B.S. Information Technology
Oregon Tech Assessment Report
2018-19

Program Description and History

The Information Technology degree was first offered at Oregon Tech in 1999. Options included Applications Development and Business/Systems Analysis. In 2015 the above options were consolidated into a B.S. in Information Technology. This degree is offered in Klamath Falls, Wilsonville and online. The Information Technology programs were awarded accreditation by the International Assembly of Collegiate Business Educators (IACBE) in 2008, and reaffirmation of accreditation in 2015.

Program Highlights

Program Enrollment, Graduation and Employment Rates

Total enrollment across all campuses is approximately 208 students; 40 at the Klamath Falls campus, 107 in Wilsonville, and 61 online. The program graduated 22 students for 2018. The three-year annual starting salaries averaged $55,513. The program has a 97% success rate (within six months of graduation students are employed or in graduate school).

Industry Relationships

Industry relationships for the Information Technology degree program in the 2018-19 assessment period increased in both depth and breadth. These relationships translate into internships, senior project opportunities, and job offers after graduation. The growing list of industry partners that demonstrate interest in Information Technology students and graduating seniors (Jeld-Wen, Intel, Nike, Benefit Elect, Emerald Techology Group, Oregon Department of Justice, Huron, to name a few) represents tremendous potential for students to engage with industry now and in the future.

Student Learning Experiences

Oregon Tech and the Business Management department, as a whole, provide many hands-on learning opportunities for students. These are embedded in the courses students take, through internship opportunities, and throughout the year-long senior project. Moreover, the IT curriculum exposes students to technology used by employers. Therefore, graduates of the program leave Oregon Tech with a business and technology toolbox that is relevant in the market with employers. Additionally, the Senior Project Symposium provides students with the opportunity to present their projects in a formal environment to peers, faculty, industry sponsors, and the community at large.

Success Stories

In addition to their 97% success rate, Information Technology students speak highly of the courses they take as evidenced by course evaluations, many students also derive tremendous value from their internships and senior projects. Below are two such experiences shared by students via email over this assessment period.

"I enjoyed that there was a small number of us in class and we were ready and willing to help each other with questions or projects."

"I enjoyed that I could easily talk to other professors that weren't in my major about various courses and issues."

"Great selection of classes for my area of focus."

Program Purpose

Bachelor of Science in Information Technology Mission

The Information Technology degree provides students with the foundation necessary to enable them to design and implement business information systems.

Educational Objectives

1. Graduates of the IT Degree can assess and apply their strengths in marketing.
2. Graduates of the IT Degree can distinguish themselves as effective communicators.
3. Graduates of the IT Degree excel in problem solving.
4. Graduates of the IT Degree model ethical and professional behavior.
5. Graduates of the IT Degree are prepared to pursue professional development opportunities and/or graduate education.

Management Department Student Learning Outcomes (SLO)

The Information Technology degree consists of the five core Management Department student learning outcomes. Upon completion of this program, Information Technology graduates will be able to:

1. Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management.
2. Describe the legal, social, ethical, and economic environments of business in a global context.
3. Solve organization problems, individually and/or in teams, using quantitative, qualitative, and technology-enhanced approaches.
4. Demonstrate professional communication and behavior.
5. Apply knowledge of business concepts and functions in an integrated manner.

Program Student Learning Outcomes (PSLO)

Upon completion of this program, Information Technology graduates will be able to:

1. Solve business problems though the use of information systems and technology.
2. Design and implement information systems.

Assessment Cycle

Assessment Schedule

1. **Oregon Tech's Essential Student Learning Outcomes:** ESLOs are assessed on a six-year cycle. The ESLO assessment schedule may be found on the Oregon Tech website under Essential Student Learning Outcomes.

2. **Department Level Student Learning Outcomes**: IACBE requires all accredited institutions to complete a Public Disclosure of Student Achievement on an annual basis. In addition, all outcomes are assessed annually, with the full self-study for IACBE core student learning outcomes (Core SLOs 1-5) completed every seven years.

