optic communication; optical time domain reflectometry, fiber amplifiers, and fiber sensors.

Academic Level (Course Level)

Undergraduate

PHY548 - Geometric Optics

Overview

Course Subject Code	Course Number
PHY	548

Department

Natural Sciences

Course Description

Reflection and refraction at plane and curved surfaces; imaging properties of lenses; first-order Gaussian optics and thin-lens system layout; matrix optics; ray-tracing software; spherical and chromatic aberrations.

Academic Level (Course Level)

Graduate

PHY453 - Optical Metrology

Overview

Course Subject Code	Course Number
PHY	453

Department

Natural Sciences

Course Description

Modern optical metrology with emphasis on non-destructive testing; Fourier optics; Moiré and polarization methods; classic and holographic interferometry; speckle techniques; fringe analysis.

Academic Level (Course Level)

Undergraduate

PHY550 - Physical Optics

Overview

Course Subject Code	Course Number
PHY	550

Department

Natural Sciences

Course Description

Spherical and planar waves; scalar diffraction theory; Fresnel and Fraunhofer diffraction and application to measurement; interference and interferometers; optical transfer functions; coherent optical systems and holography.

Academic Level (Course Level)

Graduate

PHY551 - Lasers

Overview

Course Subject Code	Course Number
PHY	551

Department

Natural Sciences

Course Description

Laser radiation properties, laser cavities, coherence, atomic spectra, pumping rate, power gain, threshold conditions, beam shape, mode structure; ion, molecular, solid-state, dye, semiconductor, and fiber lasers.

Academic Level (Course Level)

Graduate

PHY552 - Waveguides & Fiber Optics

Overview

Course Subject Code	Course Number
PHY	552

Department

Natural Sciences

Course Description

Light propagation in fibers and waveguides; termination, coupling, and splicing of fibers; fiber optic communication; optical time domain reflectometry, fiber amplifiers, and fiber sensors.

Academic Level (Course Level)

Graduate

PHY553 - Optical Metrology

Overview

Course Subject Code	Course Number
PHY	553

Department

Natural Sciences

Course Description

Modern optical metrology with emphasis on non-destructive testing; Fourier optics; Moiré and polarization methods; classic and holographic interferometry; speckle techniques; fringe analysis.

Academic Level (Course Level)

Graduate

OHSU Nursing Department

Leadership

- Susan Bakewell-Sachs, Ph.D., R.N., F.A.A.N. – Dean, OHSU School of Nursing and Vice President for Nursing Affairs
- Tracy Holt, Ed.D., R.N. – Campus Associate Dean

Instructors

S. Bailey, S. Brandsness, L. Callahan, L. Gimple, M. Gran-Moravec, A. Kohler-Edwards, S. Hobbick, L. Stockton, C. Usher

This program is offered at Oregon Institute of Technology by the Oregon Health & Science University School of Nursing, in cooperation with Oregon Tech.

Degree Offered

Bachelor of Science in Nursing (B.S.N.)

The OHSU School of Nursing is a leader in innovative education and academic excellence, recognized nationally for preparing students for professional nursing careers at both undergraduate and graduate levels.

In July 1993, the Nursing Program at Oregon Tech became a member of Oregon's Statewide Integrated Nursing Education System (SINES). OHSU Nursing programs are offered at:

- Ashland (Southern Oregon University)
- Klamath Falls (Oregon Institute of Technology)
- La Grande (Eastern Oregon University)
- Monmouth (Western Oregon University)
- Portland (Oregon Health & Science University)

In addition to the traditional B.S. degree, the statewide system offers opportunities for Registered Nurses seeking to complete a Bachelor of Science degree.

Program Overview

Non-nursing coursework may be taken at Oregon Institute of Technology, community colleges, or other accredited institutions. Pre-nursing majors must apply and be accepted by the OHSU School of Nursing to progress into the nursing major.

OHSU employs a holistic admissions process that considers academic performance, application essays, and (if invited) interviews.

Pre-nursing students typically complete one to two years of prerequisite and general education courses (depending on transfer credits). Once admitted to the OHSU undergraduate nursing program at the OIT campus, students complete three years of professional nursing courses. Admission is competitive.

The curriculum builds on a strong liberal arts and science foundation to prepare students for professional nursing practice. Graduates of the B.S. program are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN) and are prepared to assume responsibility for providing professional nursing care.

Approval and Accreditation

The OHSU School of Nursing is accredited by the Northwest Commission on Colleges and Universities (NWCCU) and the Commission on Collegiate Nursing Education (CCNE).

Admission Requirements

Applicants must submit an online application through nursingcas.org or ohsu.edu/son.

Application timeline:

- Opens: August
- Priority deadline: February 15
- Final deadline: April 15

Minimum criteria:

- Completion of 28 prerequisite credits by the end of fall term (priority applicants) or winter term (final applicants)
- Completion of Human Anatomy and Physiology I
- *A&P courses may only be taken twice within the last seven years. If taken more than twice, the second grade will be used.
- Completion of Intermediate Algebra (Math 95) or higher
- Minimum 3.0 GPA in prerequisite courses

Transfer Credits

Transfer credits are accepted subject to review by OHSU Registrar's office for comparability and number of credits which may be granted.

Programs

Pre-Nursing with OHSU

Overview

Program Long Title

Pre-Nursing Gen Study

Program Title

Pre-Nursing Gen Study

Department(s)

OHSU Nursing

Degree Designation

000000

Program Level

UG

CIP Code

300101

Courses

NRS207 - Seminar

Overview

Course Subject Code

NRS

Course Number

207

Department

OHSU Nursing

Academic Level (Course Level)

Undergraduate

NRS407 - Seminar

Overview

Course Subject Code

NRS

Course Number

407

Department

OHSU Nursing

Academic Level (Course Level)

Undergraduate

NRS307 - Seminar

Overview

Course Subject Code

NRS

Course Number

307

Department

OHSU Nursing

Academic Level (Course Level)

Undergraduate

Physical Therapy Department

MaryBeth GrantBeuttler, *Department Chair*

Degrees Offered

- Doctorate of Physical Therapy

Doctor of Physical Therapy

Program Purpose and Mission Statement

The Doctor of Physical Therapy (DPT) is a joint Oregon Tech and Oregon Health & Science University (OHSU) program that will provide a comprehensive entry-level and post-baccalaureate DPT education, with the unique focus of preparing high quality graduates with the skills to become practitioners of choice and leaders in rural physical therapy practice. The DPT program will ensure graduates develop competence in the diagnosis and treatment of patients with health or medical conditions that may affect movement and mobility.

Graduates will complete all eligibility requirements to sit for the state licensure exam and will be prepared for employment as autonomous practitioners in a variety of clinical settings.

Program Learning Outcomes:

Graduates of the Oregon Tech and OHSU DPT program will:

1. Be proficient to practice as effective, efficient, and safe autonomous practitioners.
 - a. Achieve 100% ultimate pass rate on the National Physical Therapy Examination.
 - b. Engage in self-directed practice grounded in contemporary evidence and research; demonstrate exemplary critical thinking to meet patient needs; and engage in interprofessional practice to optimize patient outcomes.
 - c. Practice physical therapy in accordance with the American Physical Therapy Association Standards of Practice, state laws, and federal laws in direct access environments.
 - d. Supervise, manage, and instruct support personnel, including the delegation of appropriate tasks.
2. Demonstrate empathetic and compassionate practice.
 - a. Adhere to the American Physical Therapy Association Code of Ethics.
 - b. Respect and treat each patient as an individual, regardless of gender, race, color, sexual orientation, or religious affiliation.
 - c. Demonstrate ability to safely provide appropriate patient-centered care, interpreted as practicing ethically and professionally, with cultural competence/sensitivity.
 - d. Act as patient advocate, educator, and consultant in diverse settings.
3. Demonstrate commitment to the physical therapy profession.
 - a. Serve as leaders who assume multiple roles, including scholarly activities, which have a positive impact on the profession and the community.
 - b. Demonstrate dedication, integrity, and a lifelong commitment to learning and professional development.

Accreditation

The Doctor of Physical Therapy Program is accredited by Commission on Accreditation in Physical Therapy Education. CAPTE is an accrediting agency that is nationally recognized by the US Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA). CAPTE grants specialized accreditation status to qualified entry-level education programs for physical therapists and physical therapist assistants. The Doctor of Physical Therapy program's accreditation status is "Developing Program" which has officially notified the Department of Accreditation that a Program Director has been employed. Developing programs are in the early stages of development; no students have been admitted.

Career Opportunities

Throughout Oregon and the Pacific Northwest, there is a high demand for qualified physical therapists. Shortages in the physical therapy (PT) field are even more acute in the state's many rural areas. In a time when proactive care is the mantra and approach of the U.S. healthcare system, and demand from patients continues to grow, PT is becoming an even larger field within Oregon and the nation.

There are many career paths for physical therapists. Listed are some you may not have considered.

Hospital and inpatient rehabilitation facilities

Outpatient facilities

Skilled nursing facilities

Pediatric physical therapy

Sports physical therapy

Clinical research

Entrepreneurship

Admissions Procedures

The application process for summer admission to the OIT/OHSU Doctor of Physical Therapy (DPT) program will open July 1, 2024 at 11:59pm. The OIT/OHSU DPT program plans to participate in the Physical Therapist Centralized Application Service, known as PTCAS, in the 2024-23 admissions cycle. Applicants applying to the OIT/OHSU physical therapist education program for the 2024 entering class will apply online using

the PTCAS application beginning July 1, 2024. To learn more about PTCAS, visit www.ptcas.org; Applications will be due November 1, 2024. Applicants must be U.S. citizens or permanent residents who currently and will continue to reside in the U.S. for the entirety of the program. They must also satisfy all requirements, which include:

1. Bachelor's Degree

Applicants must hold a bachelor's degree from a regionally accredited college or university by the date of program enrollment, which is in Summer Session of each year.

2. Minimum Cumulative and Prerequisite GPAs of 3.0

The minimum cumulative GPA is 3.0 and the minimum prerequisite GPA is 3.0. Higher GPAs will be more competitive within the applicant pool.

3. Pre-requisites

- All prerequisite courses must be completed prior to matriculation, although an application may be submitted prior to completing all prerequisite coursework. Only 1 prerequisite course may be in progress in the spring semester prior to matriculation.
- All courses must be acceptable for science majors or for pre-health professions majors.
- Courses described as "survey" will not be accepted as prerequisites.
- Grades of "C" or better are required in all prerequisite courses, as outlined below.
- Prerequisite courses taken on a "pass/no pass" basis will not be accepted.
- All science coursework must have been completed within 7 years of the intended year of entry.
- Advanced Placement (AP) courses will not be accepted as prerequisites for Chemistry, Physics, or Anatomy & Physiology. One AP course can be applied to the statistics prerequisite course OR to one of the psychology prerequisite courses (only one AP course can be utilized).

Biological Sciences:

- A one-year biology series with labs designated for science majors or pre-health professions (12 quarter credits or 8 semester credits)
- BIO 211+212+213 at Oregon Tech, or comparable coursework elsewhere
- A one-year human anatomy & physiology series with labs OR one semester of anatomy (with lab) and one semester of physiology (with lab) designated for science majors or pre-health professions (12 quarter credits or 8 semester credits).
- BIO 231+232+233 or BIO 331+332+333 at Oregon Tech, or comparable coursework elsewhere

Chemistry:

- A one-year general chemistry series with labs designated for science majors or pre-health professions (12 quarter credits or 8 semester credits).
- CHE 221+222+223 at Oregon Tech, or comparable coursework elsewhere

Physics:

- A one-year general physics series with labs designated for science majors or pre-health professions (12 quarter credits or 8 semester credits).
- PHY 221+222+223 at Oregon Tech, or comparable coursework elsewhere. An Algebra-based physics course series is also acceptable.

