Essential Studies

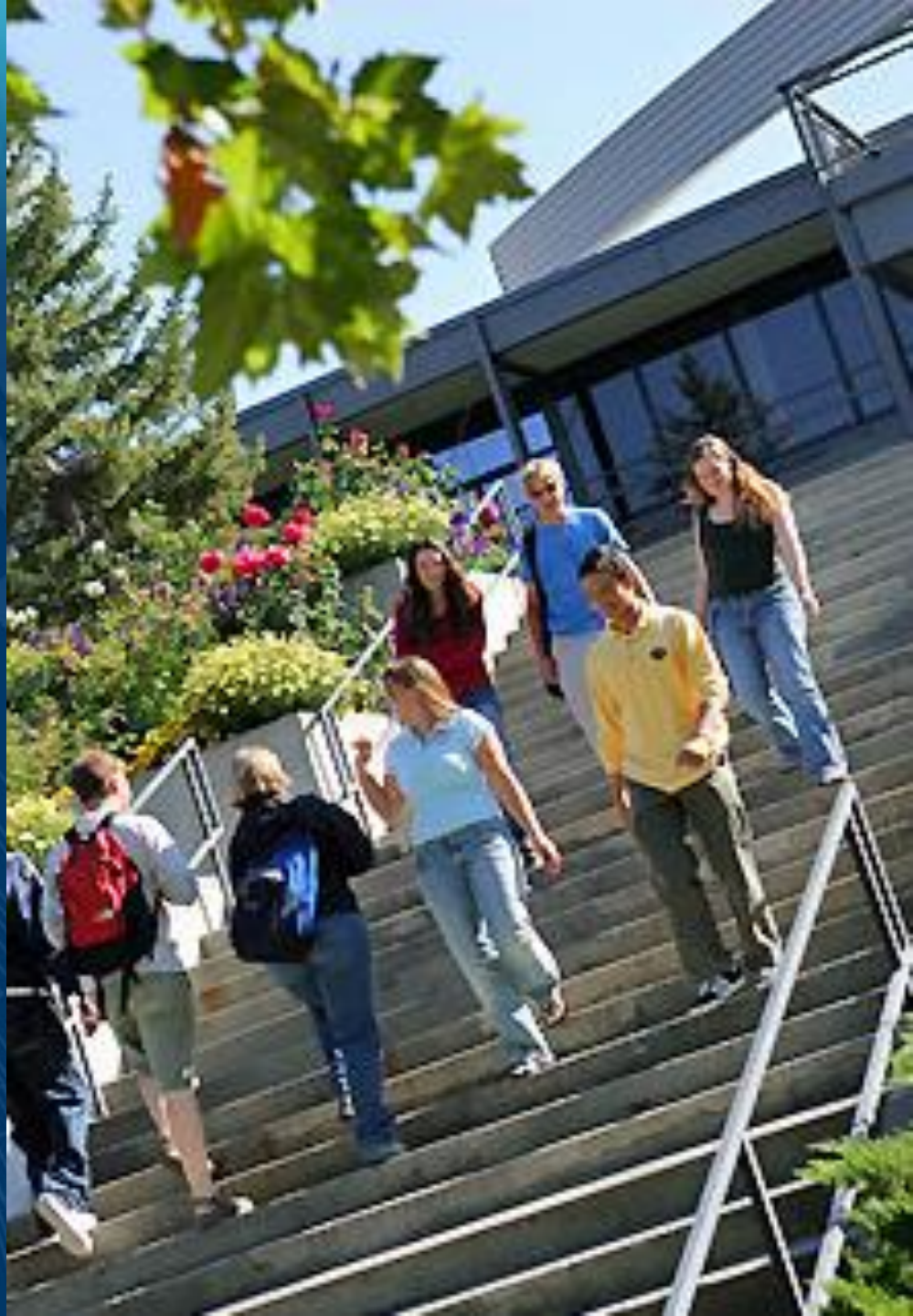
Mapping Workshop

Oregon TECH

OCTOBER 30, 2015

Mapping Workshop

1. Summary of the review
2. Working model
3. Mapping exercise



Expected outcomes of the review

1. A rationale for general education requirements
2. Recommendations regarding general education requirements and/or ISLOs for clear alignment
3. Recommended structure for an ongoing review process
4. Support during implementation of general education requirements and/or review process
5. Recommendations for institution-wide support of general education goals

Oregon Tech's Essential Studies program has been designed to help students

- Integrate knowledge and skills
- Make connections
- Become lifelong learners
- Prepare for personal, professional and civic lives

Nearly all employers

91% "agree that for career success, a candidate's demonstrated capacity to **think critically**, **communicate clearly**, and **solve complex problems** is more important than his or her undergraduate major."