Outcomes:	Direct	Indirect
Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management.	• Case Study • Senior Project	• Senior Exit Survey
Describe the legal, social, ethical, and economic environments of business in a global context.	• Case Study • Senior Project	• Senior Exit Survey
Solve organization problems, individually and/or in teams, using	• Case Study • Senior Project	• Senior Exit Survey

quantitative, qualitative, and technology-enhanced approaches.		
Demonstrate professional communication and behavior.	• Case Study • Senior Project	• Senior Exit Survey
Apply knowledge of business concepts and functions in an integrated manner.	• Case Study • Senior Project	• Senior Exit survey

3. **Program Student Learning Outcomes**: Program Based Annual Assessment Schedule and Activity

Outcomes:	Direct	Indirect
Solve business problems through the use of information systems and technology	• Senior Project • Systems Design Project	• Senior Exit Survey
Design and implement information systems	• Senior Project	• Senior Exit Survey

Evidence of Improvement in Student Learning

1. Department Level Student Learning Outcomes, Activities and Results

Management Department			
Program Outcomes	**Minimal Acceptable Performance**	**Assessment** from 2017-18	**Results** from 2017-18
Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management.	80% achieve a rate of 3 or 4	Senior Project N=64	86%
	80% achieve a rate of 3 or 4	Case Study N=82	86.5%
	80% score 4, 5, or 6	Senior Exit Survey N=93	75%
Describe the legal, social, ethical, and economic environments of business in a global context.	80% achieve a rate of 3 or 4.	Senior Project	86%
	80% achieve a rate of 3 or 4	Case Study	90%
	80% score 4, 5, or 6	Senior Exit Survey	90%
Solve organization problems, individually and/or in teams, using quantitative, qualitative, and technology-enhanced approaches.	80% achieve a rate of 3 or 4.	Senior Project	86%
	80% achieve a rate of 3 or 4	Case Study	81%
	80% score 4, 5, or 6	Senior Exit Survey	98%
Demonstrate professional communication and behavior.	80% achieve a rate of 3 or 4.	Senior Project	86%
	80% achieve a rate of 3 or 4	Case Study	97%
	80% score 4, 5, or 6	Senior Exit Survey	100%
Apply knowledge of business concepts and functions in an integrated manner.	80% achieve a rate of 3 or 4	Senior Project	86%

	80% achieve a rate of 3 or 4	Case Study	84%
	80% score 4, 5, or 6	Senior Exit Survey	100%

Qualitative Assessment of Senior Project during 2018-19

During 2017-18 the department assessed SLOs using two direct and one indirect method - Case Study (BUS478) and Senior Project, and Student Exit Survey. The results from the qualitative assessment had shown increasing improvements. In 2018-19, all three methods showed that the department met its objectives, therefore during the 2018-19 academic year, the department focused on reviewing the senior project using a qualitative survey. The key themes that came from the assessment included:

- A need to review SLO 1 - *Communicate the major concepts in the functional areas of accounting, marketing, finance, information technology, and management*.
- A need to review the senior project rubric, ensuring that it meets the needs of all programs and is closely tied to out learning outcomes.

Department Level Review: Results, Closing the Loop of Prior Action Plans, and Action Plans for this academic year:

- **Senior Project**: The goal for 2018-19 was to have more than one senior project professor assess student work as this would allow all faculty to review senior projects and provide feedback for improvement.
    - **Closing the Loop Activities**: During the 2018-19 academic year, the department faculty focused our assessment efforts on a qualitative review of senior projects. A small sample of projects from each major was compiled. Each faculty reviewed multiple projects and completed a qualitative survey tool that was tied to department outcomes and the senior project rubric. The result of this assessment uncovered two areas that need further exploration:
        - **Senior Project Rubric**: The senior project rubric was either not being utilized or was being used in an inconsistent way. For example, the rubric notes that a literature review will be assessed as part of the senior project. There was some confusion that not all majors were required to complete a literature review. As such the department agreed that a team of faculty would review and update the senior project rubric to ensure that it was a scoring tool that could be used across the department. Moreover, all faculty teaching senior project will be trained on the rubric so that they can design their courses to meet the requirements. Lastly, the senior project rubric will be re-mapped to the department's learning outcomes.
        - **Student Learning Outcomes** (Department-level): As part of the senior project review and mapping to the SLOs, the department agreed to also review the SLOs. While a full update is not needed, this is a good opportunity to ensure that the SLOs remain relevant. Since our accreditation body has updated and simplified requirements, this may be an opportunity to map SLOs to IACBE requirements.
    - **Action Plans for 2019-20:** During this academic year, the department will review the department's student learning outcomes and the senior project rubric. These will be prepared to be implemented in 2020-21. A full quantitative assessment using the current rubric will be completed during the 2019-20 year.
- **Case Study**: The plan for the 2018-19 year was for the course faculty to continue to discuss their approaches and share ideas for the Strategic Management course and the assignment. As with senior project refining the approach to this class and assessment may help identify areas of improvement.