Mathematics:

- 1 semester each of pre-calculus and statistics (6 credits total).

Psychology:

- 3 quarter courses OR 2 semester courses (6 credits total).

Social Sciences:

- 3 quarter courses or 2 semester courses (6 credits total).

English:

- 3 quarter courses or 2 semester courses (6 credits total).

Program Requirements

Students admitted to the DPT program must purchase instruments and other supplies to be used during clinical practice and pay additional fees associated with DPT course work. A background check, drug test, and proof of immunizations specific to healthcare workers are required prior to final matriculation into the professional program.

Graduation Requirements

All courses listed in the curriculum for the catalog year a student begins the DPT program must be fulfilled. Total credits required for graduation are: Doctor of Physical Therapy 163. A minimum cumulative grade point average (GPA) of 3.0 is required for graduation. All clinical experience courses must be successfully completed with the minimum level of competency set by the program.

Licensure

Graduation from the Oregon Tech-OHSU accredited Doctor of Physical Therapy program provides you the qualification to sit for the National Physical Therapist Exam (NPTE) jointly organized by the Oregon Board of Physical Therapy (OBPT) and the Federation of State Boards of Physical Therapy (FSBPT). In addition, you will be qualified to take the Oregon Pain Commission's Pain Management Module and to sit for the Oregon Jurisprudence Assessment Module (OR JAM) both required for your Oregon PT License. Should you wish to apply for licensure in another state or jurisdiction, you would need to determine those state jurisprudence requirements. The program will assist each graduate in obtaining the information required for the specific state exams and registration for the required modules and the NPTE.

Academic Performance Standards

Minimum Grade Requirements

To make satisfactory academic progress within the Department of Physical Therapy Education, students must:

1. Receive a passing grade of "C+" or better in graded courses or "pass" in pass/fail courses in each course required in the physical therapy curriculum.
2. Maintain an overall grade point average of 3.0 or better in each semester of the program and cumulatively throughout the curriculum

Academic Probation:

Any student:

1. whose term grade point average is below 3.00 for a single term or,
2. any student whose cumulative grade point average is below 3.00 or,
3. any student who receives a final course grade of "C" or below in any course or,
4. any student who receives a "fail" grade in a pass/fail course

will be placed on academic probation. A student on academic probation will be required to complete a formal remediation plan agreed upon and signed by both the student and the Program Director or designee. If the remediation plan is not successfully completed in the specified time frame, the student may be subject to further disciplinary actions.

Academic Suspension:

When a student's academic performance does not provide evidence of satisfactory progress toward meeting degree requirements, a temporary separation from the University is required. After a suspension is completed, students may apply for readmission by complying with reinstatement criteria.

Students may be placed on academic suspension if:

1. their cumulative GPA is below 2.00 and/or
2. they earn a third grade below "C+" and/or
3. they have previously been placed on academic probation without demonstrating satisfactory academic progress on their remediation plan.

Programs

Physical Therapy, DPT

Overview

Program Long Title
Doctor Physical Therapy

Program Title
Doctor Physical Therapy

Department(s)
Physical Therapy

Degree Designation
DPT

Program Level
FP

CIP Code
512308

Degree Maps

Degree Map Name Physical Therapy, DPT			
Total Degree Map Credits 149 - 169			
Degree Map Effective Catalog Year 2425 -			
Year	Semester	Actual Credits	Progress Credits
First Year	Summer	15	0
Requirement Select PT600 - Intro to PT Profession			
Course Requirement Group Course Requirement Group - (Free Text)			
Minimum Grade	-		
Area	-		
Actual Credits	1		
Progress Credits	-		
Contact Hours	1		
Clinical	-		
Criticality	No		

Requirement Select

- PT605 - Clinical Human Anatomy

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	9
Progress Credits	-
Contact Hours	0 - 15
Clinical	-
Criticality	No

Requirement Select

- PT610 - Nutrition and Wellness

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select

- PT640 - Biomec Kinematics Human Motion

Course Requirement Group
Course Requirement Group - (Free Text)

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
First Year	Fall	15 - 18	0

Requirement Select	
• PT615 - Foundations of PT Practice	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select	
• PT620 - PT Examination Skills	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 8
Clinical	-
Criticality	No

Requirement Select	
• PT630 - Social Determinants of Health	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select	
• PT635 - Human Physiology	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	4
Clinical	-
Criticality	No

Requirement Select	
• PT665 - Clinical Neuroscience	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	0 - 3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select	
• PT670 - Exercise Physiology	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
First Year	Winter	10 - 16	0

Requirement Select

- PT625 - Assistive Device Training

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PT631 - Therapeutic Exercise I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT645 - Prin of Evidence-Informed Prac

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	0 - 3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT650 - Therapeutic Modalities

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PT660 - Motor Cont & Learn Across Life

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	0 - 3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT680 - Ethics in Health Professions

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
First Year	Spring	14 - 17	0

Requirement Select

- PT632 - Therapeutic Exercise II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT641 - Mgmt of Musculoskeletal Dys I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PT655 - Pathophysiology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT732 - Mgmt of Neuro Dysfunction II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PT720 - Clin Rsrch Meth & Biostatistic

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	0 - 3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Summer	9	0

Requirement Select

- PT721 - Clinical Experience I

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	9
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Fall	14 - 16	0

Requirement Select

- PT700 - Mgmt Cardio/Pulmon Dysfunction

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT710 - Medical Imaging for PT

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT741 - Mgt Musculoskeletal Dysfunc II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PT732 - Mgmt of Neuro Dysfunction II

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	4
Progress Credits	-
Contact Hours	0 - 6
Clinical	-
Criticality	No

Requirement Select

- PT775 - PT in Rural Communities

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	0 - 2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Winter	14	0

Requirement Select

- PT725 - Physical Therapy Pharmacology

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT730 - Integrated Clinical Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- PT735 - Bus, Legal, & Regulatory Issue

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT740 - Acute Care in Physical Therapy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT675 - Clinical Reason & Decision Mak

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Second Year	Spring	19	0

Requirement Select

- PT730 - Integrated Clinical Experience

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

- PT745 - Differential Diagnosis

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT750 - Pediatric Physical Therapy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 5
Clinical	-
Criticality	No

Requirement Select

- PT755 - Geriatric Physical Therapy

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select

- PT760 - Orthotics and Prosthetics

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select

- PT705 - Mgmt Integumentary Dysfunction

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 3
Clinical	-
Criticality	No

Requirement Select

- PT715 - Teaching and Learning

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress Credits
Third Year	Summer	9	0

Requirement Select

- PT765 - Clinical Administr & Marketing

Course Requirement Group**Course Requirement Group -****(Free Text)**

Minimum Grade	-
Area	-
Actual Credits	3
Progress Credits	-
Contact Hours	3
Clinical	-
Criticality	No

Requirement Select	
• PT779 - Special Topics	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Requirement Select	
• PT780 - Management of Complex Patients	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• PT770 - Leadership & Professional Dev	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	2
Progress Credits	-
Contact Hours	2
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Third Year	Fall	10 - 12	Credits
			0

Requirement Select	
• PT751 - Capstone Project I	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	0 - 2
Progress Credits	-
Contact Hours	0 - 4
Clinical	-
Criticality	No

Requirement Select	
• PT722 - Clinical Experience II	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	10
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Year	Semester	Actual Credits	Progress
Third Year	Winter	10 - 12	Credits
			0

Requirement Select	
• PT723 - Clinical Experience III	
Course Requirement Group	
Course Requirement Group -	
(Free Text)	
Minimum Grade	-
Area	-
Actual Credits	10
Progress Credits	-
Contact Hours	-
Clinical	-
Criticality	No

Requirement Select

• PT752 - Capstone Project II

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

0 - 2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Year	Semester	Actual Credits	Progress Credits
Third Year	Spring	10 - 12	0

Requirement Select

• PT724 - Clinical Experience IV

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

10

Progress Credits

-

Contact Hours

-

Clinical

-

Criticality

No

Requirement Select

• PT753 - Capstone Project III

Course Requirement Group

Course Requirement Group -

(Free Text)

Minimum Grade

-

Area

-

Actual Credits

0 - 2

Progress Credits

-

Contact Hours

0 - 4

Clinical

-

Criticality

No

Total General Education Credits	Total Major Credits
0	0
Total Minor Credits	Total Elective Credits
0	0

Course Sets

Environmental Sciences, Recreation and Science option Required Courses

Complete ALL:

- BIO337 - Aquatic Ecology
- BIO377 - Wildlife Ecology & Management
- BIO417 - Plant Ecology
- BIO446 - Pathophysiology I
- ENV460 - Risk Mgmt & Wildrnss First Aid
- ENV466 - Environmental Education
- CHE315 - Environmental Analytical Chem.
- PHIL425 - Environmental Ethics
- PHED355 - Coaching in Application
- PHED163 - Wilderness Navigation

Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Technical Electives

Complete ANY:

- BIO428 - Fisheries
- BIO455 - Senior Research Class
- BIO355 - Junior Research Class
- BIO386 - Ornithology
- BIO255 - Sophomore Research Class
- BIO313 - Botany & Plant Taxonomy
- ENV365 - Adv Field Methods in Env Sci
- GEOG315 - Climatology & Atmospheric Sci
- GIS426 - Geospatial Vector Analysis II
- GIS432 - Customizing the GIS Envirn II
- GIS446 - GIS Database Development
- GIS306 - Geospatial Raster Analysis
- GIS316 - Geospatial Vector Analysis
- GIS332 - Python for Geospatial Analysis
- GME425 - Remote Sensing

Chemistry Electives

- CHE229Z - General Chemistry III Lab
- CHE228Z - General Chemistry II Lab
- CHE227Z - General Chemistry I Lab
- CHE223Z - General Chemistry III
- CHE222Z - General Chemistry II
- CHE221Z - General Chemistry I
- CHE221 - General Chemistry I (Inactive)
- CHE465 - Fate/Transport of Pollutants
- CHE260 - Electrochemistry for RE Applic
- CHE203 - General Chemistry III
- CHE565 - Fate & Transport of Pollutants
- CHE552 - Biochemistry III
- CHE551 - Biochemistry II
- CHE550 - Biochemistry I
- CHE522 - Biochemistry III
- CHE455 - Senior Research Class
- CHE355 - Junior Research Class
- CHE255 - Sophomore Research Class

- CHE350 - Clinical Pharmacology/NMT (Inactive)
- CHE315 - Environmental Analytical Chem.
- CHE201 - General Chemistry I
- CHE346 - Corrosion Chemistry Lab
- CHE305 - Nanoscience & Nanotech
- CHE495 - Research Project in Chemistry
- CHE335 - Bioorganic Chemistry
- CHE452 - Biochemistry III
- CHE451 - Biochemistry II
- CHE450 - Biochemistry I
- CHE407 - Seminar
- CHE360 - Clinical Pharmacology/Hlth Prf
- CHE345 - Corrosion Chemistry
- CHE342 - Instr Methods/Data Acqstn II
- CHE341 - Instr Methods/Data Acqstn I
- CHE333 - Organic Chemistry III
- CHE332 - Organic Chemistry II
- CHE331 - Organic Chemistry I
- CHE325 - Soil Science
- CHE307 - Seminar
- CHE260P - Fuel Cell Chemistry (Inactive)
- CHE227 - Organic Chemistry (Inactive)
- CHE226 - Organic Chemistry (Inactive)
- CHE223 - General Chemistry III
- CHE222 - General Chemistry II
- CHE210 - Clinical Pharmacology
- CHE207 - Seminar
- CHE206 - General Chemistry III Lab
- CHE205 - General Chemistry II Lab
- CHE204 - General Chemistry I Lab
- CHE202 - General Chemistry II
- CHE235 - Streamwater Chemistry & Samp (Inactive)
- CHE232 - Streamwater Sampling (Inactive)
- CHE231 - Streamwater Chemistry (Inactive)
- CHE250 - Clinical Pharmacology/Nuc Med (Inactive)
- CHE337 - Biochemistry III (Inactive)
- CHE336 - Biochemistry II (Inactive)
- CHE392 - Clinical Biochemistry (Inactive)
- CHE391 - Clinical Biochemistry (Inactive)
- CHE390 - Clinical Biochemistry (Inactive)

Environmental Sciences, Environmental Policy and Governance option Required Courses

Complete ALL:

- ANTH452 - Globalization
- BUS441 - Leadership I (Inactive)
- ENV314 - Environmental Policy & Law
- GEOG315 - Climatology & Atmospheric Sci
- PHIL425 - Environmental Ethics

ALP's Minor Accepted Courses

- PHIL525 - Environmental Ethics
- PHIL425 - Environmental Ethics
- PHIL355 - Ethics and Philosophy of AI

- MUS207 - Seminar
- MUS107 - Seminar
- LIT325 - Lit of the Built Environment
- LIT305 - American Nature Writing
- HUM453 - Hon III: Answer Medicine
- HUM452 - Hon II: Answers Context
- HUM451 - Hon I: Answers Questions
- HUM353 - Hon III: Questions Life
- HUM352 - Hon II: Text to Question
- HUM351 - Hon I: World Questions
- HUM253 - Hon III: Ideas in Future
- HUM252 - Hon II: Ideas in Present
- HUM251 - Honors Sem I: Ideas in Past
- HUM105 - Intro to the Humanities
- PHIL305 - Medical Ethics
- PHIL336 - Moral Standing & Moral Beings
- PHIL255 - Ethics and Philosophy of AI
- PHIL225 - Bioethics
- LIT346 - Creative Writing
- LIT315 - Science Fiction Lit & Film
- SPAN407 - Seminar (Inactive)
- SPAN307 - Seminar (Inactive)
- SPAN207 - Seminar (Inactive)
- SPAN203 - Second Year Spanish (Inactive)
- SPAN202 - Second Year Spanish (Inactive)
- SPAN201 - Second Year Spanish (Inactive)
- SPAN107 - Seminar (Inactive)
- SPAN103 - First Year Spanish (Inactive)
- SPAN102 - First Year Spanish (Inactive)
- SPAN101 - First Year Spanish (Inactive)
- PHIL405 - Advanced Logic (Inactive)
- PHIL335 - Philosophy of Science (Inactive)
- PHIL325 - Environmental Ethics (Inactive)
- PHIL315 - The Ethics of Emerging Tech (Inactive)
- PHIL105 - Introduction to Ethics (Inactive)
- MUS407 - Seminar (Inactive)
- MUS307 - Seminar (Inactive)
- MUS197 - Chorus (Inactive)
- MUS195 - Band (Inactive)
- LIT456 - Topics in Film (Inactive)
- LIT381 - Contemporary World Lit (Inactive)
- LIT373 - British Culture & Literature (Inactive)
- LIT367 - Art & Trash in Contemp Fiction (Inactive)
- LIT335 - Nonfiction Travel Writing (Inactive)
- LIT266 - Native American Lit & Film (Inactive)
- LIT255 - Contemporary American Lit (Inactive)
- LIT254 - 20th Century American Lit (Inactive)
- LIT253 - 19th Century American Lit (Inactive)
- LIT235 - American Multicultural Lit (Inactive)
- HUM225 - Cont Thtr: Ashland Plays (Inactive)
- HUM149 - West Cult in the Modern Age (Inactive)
- ART280 - Introductory Painting (Inactive)
- ART210 - Beginning Sculpture (Inactive)
- LIT345 - Postapocalyptic Lit & Film
- ART205 - Introduction to Watercolors
- PHIL331 - Ethics in the Professions
- HUM235 - Introduction to Film
- HUM207 - Seminar
- HUM345 - Digital Culture and Society
- HUM407 - Seminar
- HUM307 - Seminar
- ART315 - Design Thinking
- HUM366 - Eng, Business & the Holocaust (Inactive)
- HUM335 - Video Game Studies
- HUM245 - Digital Culture and Society
- ART215 - Design Arts and Aesthetics
- PHIL407 - Seminar
- PHIL342 - Business Ethics
- PHIL307 - Seminar
- PHIL215 - Ethical Theory
- PHIL207 - Seminar
- PHIL205 - Introduction to Logic
- PHIL107 - Seminar
- LIT407 - Seminar
- LIT307 - Seminar
- LIT246 - Creative Writing
- LIT225 - Cont Thtr: Ashland Plays
- LIT207 - Seminar
- LIT107 - Seminar
- LIT106 - Intro to Literature
- LIT105 - Intro to Literature
- LIT104 - Intro to Literature
- HUM330 - Tech, Society & Values (Inactive)
- HUM307P - Seminar (Inactive)
- HUM205 - Intercultural Comm (Inactive)
- HUM148 - West Cult in the Medieval Age
- HUM147 - West Cult in the Classical Age
- HUM125 - Intro Tech, Soc, Value
- HUM107 - Seminar
- ART407 - Seminar
- ART307 - Seminar
- ART282 - Intro to Acrylic Painting
- ART226 - Digital Photography
- ART220 - Basic Drawing
- ART207 - Seminar
- ART107 - Seminar
- ART281 - Modern Painting Techniques (Inactive)
- ART225 - Basic Photography (Inactive)
- PHIL203 - Politics, Law and Justice (Inactive)
- PHIL202 - Critical Thinking (Inactive)
- PHIL201 - Introduction to Philosophy (Inactive)
- HUM317P - Native American Tchngs (Inactive)
- HUM317 - Native American Tchngs (Inactive)
- HUM462 - Sr Thesis/Tech, Soc, Val (Inactive)
- HUM461 - Sr Sem/Tech, Soc, Value (Inactive)
- HUM206 - Jazz Hist/Appreciation (Inactive)
- HUM000 - Humanities Elective Lower
- HUM365 - Adv Intercul Comm (Inactive)
- HUMP00 - Hum Elective Lower Performance
- HUM365P - Adv Intercultural Comm (Inactive)
- HUM304P - Intro to Short Story (Inactive)
- PHIL101 - Intro to Philosophy (Inactive)
- HUM350 - World Myth: Orig/Tran (Inactive)
- HUM215 - Intro to Greek Mythology (Inactive)
- HUM304 - Intro to Short Story (Inactive)
- ART228 - Basic Comp and Design (Inactive)

- HUM310 - Introduction to Drama (Inactive)
- HUM325 - Intro to Greek Myth (Inactive)
- HUM316 - Contp Theat: Ash Plays (Inactive)
- HUM315 - Contp Theat: Ash Plays (Inactive)
- HUM306 - Intro/Contmp Poetry (Inactive)
- HUM305 - Intro to Short Novel (Inactive)
- HUM100 - Intro to Humanities (Inactive)
- HUM206X - Jazz Hist & Appreciation (Inactive)
- HUM303 - Humanities (Inactive)
- HUM302 - Humanities (Inactive)
- HUM301 - Humanities (Inactive)
- HUM300 - Principles of Aesthetics (Inactive)
- HUMP0U - Hum Elective Upper Performance
- HUM00U - Humanities Elective Upper

Environmental Sciences, Water and Wetland Resources option Required Courses

Complete ALL:

- BIO428 - Fisheries
- BIO337 - Aquatic Ecology
- CHE465 - Fate/Transport of Pollutants
- CHE315 - Environmental Analytical Chem.
- ENV469 - Wetlands
- ENV321 - Water Resources
- ENV214 - Watershed Sci & Tech

BUS or MGT Elective

Civil Engineering Graduate Technical Electives

- CE599 - Independent Studies
- CE558 - Transportation Safety Analysis
- CE535 - Structural Dynamics
- CE587 - Environmental Remediation Tech (Inactive)
- CE586 - Water & Wastewater Treatment (Inactive)
- CE577 - GIS for Water Resources (Inactive)
- CE576 - Applied Hydraulic Design (Inactive)
- CE575 - H&H Modeling (Inactive)
- CE574 - Environmental River Mechanics (Inactive)
- CE572 - Hydrometry (Inactive)
- CE571 - Open-Channel Hydraulics (Inactive)
- CE568 - Travel Demand Modeling (Inactive)
- CE557 - Traffic Impact Analysis (Inactive)
- CE554 - Advanced Traffic Engineering (Inactive)
- CE551 - Geometric Design of Roadways (Inactive)
- CE544 - Advanced Steel Design (Inactive)
- CE542 - Prestressed Concrete Design (Inactive)
- CE522 - Adv Shear Strengths of Soils (Inactive)
- CE513 - Deep Foundations (Inactive)
- CE511 - Seepage and Earth Structures (Inactive)
- CE595 - Graduate Thesis
- CE590 - Civil Engineering Grad Project
- CE555 - Bicycle & Pedestrian Transport
- CE524 - Advanced Soil Mechanics
- CE512 - Seismic Engineering

- CE556 - Advanced Pavement Design
- CE550 - Transportation Structures
- CE549 - Bridge Design
- CE539 - Highway Bridge Rating
- CE534 - Advanced Solid Mechanics
- CE533 - Structural Matrix Analysis
- CE507 - Seminar
- CE501 - Civil Engr Graduate Seminar

Environmental Sciences, Environmental Business & Economics Required Courses

Complete ALL:

- BUS215 - Principles of Management
- BUS223 - Marketing I
- BUS314 - Intro to Innovation & Entr.
- BUS318 - Marketing II
- BUS319 - Integrated Marketing Comm.
- BUS335 - Innov. & Entrepreneurship II
- BUS441 - Leadership I (Inactive)
- COM248 - Digital Media Production
- Complete ANY:
 - ANTH452 - Globalization
 - HIST452 - Globalization & Pac NW
- PHIL425 - Environmental Ethics

Civil Engineering Technical Electives

- CE456 - Pavement Engineering
- CE599 - Independent Studies
- CE558 - Transportation Safety Analysis
- CE535 - Structural Dynamics
- CE458 - Transportation Safety Analysis
- CE435 - Structural Dynamics
- CE402 - Civil Engineering Project II
- CE587 - Environmental Remediation Tech (Inactive)
- CE586 - Water & Wastewater Treatment (Inactive)
- CE577 - GIS for Water Resources (Inactive)
- CE576 - Applied Hydraulic Design (Inactive)
- CE575 - H&H Modeling (Inactive)
- CE574 - Environmental River Mechanics (Inactive)
- CE572 - Hydrometry (Inactive)
- CE571 - Open-Channel Hydraulics (Inactive)
- CE568 - Travel Demand Modeling (Inactive)
- CE557 - Traffic Impact Analysis (Inactive)
- CE554 - Advanced Traffic Engineering (Inactive)
- CE551 - Geometric Design of Roadways (Inactive)
- CE544 - Advanced Steel Design (Inactive)
- CE542 - Prestressed Concrete Design (Inactive)
- CE522 - Adv Shear Strengths of Soils (Inactive)
- CE513 - Deep Foundations (Inactive)
- CE511 - Seepage and Earth Structures (Inactive)
- CE491 - Engineering Law (Inactive)
- CE489 - Treatment Wetlands (Inactive)
- CE477 - GIS for Water Resources (Inactive)
- CE476 - Applied Hydraulic Design (Inactive)
- CE475 - H&H Modeling (Inactive)
- CE473 - Groundwater (Inactive)
- CE472 - Hydrometry (Inactive)