- **Closing the Loop Activities**: The two faculty that teach the Strategic Management class did engage in discussions regarding approaches to the case study assignment. While one faculty incorporates the assessment in one assignment, the other spreads out the components of the assignment over the term. During the 2018-19 academic year, there was no formal assessment of the case study therefore there is no data relating to the effectiveness of these approaches.
- **Action Plans for 2019-20**: In the 2019-20 academic year, a quantitative assessment will be conducted using the new assessment software. This new software may allow for multiple assessors to review the work.

- **Senior Exit Survey**: During the 2018-19 academic year, the faculty proposed an adjustment to the senior exit survey. Specifically, the faculty wished to replace the word proficiency with the word understanding as this more accurately reflects the question's intent. The goal is for a minimum of 80% of students to rate their understanding of each of the functional areas of business at a high level (4-6).
    - **Closing the Loop Activities**: The results of the exit survey for the 2018-19 year did meet the 80% threshold for all SLOs with the exception of accounting and finance, which is an improvement from prior years. However, although the word change for the exit survey was reported to the assessment office it was not made in the exit survey, therefore the department was not able to test out this change.
    - **Action Plan for 2019-20**: This change will be submitted again for the 2019-20 assessment year.

2. Program Student Learning Outcomes, Activities and Results

Information Technology			
Program Outcomes	**Minimal Acceptable Performance**	**Assessment** from 2017-18	**Results** from 2017-18
Solve business problems through the use of information systems and technology	80% achieve a rate of 3 or 4	Senior Project N=21	85%
	80% score 4, 5, or 6	Systems Design Project N=16	62%
	80% score 4, 5, or 6	Senior Exit Survey N=27	100%
Design and implement information systems	80% achieve a rate of 3 or 4.	Senior Project	85%
	80% score 4, 5, or 6	Senior Exit Survey	96%

- **2018-19 Results:** The following summarizes the results:
    - The program had intended to assess PSLO 3. However, the course where the assessment would have been administered was cancelled in 2016-2017. Additionally, due to changes made to Oregon Tech's assessment software, assessment was not possible in 2017-2018.
    - The program focused on ensuring that students completed their focus sequence electives prior to starting senior project to improve overall preparedness for senior project. Improvements have been noticed as a result of active advising in both Klamath Falls and Portland Metro.
    - In regard to the assessment of senior projects in relation to the SLO and PSLOs:
        - The Health Informatics program will continue to integrate core concepts throughout the curriculum. Students scored well on these areas when assessed by faculty.

Students self-reported they could use additional support in the areas of accounting and finance. Accounting concepts are re-visited in program courses such as systems analysis and sr. project. However, financial concepts, with exception of ROI and NPV, are not revisited in the curriculum. These areas have been consistently marked low for 3 years. Program faculty will review the curriculum this year to determine if other courses or outcomes could be added to existing courses.

- Programmatically, students performed well in this area and are confident in their ability to identify and respond to ethical dilemmas within a variety of social contexts. As a university, the ESLO report showed the college of ETM falling short in this category.
- Students performed at 81% slightly within the range of acceptable performance. Departmental faculty should integrate more applied team projects which require technology enhanced approaches. Students get significant experience working in teams and collaboratively discussing solutions. However, providing more technology in courses and increasing student's Information Technology acumen would further support using technology to aid in decision making. Faculty should consider integrating more Information Technology courses into programs such as Business Analytics and Database Applications.
- Students performed well on communication and professional behavior. Enforcing dress codes or codes of conduct could aid in supporting professionalism.
- Students met in the area of applying concepts in an integrated manner. Continued practice could assist students in raising their effectiveness.

- **Closing the Look Activities:** PSLO 1 and 2 were assessed in 2017-2018. Students performed well in PSLO 1 but only at 25% for PSLO 2. This course has not been offered in Klamath Falls since the last assessment period and has only been offered in a cross-campus environment. The cross-campus environment likely hindered student progress, although the outcome has not been assessed since then. This will continue to be a focus moving forward.

- **Action Plans for 2019-20:** Due to the issues noted above, the following actions will continue:
  - **Senior Project**: Students are currently meeting the established objectives for senior project. The online students do not do as well as those working with faculty on campus. Increased interaction with online students is under consideration. In addition, the IT/HI faculty have worked with all faculty advising IT/HI students to ensure that focused electives are completed before senior project is started. This will ensure that students have taken 300- and 400-level electives in their chosen area before attempting project management in the senior project sequence.
  - **Systems Design Project**: MIS 442 curriculum is under review, including the Systems Design Project, to evaluate the course's effectiveness and in consideration of re-structuring the curriculum. This will aid in student's ability to critically think and problem solve.