- CE468 - Travel Demand Modeling (Inactive)
- CE457 - Traffic Impact Analysis (Inactive)
- CE423 - Deep Foundations (Inactive)
- CE422 - Adv Shear Strength of Soils (Inactive)
- CE421 - Seepage & Earth Structures (Inactive)
- CE413 - Advanced Soils (Inactive)
- CE411 - Engineering Geology (Inactive)
- CE408 - Workshop (Inactive)
- CE403 - FE Exam Preparation
- CE595 - Graduate Thesis
- CE590 - Civil Engineering Grad Project
- CE555 - Bicycle & Pedestrian Transport
- CE524 - Advanced Soil Mechanics
- CE512 - Seismic Engineering
- CE455 - Bicycle & Pedestrian Transport
- CE434 - Advanced Solid Mechanics
- CE424 - Advanced Soil Mechanics
- CE412 - Seismic Engineering
- CE405 - Sustainability & Infrastruct
- CE401 - Civil Engineering Project I
- CE556 - Advanced Pavement Design
- CE550 - Transportation Structures
- CE549 - Bridge Design
- CE539 - Highway Bridge Rating
- CE534 - Advanced Solid Mechanics
- CE533 - Structural Matrix Analysis
- CE507 - Seminar
- CE501 - Civil Engr Graduate Seminar
- CE499 - Independent Studies
- CE481 - Environmental Engineering I
- CE450 - Transportation Structures
- CE449 - Bridge Design
- CE448 - Timber Design
- CE447 - Masonry Design
- CE444 - Intermediate Steel Design
- CE442 - Adv Reinforced Concrete Design
- CE439 - Highway Bridge Rating
- CE433 - Structural Matrix Analysis
- CE432 - Struc Loading & Lateral Forces
- CE407 - Seminar

Environmental Sciences, Environmental Policy and Governance option Technical Electives

Complete ANY:

- BUS308 - Prin of International Business
- COM115 - Intro to Mass Communication
- COM205 - Intercultural Communication
- COM256 - Public Relations
- COM276 - Democracy and Media
- ECO202Z - Principles of Macroeconomics
- HUM345 - Digital Culture and Society
- PHIL342 - Business Ethics
- WRI122Z - Composition II

EE Technical Electives

Complete ALL:

- EE325 - Electronics III
- EE419 - Power Electronics
- EE432 - Advanced Digital System Design
- EE448 - Geometric Optics
- EE485 - Printed Circuit Board Design
- ENGR461 - Engr Mdlng & Sim of Dyn Sys
- ENGR463 - MC in Mechanisms & Robotics
- ENGR464 - Autonomous Systems
- REE243 - Electrical Power
- REE253 - Electromech Energy Conversion
- REE345 - Wind Power
- REE412 - Photovoltaic Systems
- REE413 - Electric Power Conv Systems
- REE453 - Power System Analysis
- REE454 - Power Sys Protection & Control
- REE463 - Energy Systems Instrumentation

Dental Hygiene Advisor Electives

Complete ANY:

- ALH565 - Population Health
- ALH508 - Medical Edu Theories & Methods
- ALH515 - Scientific Writing/Healthcare
- ALH535 - Quality Improv. in Healthcare
- DH465 - Indep. Dental Hygiene Practice
- AHED460 - Fund of Distance Education (Inactive)
- BA211Z - Principles of Financial Accoun
- BA213Z - Princ of Managerial Accounting
- BUS223 - Marketing I
- BUS226Z - Introduction to Business Law
- BUS308 - Prin of International Business
- BUS313 - Health Care Systems & Policy
- BUS317 - Health Care Management
- BUS331 - Personal Finance
- BUS337 - Prin of Health Care Marketing
- BUS349 - Human Resource Management I
- COM205 - Intercultural Communication
- CSH201 - Human Dev. and Sleep Health
- CSH220 - Sleep Disord & Co-Morbid
- DH370 - International Experience I
- DH371 - International Experience II
- DH372 - International Experience III
- DH405 - Pharmacology Review for DH
- DH465 - Indep. Dental Hygiene Practice
- DH476 - Applied Research Concepts
- PHIL342 - Business Ethics
- PSG246 - Sleep Disorders in Women
- PSY347 - Organizational Behavior
- SOC225 - Medical Sociology
- SOC325 - Global Population Health
- SOC335 - Hlth Inequal & Cult Competency
- WRI410 - Proposal & Grant Writing
- WRI510 - Grant Proposal Writing

Business, Marketing Option Program Electives

Complete ALL:

- ACC205 - Computerized Accounting
- ART215 - Design Arts and Aesthetics
- ART226 - Digital Photography
- ART315 - Design Thinking
- BUS107 - Seminar
- BUS314 - Intro to Innovation & Entr.
- BUS326 - Sales/Sales Management
- BUS335 - Innov. & Entrepreneurship II
- BUS390 - Applied Management Internship
- BUS399 - Marketing Special Topics
- BUS434 - Global Marketing
- BUS447 - Controversial Issues in Mgmt
- COM237 - Intro to Visual Communication
- COM248 - Digital Media Production
- COM256 - Public Relations
- COM347 - Negotiation & Conflict Resol'n
- GIS134 - Geographic Info Systems
- MGT461 - Lean/Six Sigma Management I
- MGT462 - Lean/Six Sigma Management II
- MGT463 - Lean/Six Sigma Management III
- MIS118 - Intro to Programming in C#
- MIS334 - Business Analytics
- MIS341 - Relational Database Design I
- MIS344 - Business Intelligence
- MIS446 - Data Mining
- WRI350 - Documentation Development

Math/Science General Education

- PHY455 - Senior Research
- PHY355 - Junior Research
- PHY255 - Sophomore Research
- MATH253Z - Calculus: Sequences and Series
- MATH252Z - Integral Calculus
- MATH251Z - Differential Calculus
- MATH110 - Applied Math: Natural Sciences
- BIO541 - Genetic Enginring&Gene Therapy
- BIO441 - Genetic Engr & Gene Therapy
- BIO597 - Internship/Shadowing
- BIO596 - Biomedical Capstone
- BIO595 - Graduate Research/Thesis
- BIO585 - Ecoregional Studies
- BIO567 - Biomedical Devices
- BIO554 - Environmental Health
- BIO547 - Pathophysiology II
- BIO545 - Comparative Virology
- BIO543 - Cell Biology
- BIO542 - Biological Physics
- BIO538 - Conservation Biology
- BIO535 - Exercise Physiology
- BIO527 - Special Topics in Neuroscience
- BIO526 - Evolutionary Biology
- BIO522 - Introduction to Neuroscience
- BIO512 - Current Iss in Natural Resourc

- BIO511 - Foundations in Conservation
- BIO510 - Current Iss in Biomedical Sci
- BIO509 - Introduction to Biomedical Sci
- BIO501 - Intro to Graduate Studies
- BIO454 - Environmental Health
- BIO447 - Pathophysiology II
- BIO442 - Biological Physics
- BIO438 - Conservation Biology
- CHE455 - Senior Research Class
- CHE355 - Junior Research Class
- CHE255 - Sophomore Research Class
- BIO546 - Pathophysiology I
- MATH411 - Topics in Complex Analysis (Inactive)
- MATH261 - Introduction to Linear Algebra (Inactive)
- MATH221 - Intro to Computational Sftware (Inactive)
- MATH213 - Fundamentals of Elem Math III (Inactive)
- MATH212 - Fundamentals of Elem Math II (Inactive)
- MATH211 - Fundamentals of Elem Math I (Inactive)
- MATH111B - College Algebra (Inactive)
- CHE350 - Clinical Pharmacology/NMT (Inactive)
- STAT243Z - Elementary Statistics I
- MATH372 - Finite Math/Calc II
- MATH112 - Trigonometry (Inactive)
- BIO455 - Senior Research Class
- BIO355 - Junior Research Class
- MATH451 - Numerical Methods I
- MATH251 - Differential Calculus
- MATH243 - Introductory Statistics (Inactive)
- MATH112Z - Precalculus II: Trigonometry
- MATH111Z - Precalculus I: Functions
- MATH111 - College Algebra (Inactive)
- MATH105Z - Math in Society
- MATH105 - Collegiate Mathematics (Inactive)
- CHE315 - Environmental Analytical Chem.
- BIO467 - BioMedical Devices
- BIO445 - Comparative Virology
- BIO427 - Special Topics in Neuroscience
- BIO255 - Sophomore Research Class
- MATH111A - College Algebra
- PHY305 - Nanoscience & Nanotech
- ENGR305 - Nanoscience & Nanotech
- CHE305 - Nanoscience & Nanotech
- BIO335 - Cross-Sectional Anatomy
- MATH315 - History of Mathematics
- MATH310 - Mathematical Structures
- MATH254N - Vector Calculus I (Inactive)
- MATH254 - Vector Calculus I
- MATH253N - Sequences and Series (Inactive)
- MATH253 - Sequences and Series
- STAT407 - Seminar
- PHY410 - Math Meth:Fourier Optics
- PHY330 - Electricity & Magnetism
- PHY313 - Intro to Modern Physics
- PHY312 - Intro to Modern Physics
- PHY311 - Intro to Modern Physics
- PHY211 - Physics of Ultrasound II (Inactive)
- PHY210 - Physics of Ultrasound I (Inactive)
- OSMS407 - Seminar

- OSMS207 - Seminar
- OSMS107 - Seminar
- MATH465P - Mathematical Statistics (Inactive)
- MATH465 - Mathematical Statistics
- MATH453 - Numerical Methods III
- MATH452 - Numerical Methods II
- MATH423 - Applied Partial Diff Equ III
- MATH422 - Applied Partial Diff Equ II
- MATH421 - Applied Partial Diff Equations
- MATH407P - Seminar (Inactive)
- MATH407 - Seminar
- MATH372P - Finite Math & Calculus (Inactive)
- MATH371P - Finite Math/Calc (Inactive)
- MATH371 - Finite Math/Calc I
- MATH362P - Statistical Methods (Inactive)
- MATH362 - Statistical Methods II
- MATH361P - Statistical Methods I (Inactive)
- MATH361 - Statistical Methods I
- MATH354 - Vector Calculus II
- MATH347 - Fundmntls of Abstract Algebra
- MATH346 - Number Theory
- MATH342 - Linear Algebra II
- MATH341P - Linear Algebra I (Inactive)
- MATH341 - Linear Algebra I
- MATH327P - Discrete Mathematics (Inactive)
- MATH327 - Discrete Mathematics
- MATH322 - Appl Diff Equation II
- MATH321P - Appl Diff Equations (Inactive)
- MATH321 - Appl Diff Equation I
- MATH311 - Introduction to Real Analysis
- MATH307 - Seminar
- MATH252P - Integral Calculus (Inactive)
- MATH252 - Integral Calculus
- MATH251P - Analy Geom/Diff Calc (Inactive)
- MATH207P - Seminar (Inactive)
- MATH207 - Seminar
- MATH112P - Trigonometry (Inactive)
- MATH111P - College Algebra (Inactive)
- MATH107 - Seminar
- GEOG407 - Seminar
- GEOG307 - Seminar
- GEOG207 - Seminar
- CHE450 - Biochemistry I
- CHE407 - Seminar
- CHE360 - Clinical Pharmacology/Hlth Prf
- CHE210 - Clinical Pharmacology
- BIO485 - Klamath Bioregional Studies (Inactive)
- BIO426 - Evolutionary Biology
- BIO409 - Crnt Rsch Tpcs in Med Sci II
- BIO357 - Intro to Neuroscience (Inactive)
- BIO347 - Pathophysiology II (Inactive)
- BIO346 - Pathophysiology I (Inactive)
- BIO341 - Medical Genetics
- BIO336 - Essentials of Pathophysiology
- BIO247 - Forensic Anthropology
- BIO226 - Intro to Wildlife Rehab
- BIO200 - Medical Terminology
- ANTH101 - Intro to Physical Anthropology

- MATH425 - Vector Analysis (Inactive)
- BIO472 - Senior Project Proposal (Inactive)
- BIO471 - Sr Project Proposal Research (Inactive)
- BIO261 - Sophomore Project Proposal (Inactive)
- OSMS307 - Seminar
- MATH255 - Vector Calculus II (Inactive)
- CHE100 - Consumer Chemistry (Inactive)
- MATH355 - Graphical Analysis (Inactive)
- MATH345 - Symbolic Logic (Inactive)
- MATH324 - LaPlace Transforms (Inactive)
- MATH323 - Series & Fourier Series (Inactive)
- MATH241 - Intro to Computational Softwre (Inactive)
- MASC000 - Math/Science Elective Lower
- MATH253P - Multi/Vector Calc
- MATH254P - Series/Vector Calc (Inactive)
- MASC00U - Math/Science Elective Upper

Environmental Sciences, Recreation and Science option Technical Electives

Complete ANY:

- BIO255 - Sophomore Research Class
- BIO355 - Junior Research Class
- BIO455 - Senior Research Class
- COM226 - Nonverbal Communication (Inactive)
- COM237 - Intro to Visual Communication
- COM248 - Digital Media Production
- ENV420 - Extern Environmental Science
- GEOG315 - Climatology & Atmospheric Sci
- BUS223 - Marketing I
- PHED145 - Relaxation and Flexibility
- PHED146 - Yoga
- PHED151 - Karate

Dental Hygiene Program Courses

Complete ALL:

- DH475 - EBDM in Healthcare I
- DH454 - Dental Prac Mgmt
- AHED450 - Instructional Methods

General Business Elective

- BUS480 - Capstone Experience
- BUS226Z - Introduction to Business Law
- BUS226 - Business Law (Inactive)
- BUS169Z - Data Analysis Using Microsoft
- BUS507 - Seminar
- BUS101 - Introduction to Business (Inactive)
- BUS475 - Experience Business Abroad II
- BUS375 - Experience Business Abroad I
- BUS525 - Marketing Management (Inactive)
- BUS416 - Environmental Management (Inactive)
- BUS415 - Environmental Regulation (Inactive)
- BUS405 - Reading and Conference (Inactive)
- BUS387 - International Human Res Mgmt (Inactive)
- BUS345 - Fraud Examination (Inactive)
- BUS328 - Health Care Accounting/Finance (Inactive)
- BUS325 - Finance Management (Inactive)

- BUS356 - Business Presentations
- BUS473 - Marketing Plan Development
- BUS414 - Marketing Research
- BUS318 - Marketing II
- BUS307 - Seminar
- BUS420 - Applied Management Internship
- BUS390 - Applied Management Internship
- BUS256 - Graphic Design for Business
- BUS385 - Ecotourism (Inactive)
- BUS358 - Marketing Hospitality/Tourism (Inactive)
- BUS350 - Hospitality Management (Inactive)
- BUS347 - Geography of Travel/Tourism (Inactive)
- BUS496 - Senior Project
- BUS314 - Intro to Innovation & Entr.
- BUS456 - Business Research Methods
- BUS335 - Innov. & Entrepreneurship II
- BUS326 - Sales/Sales Management
- BUS319 - Integrated Marketing Comm.
- BUS207 - Seminar
- BUS497 - Senior Project
- BUS495 - Senior Project Proposal
- BUS490 - Applied Management Internship
- BUS223 - Marketing I
- BUS478 - Strategic Management
- BUS467 - Service Management
- BUS466 - Marketing Policy (Inactive)
- BUS457 - Business Research Methods II (Inactive)
- BUS456P - Business Research Method (Inactive)
- BUS447 - Controversial Issues in Mgmt
- BUS445P - Business Presentations (Inactive)
- BUS442 - Leadership II
- BUS441P - Leadership (Inactive)
- BUS441 - Leadership I (Inactive)
- BUS435 - Marketing III
- BUS434 - Global Marketing
- BUS416P - Environmental Mgmt (Inactive)
- BUS415P - Environmental Regulation (Inactive)
- BUS407P - Seminar (Inactive)
- BUS407 - Seminar
- BUS399 - Marketing Special Topics
- BUS397 - Human Resource Management II
- BUS355P - Business Law (Inactive)
- BUS349 - Human Resource Management I
- BUS337 - Prin of Health Care Marketing
- BUS331 - Personal Finance
- BUS325P - Finance Management (Inactive)
- BUS322P - Managerial Accounting (Inactive)
- BUS321P - Financial Accounting (Inactive)
- BUS317 - Health Care Management
- BUS316 - Total Quality Health Care
- BUS313 - Health Care Systems & Policy
- BUS309 - Introduction to Tourism
- BUS308P - Princ of International Bus (Inactive)
- BUS308 - Prin of International Business
- BUS306P - Principles of Marketing (Inactive)
- BUS304P - Engineering Mgt (Inactive)
- BUS304 - Engineering Management
- BUS215P - Principles of Management (Inactive)
- BUS215 - Principles of Management
- BUS107 - Seminar
- BUS476 - EDP Auditing and Controls (Inactive)
- BUS395 - Indust & Transport Law (Inactive)
- BUS386 - Real Estate Law (Inactive)
- BUS355 - Business Law (Inactive)
- BUS306 - Principles of Marketing (Inactive)
- BUS305 - Mgmt of Engr Resources (Inactive)
- BUS458 - Process Improvement
- BUS445 - Business Presentations (Inactive)
- BUS322 - Managerial Accounting (Inactive)
- BUS321 - Financial Accounting (Inactive)
- BUS000 - Business General Elective
- BUS464 - Corporate Entrepreneurship (Inactive)
- BUS367 - Int'l Economics & Finance Mgt (Inactive)
- BUS334 - Cash Flow Management (Inactive)
- BUS320 - Advtg Digital Video Lab (Inactive)
- BUS152 - Legal Bib/Term/Research (Inactive)
- BUS397P - Labor Relations (Inactive)
- BUS349P - Human Resource Management (Inactive)
- BUS458P - Process Improvement (Inactive)
- BUS365P - Marketing Management (Inactive)
- BUS315P - Principles of Management (Inactive)
- BUS353 - Marketing Special Topics (Inactive)
- BUS324 - Mrktng Channels/Distribtn (Inactive)
- BUS378 - Acct & Infor Systems (Inactive)
- BUS302 - Management Processes II (Inactive)
- BUS301 - Management Processes I (Inactive)
- BUS113 - Freshman Seminar III (Inactive)
- BUS112 - Freshman Seminar II (Inactive)
- BUS111 - Freshman Seminar I (Inactive)
- BUS365 - Marketing Management (Inactive)
- BUS266 - Salesmanship (Inactive)
- BUS265 - Principles of Advertising (Inactive)
- BUS196 - Small Business Management (Inactive)
- BUS375P - Decision Support Systems (Inactive)
- BUS315 - Principles of Management (Inactive)
- BUS175 - Intro to Bus Info Systems (Inactive)
- BUS408 - Workshop (Inactive)
- BUS479 - Information Resources Mgmt (Inactive)
- BUS477 - Micro/Mainframe Integration (Inactive)
- BUS474 - Info System Project Management (Inactive)
- BUS472 - Database Information Systems (Inactive)
- BUS471 - User Interface and Training (Inactive)
- BUS376 - Business Telecommunications (Inactive)
- BUS00U - Business Upper Elective

EET Technical Electives

Complete ALL:

- EE341 - Electricity/Magnetism w/Transm
- EE343 - Solid State Electronic Devices
- EE419 - Power Electronics
- EE448 - Geometric Optics
- EE485 - Printed Circuit Board Design
- ENGR461 - Engr Mdlng & Sim of Dyn Sys
- ENGR463 - MC in Mechanisms & Robotics
- ENGR464 - Autonomous Systems

- REE243 - Electrical Power
- REE253 - Electromech Energy Conversion
- REE345 - Wind Power
- REE412 - Photovoltaic Systems
- REE413 - Electric Power Conv Systems
- REE453 - Power System Analysis
- REE454 - Power Sys Protection & Control
- REE463 - Energy Systems Instrumentation

Upper Division Health Biology Electives

Complete ANY:

- BIO326 - Parasitology
- BIO341 - Medical Genetics
- BIO443 - Cell Biology
- BIO347 - Pathophysiology II (Inactive)
- BIO352 - Developmental Biology
- BIO457 - Intro to Neuroscience
- BIO426 - Evolutionary Biology
- BIO435 - Exercise Physiology
- BIO436 - Immunology
- BIO462 - Human Cadaver Dissection
- BIO495 - Research Project in Biology
- CHE360 - Clinical Pharmacology/Hlth Prf
- CHE452 - Biochemistry III
- CHE495 - Research Project in Chemistry
- STAT414 - Stat Methods in Epidemiology

Social Science Elective Credits

- SOC220 - Current Health Issues
- SOC206Z - Social Problems
- SOC206 - Social Problems (Inactive)
- SOC205 - Current Health Issues (Inactive)
- SOC204Z - Introduction to Sociology
- SOC204 - Intro to Sociology (Inactive)
- PSY497 - Special Projects/Training
- PSY376 - Foundations of Sport Psy.
- ECO202Z - Principles of Macroeconomics
- ECO202 - Principles of Economics, Macro (Inactive)
- ECO201Z - Principles of Microeconomics
- ECO201 - Principles of Economics, Micro (Inactive)
- ANTH335 - The Built Environment
- PSY347 - Organizational Behavior
- PSY201 - Psychology (Inactive)
- PSY465 - Ecuador Study Abroad
- PSY447 - Well-Being Program
- PSY202Z - Intro to Psychology II
- PSY201Z - Intro to Psychology I
- HIST255 - History of Science
- SOC421 - Senior Project Preparation (Inactive)
- SOC405 - Program Planning & Eval (Inactive)
- SOC325 - Global Population Health
- SOC315 - Juvenile Delinquency (Inactive)
- SOC304 - Criminology (Inactive)
- SOC210 - Marriage & Family Living (Inactive)
- PSY480 - Theories of Learning (Inactive)
- PSY446 - Psychological Trauma (Inactive)
- PSY432 - Group Therapy (Inactive)

- PSY431 - Family Therapy (Inactive)
- PSY428 - Animal Behavior (Inactive)
- PSY375 - Organizational Behavior Mgmt (Inactive)
- PSY360 - Organizational Psych
- PSY358 - Psychology of Gender (Inactive)
- PSY356 - Military Psychology (Inactive)
- PSY351 - Cognitive Restructuring I (Inactive)
- PSY346 - Educational Psychology II (Inactive)
- PSY345 - Educational Psychology I (Inactive)
- PSY342 - Psychoactive DrugsII: Abused (Inactive)
- PSY341 - Psychoactive Drugs I (Inactive)
- PSY337 - Health Psychology II (Inactive)
- PSY336 - Health Psychology I (Inactive)
- PSY322 - Theories of Personality II (Inactive)
- PSY321 - Theories of Personality I (Inactive)
- PSY220 - Community Psych (Inactive)
- PSY110 - Human Serv Careers (Inactive)
- PSCI497 - US Foreign Policy (Inactive)
- PSCI407 - Seminar (Inactive)
- PSCI307 - Seminar (Inactive)
- PSCI250 - Intro to World Politics (Inactive)
- PSCI207 - Seminar (Inactive)
- PSCI201 - United States Government (Inactive)
- PSCI107 - Seminar (Inactive)
- HIST478 - History of Oregon (Inactive)
- HIST392 - Modern Asia (Inactive)
- HIST357 - History of the Electric Grid (Inactive)
- HIST335 - Engineering Profession (Inactive)
- HIST245 - Hitler & the Holocaust (Inactive)
- HIST226 - Tech & Modern World (Inactive)
- HIST225 - Tech & Rise of the West (Inactive)
- HIST224 - Tech & Ancient World (Inactive)
- HIST103 - Hist-Western Civil (Inactive)
- HIST102 - Hist-Western Civil (Inactive)
- HIST101 - Hist-Western Civil (Inactive)
- GEOG108 - Cultural Geography III (Inactive)
- GEOG106 - Cultural Geography I (Inactive)
- ECO367 - Int'l Economics & Finance Mgt (Inactive)
- ECO357 - Energy Economics & Policy (Inactive)
- ECO203 - Prin of Econ-Spec Topics (Inactive)
- PSY475 - Capstone in Applied Psychology
- PSY313 - Psych Research Methods I
- HIST468 - History of the Pacific NW
- HIST452 - Globalization & Pac NW
- HIST356 - A History of Energy
- ANTH452 - Globalization
- PSY420 - Applied Psych Extern
- PSY456 - Performance Management
- PSY435 - Adv Behavior Modification II
- PSY434 - Adv Behavior Modification I
- PSY335 - Behavior Modification II
- PSY334 - Behavior Modification I
- GEOG315 - Climatology & Atmospheric Sci
- PSY443 - Youth Mentorship III (Inactive)
- PSY442 - Youth Mentorship II (Inactive)
- PSY441 - Youth Mentorship I (Inactive)
- SOC201 - Classical Sociol Theory
- PSY410 - Organiz Change/Develop

- PSY216 - Abnormal Psychology II
 - SOC345 - Aging and Society
 - SOC302 - Soc Science Resrch Methods II
 - SOC415 - Soc of Substance Abuse (Inactive)
 - SOC407 - Seminar
 - SOC335 - Hlth Inequal & Cult Competency
 - SOC307 - Seminar
 - SOC305 - Rural Health
 - SOC304P - Criminology (Inactive)
 - SOC301 - Soc Science Research Methods
 - SOC235 - Intro to Sustainability
 - SOC225 - Medical Sociology
 - SOC207 - Seminar
 - SOC204P - Intro to Sociology (Inactive)
 - SOC202 - Contemporary Soc Theory
 - SOC107 - Seminar
 - PSY499 - Independent Study
 - PSY485 - Education Assistantship
 - PSY455 - Cognitive Psychology
 - PSY445 - OR Tech Relationship Bldg Prog
 - PSY425 - Motivational Interviewing
 - PSY423 - Sr Project III
 - PSY422 - Sr Project II
 - PSY421 - Senior Project I
 - PSY416 - Abnorm Behav Children & Adol
 - PSY410P - Organiz Change/Develop (Inactive)
 - PSY407 - Seminar
 - PSY401 - Adv Counseling Techniques
 - PSY372 - Human Sexuality II
 - PSY371 - Human Sexuality I
 - PSY364 - Environmental Psychology
 - PSY361P - Industrial Psychology (Inactive)
 - PSY361 - Industrial Psychology
 - PSY355 - Evolutionary Psychology
 - PSY347P - Organizational Behavior (Inactive)
 - PSY339 - Biopsychology
 - PSY331 - Social Psychology II
 - PSY330 - Social Psychology I
 - PSY317 - Field & Career Preparation
 - PSY314 - Psych Research Methods II
 - PSY312 - Human Growth & Dev II
 - PSY311 - Human Growth & Dev I
 - PSY308 - Psychology of Eating
 - PSY307 - Seminar
 - PSY301 - Basic Counseling Techniques
 - PSY225 - Applied Stats for Social Sci
 - PSY215 - Abnormal Psychology I
 - PSY207 - Seminar
 - PSY203 - Psychology
 - PSY202 - Psychology
 - PSY107 - Seminar
 - OSSS307 - Seminar
 - OSSS107 - Seminar
 - HIST407 - Seminar
 - HIST307 - Seminar
 - HIST275 - Intro to Hist of Medicine
 - HIST207 - Seminar
 - HIST203 - US History
 - HIST202 - US History
 - HIST201 - US History
 - HIST107 - Seminar
 - GEOG107 - Cultural Geography II
 - ECO407 - Seminar
 - ECO367P - Int'l Economics & Finance Mgt (Inactive)
 - ECO307 - Seminar
 - ECO207 - Seminar
 - ECO202P - Prin of Econ-Micro (Inactive)
 - ECO107 - Seminar
 - ANTH407 - Seminar
 - ANTH307 - Seminar
 - ANTH207 - Seminar
 - ANTH107 - Seminar
 - ANTH103 - Intro to Cultural Anthropology
 - ANTH102 - Intro to Archeology
 - PSY464 - Organizatnl Structure (Inactive)
 - PSY403 - Applied Psy Methods III (Inactive)
 - PSY402 - Appl Psych Methods II (Inactive)
 - PSY352 - Cognitive Restructuring II (Inactive)
 - PSY325 - Stress Management (Inactive)
 - PSCI355 - Int'l Conflict in 20th Century (Inactive)
 - PSCI326 - World Politics/Transition (Inactive)
 - HIST216 - American Military Hist (Inactive)
 - HIST215 - American West Exp (Inactive)
 - OSSS407 - Seminar
 - OSSS207 - Seminar
 - HIST266 - Nat/Cultural Hist of E Oregon (Inactive)
 - HIST256 - Nat/Cultural Hist of NW Nevada (Inactive)
 - ECO202N - Principles of Economics, Macro (Inactive)
 - ECO201N - Principles of Economics, Micro (Inactive)
 - PSY374 - Therapeutic Communities (Inactive)
 - HIST315 - Computers & Society (Inactive)
 - HIST235 - American Pop Culture (Inactive)
 - ANTH222 - Native American Culture II (Inactive)
 - ANTH221 - Native American Culture I (Inactive)
 - SOC000 - Social Science Elective Lower
 - PSY348P - Organizational Behavior
 - PSCI213 - International Conflict (Inactive)
 - ECO115 - Intro to Economics (Inactive)
 - PSY216X - Social Psychology (Inactive)
 - PSY340X - Abnormal Psychology (Inactive)
 - SOC00U - Social Science Elective Upper
 - PSY00U - Psychology Elective Upper
 - PSY000 - Psychology Elective
 - ECO00U - Economics Elective Upper
 - ECO000 - Economics Elective
- ## Communication Electives
- Complete ALL:
- COM205 - Intercultural Communication
 - COM218Z - Interpersonal Communication
 - COM320 - Advanced Intercultural Comm
 - COM347 - Negotiation & Conflict Resol'n
 - COM401 - Civil Engineering Project I
 - SPE314 - Argumentation
 - SPE321 - Small Group/Team Communication

- WRI214 - Business Correspondence
- WRI227Z - Technical Writing
- WRI328 - Style
- WRI345 - Science Writing
- WRI350 - Documentation Development
- WRI410 - Proposal & Grant Writing

Environmental Sciences, Wildlife, Fisheries, and Natural Resource option Required Courses

Complete ALL:

- BIO426 - Evolutionary Biology
- BIO446 - Pathophysiology I
- BIO417 - Plant Ecology
- BIO377 - Wildlife Ecology & Management
- BIO337 - Aquatic Ecology
- CHE315 - Environmental Analytical Chem.
- ENV375 - Forest Ecology & Management (Inactive)
- ENV465 - Ecological Resto. & Monitoring

400 Level Math Course

- MATH411 - Topics in Complex Analysis (Inactive)
- MATH451 - Numerical Methods I
- MATH465P - Mathematical Statistics (Inactive)
- MATH465 - Mathematical Statistics
- MATH453 - Numerical Methods III
- MATH452 - Numerical Methods II
- MATH432 - Appld Partial Diff Equatns III (Inactive)
- MATH423 - Applied Partial Diff Equ III
- MATH422 - Applied Partial Diff Equatns II
- MATH421 - Applied Partial Diff Equations
- MATH407P - Seminar (Inactive)
- MATH407 - Seminar
- MATH425 - Vector Analysis (Inactive)
- MATH462 - Statistical Methods (Inactive)
- MATH461 - Statistical Methods (Inactive)

Health Care Management Program Elective*

Complete ALL:

- MIS118 - Intro to Programming in C#
- MIS334 - Business Analytics
- MIS341 - Relational Database Design I
- MIS344 - Business Intelligence
- MIS446 - Data Mining
- PSY201Z - Intro to Psychology I
- PSY202Z - Intro to Psychology II
- PSY203 - Psychology
- SOC204Z - Introduction to Sociology
- SOC325 - Global Population Health
- SOC335 - Hlth Inequal & Cult Competency
- SOC000 - Social Science Elective Lower
- PSY000 - Psychology Elective

Applied Psychology - Applied Experience course options

Complete ALL:

- PSY314 - Psych Research Methods II
- PSY420 - Applied Psych Extern
- PSY421 - Senior Project I
- PSY422 - Sr Project II
- PSY423 - Sr Project III
- PSY445 - OR Tech Relationship Bldg Prog
- PSY497 - Special Projects/Training
- PSY447 - Well-Being Program

Environmental Sciences, Water and Wetland Resources option Technical Electives

Complete ALL:

- BIO255 - Sophomore Research Class
- BIO355 - Junior Research Class
- ENV495 - Research in Env. Sciences
- BIO455 - Senior Research Class
- ENV420 - Extern Environmental Science
- GEOG335 - Soils
- GIS432 - Customizing the GIS Envirn II
- GIS306 - Geospatial Raster Analysis
- GIS316 - Geospatial Vector Analysis
- GIS332 - Python for Geospatial Analysis
- GME161 - Plane Surveying I
- GME425 - Remote Sensing
- CE405 - Sustainability & Infrastruct
- CE374 - Hydrology

Environmental Science, Environmental Business & Economics Optional Technical Electives

Complete ALL:

- BA212 - Prin of Accounting II
- BUS326 - Sales/Sales Management
- ECO201Z - Principles of Microeconomics
- ECO202Z - Principles of Macroeconomics
- GEOG315 - Climatology & Atmospheric Sci
- PHIL342 - Business Ethics
- PSY347 - Organizational Behavior
- PSY201Z - Intro to Psychology I

Biology Electives

- BIO557 - Introduction to Neuroscience
- BIO551 - Zoology
- BIO541 - Genetic Enginring&Gene Therapy
- BIO534 - Advanced Data Analysis (Inactive)
- BIO457 - Intro to Neuroscience
- BIO451 - Zoology
- BIO441 - Genetic Engr & Gene Therapy
- BIO366 - Zoology (Inactive)
- BIO313 - Botany & Plant Taxonomy

- BIO223Z - Principles of Biology: Ecology and Evolution
- BIO222Z - Principles of Bio: Organisms
- BIO221Z - Principles of Biology: Cells
- BIO597 - Internship/Shadowing
- BIO596 - Biomedical Capstone
- BIO595 - Graduate Research/Thesis
- BIO585 - Ecoregional Studies
- BIO567 - Biomedical Devices
- BIO562 - Human Cadaver Dissection
- BIO561 - Human Cadaver Dissection
- BIO554 - Environmental Health
- BIO552 - Developmental Biology
- BIO547 - Pathophysiology II
- BIO545 - Comparative Virology
- BIO543 - Cell Biology
- BIO542 - Biological Physics
- BIO538 - Conservation Biology
- BIO537 - Advanced Data Analysis II
- BIO536 - Immunology
- BIO535 - Exercise Physiology
- BIO527 - Special Topics in Neuroscience
- BIO526 - Evolutionary Biology
- BIO522 - Introduction to Neuroscience
- BIO517 - Plant Ecology
- BIO512 - Current Iss in Natural Resourc
- BIO511 - Foundations in Conservation
- BIO510 - Current Iss in Biomedical Sci
- BIO509 - Introduction to Biomedical Sci
- BIO501 - Intro to Graduate Studies
- BIO462 - Human Cadaver Dissection
- BIO454 - Environmental Health
- BIO452 - Development Biology
- BIO447 - Pathophysiology II
- BIO443 - Cell Biology
- BIO442 - Biological Physics
- BIO438 - Conservation Biology
- BIO417 - Plant Ecology
- BIO375 - Cross Sectional Anatomy II
- BIO234 - Microbiology
- BIO546 - Pathophysiology I
- BIO507 - Seminar
- BIO446 - Pathophysiology I
- BIO367 - Plant Ecology (Inactive)
- BIO354 - Environmental Health (Inactive)
- BIO302 - Inntl Study Exp Ecolo & Sustn
- BIO301 - Int Sutdy Exp Ecology/Sustn I
- BIO216 - Biology of Companion Animals
- BIO227 - Intro to Forensic Science
- BIO455 - Senior Research Class
- BIO355 - Junior Research Class
- BIO467 - BioMedical Devices
- BIO445 - Comparative Virology
- BIO428 - Fisheries
- BIO427 - Special Topics in Neuroscience
- BIO377 - Wildlife Ecology & Management
- BIO369 - Mammalogy
- BIO255 - Sophomore Research Class
- BIO495 - Research Project in Biology
- BIO326 - Parasitology
- BIO233 - Human Anatomy/Physiology III
- BIO220 - Cardiovascular Physiology
- BIO335 - Cross-Sectional Anatomy
- BIO435 - Exercise Physiology
- BIO386 - Ornithology
- BIO485 - Klamath Bioregional Studies (Inactive)
- BIO484 - Sustainable Human Ecology (Inactive)
- BIO461 - Human Cadaver Dissection
- BIO436 - Immunology
- BIO434 - Data Analysis Methods
- BIO426 - Evolutionary Biology
- BIO409 - Crnt Rsch Tpcs in Med Sci II
- BIO407 - Seminar
- BIO357 - Intro to Neuroscience (Inactive)
- BIO352 - Developmental Biology
- BIO351 - Vertebrate Biology (Inactive)
- BIO347 - Pathophysiology II (Inactive)
- BIO346 - Pathophysiology I (Inactive)
- BIO345 - Medical Microbiology
- BIO342 - Cell Biology
- BIO341 - Medical Genetics
- BIO337 - Aquatic Ecology
- BIO336 - Essentials of Pathophysiology
- BIO333 - Human Anatomy/Physiology III
- BIO332 - Human Anatomy/Physiology II
- BIO331 - Human Anatomy/Physiology I
- BIO327 - General Ecology (Inactive)
- BIO325 - Applied Aquatic Botany (Inactive)
- BIO324 - Human Physiology II (Inactive)
- BIO323 - Human Physiology I (Inactive)
- BIO322 - Human Anatomy II (Inactive)
- BIO321 - Human Anatomy I (Inactive)
- BIO317 - Invertebrate Biology (Inactive)
- BIO307 - Seminar
- BIO247 - Forensic Anthropology
- BIO235 - Human Genetics
- BIO232 - Human Anatomy/Physiology II
- BIO231 - Human Anatomy/Physiology I
- BIO226 - Intro to Wildlife Rehab
- BIO213 - Principles of Biology
- BIO212 - Principles of Biology
- BIO211 - Principles of Biology
- BIO209 - Current Research Tpc Med Sci I
- BIO207 - Seminar
- BIO205 - Nutrition
- BIO474 - Sr Prj Data Analysis & Present (Inactive)
- BIO473 - Senior Project Data Collection (Inactive)
- BIO472 - Senior Project Proposal (Inactive)
- BIO471 - Sr Project Proposal Research (Inactive)
- BIO262 - Sophomore Project (Inactive)
- BIO261 - Sophomore Project Proposal (Inactive)
- BIO265 - Field Methods Environ Science
- BIO225 - Riparian Assessment Methods
- BIO365 - Adv Field Methods Env Science (Inactive)
- BIO498 - Senior Project Presentation (Inactive)
- BIO497 - Senior Project Data Analysis (Inactive)
- BIO496 - Sr Project Data Collection (Inactive)

- BIO460 - Human Cadaver Dissection (Inactive)
- BIO203 - Molecular & Cellular Bio (Inactive)
- BIO202 - Population & Env Biology (Inactive)
- BIO201 - Organismic Biology
- BIO312 - Botany II (Inactive)
- BIO311 - Botany I (Inactive)
- BIO408 - Workshop (Inactive)
- BIO315 - Radiographic Vas Anatomy (Inactive)
- BIO299 - Laboratory Practice (Inactive)
- BIO298 - Reading and Conference (Inactive)
- BIO295 - Individual Studies (Inactive)
- BIO215 - Vascular Pathology (Inactive)
- BIO210 - Vascular Anatomy (Inactive)
- BIO300 - Human Ecology (Inactive)

Lab Science General Education

- PHY202 - General Physics
- ENV534 - Advanced Data Analysis
- CHE223Z - General Chemistry III
- CHE222Z - General Chemistry II
- CHE221Z - General Chemistry I
- CHE221 - General Chemistry I (Inactive)
- BIO534 - Advanced Data Analysis (Inactive)
- BIO313 - Botany & Plant Taxonomy
- BIO223Z - Principles of Biology: Ecology and Evolution
- BIO222Z - Principles of Bio: Organisms
- BIO221Z - Principles of Biology: Cells
- CHE465 - Fate/Transport of Pollutants
- CHE260 - Electrochemistry for RE Applic
- CHE203 - General Chemistry III
- BIO562 - Human Cadaver Dissection
- BIO561 - Human Cadaver Dissection
- BIO552 - Developmental Biology
- BIO537 - Advanced Data Analysis II
- BIO536 - Immunology
- BIO517 - Plant Ecology
- BIO462 - Human Cadaver Dissection
- BIO452 - Development Biology
- BIO443 - Cell Biology
- BIO417 - Plant Ecology
- BIO234 - Microbiology
- BIO105 - Microbiology (Inactive)
- CHE565 - Fate & Transport of Pollutants
- CHE552 - Biochemistry III
- CHE551 - Biochemistry II
- CHE550 - Biochemistry I
- CHE522 - Biochemistry III
- BIO216 - Biology of Companion Animals
- BIO227 - Intro to Forensic Science
- CHE201 - General Chemistry I
- CHE101 - Intro to General Chemistry
- BIO428 - Fisheries
- BIO369 - Mammalogy
- GEOG305 - Geomorphology
- GEOG105 - Physical Geography
- CHE346 - Corrosion Chemistry Lab
- BIO326 - Parasitology
- BIO233 - Human Anatomy/Physiology III
- BIO109 - Intro to Medical Sciences
- BIO220 - Cardiovascular Physiology
- CHE335 - Bioorganic Chemistry
- ENV111 - Intro to Env Sciences
- BIO111 - Intro to Environmental Science (Inactive)
- BIO102 - Diversity of Life
- PHY453 - Optical Metrology
- PHY452 - Waveguides and Fiber Optics
- PHY450 - Physical Optics
- PHY449 - Radiometry & Optical Detect
- PHY448 - Geometric Optics
- PHY237 - Meteorology (Inactive)
- PHY223 - General Physics w/Calculus
- PHY222 - General Physics w/Calculus
- PHY221 - General Physics w/Calculus
- PHY215 - Topics in Astronomy
- PHY203P - General Physics (Inactive)
- PHY203 - General Physics
- PHY202P - General Physics (Inactive)
- PHY201 - General Physics
- OSLS207 - Overseas Lab Science
- CHE452 - Biochemistry III
- CHE451 - Biochemistry II
- CHE345 - Corrosion Chemistry
- CHE342 - Instr Methods/Data Acqstn II
- CHE341 - Instr Methods/Data Acqstn I
- CHE333 - Organic Chemistry III
- CHE332 - Organic Chemistry II
- CHE331 - Organic Chemistry I
- CHE325 - Soil Science
- CHE260P - Fuel Cell Chemistry (Inactive)
- CHE223 - General Chemistry III
- CHE222 - General Chemistry II
- CHE206 - General Chemistry III Lab
- CHE205 - General Chemistry II Lab
- CHE204 - General Chemistry I Lab
- CHE202 - General Chemistry II
- CHE106 - Elementary Chemistry Lab
- CHE105 - Intro to Organic Chemistry Lab
- CHE104 - Intro to General Chemistry Lab
- CHE103 - Intro to Biochemistry
- CHE102 - Intro to Organic Chemistry
- BIO484 - Sustainable Human Ecology (Inactive)
- BIO461 - Human Cadaver Dissection
- BIO436 - Immunology
- BIO434 - Data Analysis Methods
- BIO352 - Developmental Biology
- BIO351 - Vertebrate Biology (Inactive)
- BIO345 - Medical Microbiology
- BIO342 - Cell Biology
- BIO337 - Aquatic Ecology
- BIO333 - Human Anatomy/Physiology III
- BIO332 - Human Anatomy/Physiology II
- BIO331 - Human Anatomy/Physiology I
- BIO327 - General Ecology (Inactive)
- BIO325 - Applied Aquatic Botany (Inactive)
- BIO317 - Invertebrate Biology (Inactive)
- BIO247 - Forensic Anthropology

- BIO235 - Human Genetics
- BIO232 - Human Anatomy/Physiology II
- BIO231 - Human Anatomy/Physiology I
- BIO213 - Principles of Biology
- BIO212 - Principles of Biology
- BIO211 - Principles of Biology
- BIO103 - Intro to Human Anat & Phys
- BIO101 - Intro to Cell Biology
- GEOG115 - Phys Geography: Climatology (Inactive)
- CHE235 - Streamwater Chemistry & Samp (Inactive)
- BIO474 - Sr Prj Data Analysis & Present (Inactive)
- BIO473 - Senior Project Data Collection (Inactive)
- BIO262 - Sophomore Project (Inactive)
- BIO112 - Intro to Data Analysis (Inactive)
- BIO265 - Field Methods Environ Science
- BIO225 - Riparian Assessment Methods
- BIO365 - Adv Field Methods Env Science (Inactive)
- CHE232 - Streamwater Sampling (Inactive)
- CHE231 - Streamwater Chemistry (Inactive)
- CHE250 - Clinical Pharmacology/Nuc Med (Inactive)
- BIO498 - Senior Project Presentation (Inactive)
- BIO497 - Senior Project Data Analysis (Inactive)
- BIO496 - Sr Project Data Collection (Inactive)
- BIO460 - Human Cadaver Dissection (Inactive)
- MASCL0U - Math/Science Elective Upper Lb
- MASCL00 - Math/Science Elective Lower Lb
- CHE337 - Biochemistry III (Inactive)
- CHE336 - Biochemistry II (Inactive)
- BIO123 - Human Anatomy/Physio III (Inactive)
- BIO122 - Human Anatomy/Physio II (Inactive)
- BIO121 - Human Anatomy/Phys I (Inactive)
- BIO203 - Molecular & Cellular Bio (Inactive)
- BIO202 - Population & Env Biology (Inactive)
- BIO201 - Organismic Biology
- BIO312 - Botany II (Inactive)
- BIO311 - Botany I (Inactive)

Lower Division Health Biology Electives

Complete ALL:

- BIO200 - Medical Terminology
- BIO205 - Nutrition
- BIO216 - Biology of Companion Animals
- BIO226 - Intro to Wildlife Rehab

Upper Division Writing Elective

Complete ANY:

- WRI327 - Advanced Tech Writing
- WRI328 - Style
- WRI345 - Science Writing
- WRI350 - Documentation Development
- WRI410 - Proposal & Grant Writing

Sociology Electives

Complete ANY:

- SOC204 - Intro to Sociology (Inactive)
- SOC204Z - Introduction to Sociology

- SOC205 - Current Health Issues (Inactive)
- SOC215 - The American Experience (Inactive)
- SOC225 - Medical Sociology
- SOC305 - Rural Health
- SOC325 - Global Population Health
- SOC335 - Hlth Inequal & Cult Competency

Construction Management Concentration Course

Complete ALL:

- CM330 - Construct Planning/Scheduling
- CM340 - Construct Budgeting & Takeoffs
- CM350 - Cons Equip, Methods, Materials
- CM331 - Heavy Const Project Scheduling
- CM341 - HC Cost Estimating & Control
- CM351 - HC Equip, Methods, Materials

Humanities Elective Credits

- HUM235 - Introduction to Film
- HUM207 - Seminar
- HUM225 - Cont Thtr: Ashland Plays (Inactive)
- HUM345 - Digital Culture and Society
- HUM407 - Seminar
- HUM307 - Seminar
- ART315 - Design Thinking
- LIT335 - Nonfiction Travel Writing (Inactive)
- HUM335 - Video Game Studies
- HUM245 - Digital Culture and Society
- ART215 - Design Arts and Aesthetics
- PHIL407 - Seminar
- PHIL405 - Advanced Logic (Inactive)
- PHIL342 - Business Ethics
- PHIL335 - Philosophy of Science (Inactive)
- PHIL325 - Environmental Ethics (Inactive)
- PHIL315 - The Ethics of Emerging Tech (Inactive)
- PHIL307 - Seminar
- PHIL215 - Ethical Theory
- PHIL207 - Seminar
- PHIL205 - Introduction to Logic
- PHIL107 - Seminar
- PHIL105 - Introduction to Ethics (Inactive)
- OSH207 - Overseas Humanities
- MUS407 - Seminar (Inactive)
- LIT456 - Topics in Film (Inactive)
- LIT407 - Seminar
- LIT381 - Contemporary World Lit (Inactive)
- LIT373 - British Culture & Literature (Inactive)
- LIT367 - Art & Trash in Contemp Fiction (Inactive)
- LIT307 - Seminar
- LIT266 - Native American Lit & Film (Inactive)
- LIT255 - Contemporary American Lit (Inactive)
- LIT254 - 20th Century American Lit (Inactive)
- LIT253 - 19th Century American Lit (Inactive)
- LIT246 - Creative Writing
- LIT235 - American Multicultural Lit (Inactive)
- LIT225 - Cont Thtr: Ashland Plays
- LIT207 - Seminar

- LIT107 - Seminar
- LIT106 - Intro to Literature
- LIT105 - Intro to Literature
- LIT104 - Intro to Literature
- HUM149 - West Cult in the Modern Age (Inactive)
- HUM148 - West Cult in the Medieval Age
- HUM147 - West Cult in the Classical Age
- HUM125 - Intro Tech, Soc, Value
- HUM107 - Seminar
- HUM000 - Humanities Elective Lower
- HUM00U - Humanities Elective Upper

Environmental Sciences, Environmental Chemistry option Required Courses

Complete ALL:

- CHE465 - Fate/Transport of Pollutants
- CHE451 - Biochemistry II
- CHE315 - Environmental Analytical Chem.
- CHE331 - Organic Chemistry I
- GEOG335 - Soils
- PHM321 - Program Planning & Evaluation
- SOC220 - Current Health Issues
- SOC225 - Medical Sociology

Psychology Electives

- PSY497 - Special Projects/Training
- PSY376 - Foundations of Sport Psy.
- PSY347 - Organizational Behavior
- PSY201 - Psychology (Inactive)
- PSY465 - Ecuador Study Abroad
- PSY447 - Well-Being Program
- PSY202Z - Intro to Psychology II
- PSY201Z - Intro to Psychology I
- PSY480 - Theories of Learning (Inactive)
- PSY446 - Psychological Trauma (Inactive)
- PSY432 - Group Therapy (Inactive)
- PSY431 - Family Therapy (Inactive)
- PSY428 - Animal Behavior (Inactive)
- PSY385 - Peer Mentorship (Inactive)
- PSY375 - Organizational Behavior Mgmt (Inactive)
- PSY360 - Organizational Psych
- PSY358 - Psychology of Gender (Inactive)
- PSY356 - Military Psychology (Inactive)
- PSY351 - Cognitive Restructuring I (Inactive)
- PSY346 - Educational Psychology II (Inactive)
- PSY345 - Educational Psychology I (Inactive)
- PSY342 - Psychoactive DrugsII: Abused (Inactive)
- PSY341 - Psychoactive Drugs I (Inactive)
- PSY337 - Health Psychology II (Inactive)
- PSY336 - Health Psychology I (Inactive)
- PSY322 - Theories of Personality II (Inactive)
- PSY321 - Theories of Personality I (Inactive)
- PSY220 - Community Psych (Inactive)
- PSY110 - Human Serv Careers (Inactive)
- PSY475 - Capstone in Applied Psychology
- PSY436 - Ethics for ABA
- PSY313 - Psych Research Methods I

- PSY420 - Applied Psych Extern
- PSY521 - Individ Counseling Techniques (Inactive)
- PSY456 - Performance Management
- PSY435 - Adv Behavior Modification II
- PSY434 - Adv Behavior Modification I
- PSY335 - Behavior Modification II
- PSY334 - Behavior Modification I
- PSY443 - Youth Mentorship III (Inactive)
- PSY442 - Youth Mentorship II (Inactive)
- PSY441 - Youth Mentorship I (Inactive)
- PSY410 - Organiz Change/Develop
- PSY216 - Abnormal Psychology II
- PSY599 - Internship (Inactive)
- PSY598 - Practicum (Inactive)
- PSY575 - Treatment of Substance Abuse
- PSY566 - Child & Adolescent Therapy
- PSY565 - Group Counseling
- PSY535 - Treating Diverse Populations
- PSY530 - Research Methods
- PSY526 - Couples Therapy
- PSY525 - Family Therapy I
- PSY522 - Individ Counseling Techniques II
- PSY513 - Couples Theory
- PSY512 - Systems Theory
- PSY507 - Seminar
- PSY505 - Law, Ethics, & Prof Develop
- PSY500 - Life Span Development
- PSY499 - Independent Study
- PSY485 - Education Assistantship
- PSY455 - Cognitive Psychology
- PSY445 - OR Tech Relationship Bldg Prog
- PSY425 - Motivational Interviewing
- PSY423 - Sr Project III
- PSY422 - Sr Project II
- PSY421 - Senior Project I
- PSY416 - Abnorm Behav Children & Adol
- PSY415 - Psychology of Addiction (Inactive)
- PSY410P - Organiz Change/Develop (Inactive)
- PSY407 - Seminar
- PSY401 - Adv Counseling Techniques
- PSY372 - Human Sexuality II
- PSY371 - Human Sexuality I
- PSY365 - Field Placement Sem (Inactive)
- PSY364 - Environmental Psychology
- PSY361P - Industrial Psychology (Inactive)
- PSY361 - Industrial Psychology
- PSY355 - Evolutionary Psychology
- PSY347P - Organizational Behavior (Inactive)
- PSY339 - Biopsychology
- PSY331 - Social Psychology II
- PSY330 - Social Psychology I
- PSY317 - Field & Career Preparation
- PSY314 - Psych Research Methods II
- PSY312 - Human Growth & Dev II
- PSY311 - Human Growth & Dev I
- PSY308 - Psychology of Eating
- PSY307 - Seminar
- PSY301 - Basic Counseling Techniques

- PSY225 - Applied Stats for Social Sci
- PSY219 - Abnormal Psychology (Inactive)
- PSY215 - Abnormal Psychology I
- PSY207 - Seminar
- PSY203 - Psychology
- PSY202 - Psychology
- PSY107 - Seminar
- PSY464 - Organizational Structure (Inactive)
- PSY403 - Applied Psy Methods III (Inactive)
- PSY402 - Appl Psych Methods II (Inactive)
- PSY352 - Cognitive Restructuring II (Inactive)
- PSY325 - Stress Management (Inactive)
- PSY374 - Therapeutic Communities (Inactive)
- PSY348P - Organizational Behavior
- PSY366 - Psychopharmacology (Inactive)
- PSY216X - Social Psychology (Inactive)
- PSY340X - Abnormal Psychology (Inactive)
- PSY348 - Organizational Behavior (Inactive)
- PSY00U - Psychology Elective Upper
- PSY000 - Psychology Elective

Environmental Sciences, Environmental Chemistry option Technical Electives

Complete ANY:

- BIO355 - Junior Research Class
- BIO377 - Wildlife Ecology & Management
- BIO386 - Ornithology
- BIO428 - Fisheries
- BIO455 - Senior Research Class
- BIO495 - Research Project in Biology
- CHE450 - Biochemistry I
- CHE452 - Biochemistry III
- CHE332 - Organic Chemistry II
- CHE333 - Organic Chemistry III
- ENV495 - Research in Env. Sciences
- ENV485 - Habitat Management
- ENV321 - Water Resources
- ENV420 - Extern Environmental Science
- PHY305 - Nanoscience & Nanotech
- REE331 - Fuel Cells
- REE333 - Batteries
- REE337 - Materials for RE Applications

Requirement Sets

Communication Bachelor Requirements

Pre-Medical Imaging Technology

Technical Electives