96% "agree that all college students should have experiences that teach them how to **solve problems with people whose views are different from their own**."

90% "give hiring preference to college graduates with skills that enable them to contribute to **innovation in the workplace**."

Identified problems

- á la carte menu
- lack of clarity and intentionality between institutional outcomes and the curriculum

Identified problems

- Outcomes not clear to students
- Fail to see relevance of GE courses

Identified problems

- GE curriculum not vertically connected

Identified problems

- Diverse Perspectives is not a GE requirement

Identified problems

- Reinforcement of writing not intentional

Identified problems

- Weak inquiry and analysis skills

Identified problems

- Varying expectations for Math Knowledge and Skills

Identified problems

- Ethical Reasoning not addressed consistently in curricula

Identified problems

- No consistent requirement for teamwork foundational skills

Identified problems

- Distribution requirements, while flexible, are taken haphazardly

Identified problems

- Students siloed in majors

Current General Education Model

Year	
4th Year	Global and cultural awareness recommendation
3rd Year	Communication 18 SPE111 WRI121 WRI122
2nd Year	Science/ Mathematics 16
1st Year	Humanities 9
	Social Science 12
	36 M/S 45 M/S/SS Our current method of integration

Essential Studies Conceptual Model

	 Communication	 Inquiry & Analysis	 Ethical Reasoning	 Teamwork	 Quantitative Literacy	 Diverse Perspectives
Capstone						
Practice						
Foundation						

The Essential Studies program

- provides experiences to support ESLOs
- ensures ESLOs will be practiced and integrated at increasingly more challenging levels
- prepares students for the changing nature of knowledge, even in their own fields
- prepares all students for their personal, civic, and professional lives
- asks that students explore connections among different disciplines

Essential Studies Mapping - Program:_____

Capstone

Capstone Experience

- ensures that the ESLOs are demonstrated at the highest proficiency expected of Oregon Tech students before they graduate
- builds on practice-level skills
- can consist of more than one course or activity
- is identified by the major program

Course(s) or experience(s):_____

Practice

Program-integrated practice courses
(selected by programs) are approved courses that
- ensure that the ESLOs are demonstrated at the practice level within the major or through out-of-program courses selected by the program
- are limited to demonstration of no more than two ESLOs
- provide the intentional connection from foundation to capstone and between traditional general education offerings and program courses
- have been identified as a critical part of the program map and align with ESLOs

Required practice courses
- are taught by content area experts
- build upon foundational knowledge and skills in ways that Program-integrated courses don't
- emphasize particular outcomes (COM, IA)
- have the following components

WRI/COM/SPE List -appropriate course selected by the program or left as choice for student
WRI List - appropriate course selected by the program: research, technical, documentation, and grant writing as examples
Program Coreq - course or courses that serve as context or content support for WRI course
IA 3 and 3 - program/students will select from a practice level IA list with a foundation course as a prerequisite (preference to require courses that provide breadth)

Essential Studies Synthesis Experience - 3 credits

A cross-disciplinary experience that
- provides a practice-level synthesis of all of the ESLOs
- is the trademark of the Essential Studies program
- is a mid-level seminar
- offers faculty from any discipline an innovative and collaborative opportunity

Approved seminars must allow for cross-disciplinary enrollment, demonstrate synthesis of the six ESLOs, and meet the established criteria.

Program-integrated 1: _____
Program-integrated 2: _____

Program-integrated 1: _____
Program-integrated 2: _____

Program-integrated 1: _____
Program-integrated 2: _____

Program-integrated 1: _____
Program-integrated 2: _____

Program-integrated 1: _____
Program-integrated 2: _____

WRI/COM/SPE list
3cr:_____
WRI list
3cr:_____
Program Coreq
_____

3 cr:_____

3 cr:_____
Select from a peculiar level IA list
Intent is to encourage breadth outside the major

Foundation

Program/students choose from a select group of foundation courses that
- provide foundational knowledge and skills in each of Oregon Tech's six ESLOs
- satisfy established ESLO criteria
- are taught by content experts

WRI 122 (3 cr)
WRI121 (3 cr)
SPE111 (3 cr)

3 cr:_____
Could be PHIL 105 or another course selected from the IA-HUM Foundation list
Selected by the student or program

3 cr:_____
Select from a list of approved Foundational IA-SS

4 cr:_____
Laboratory based science course selected by the student or program

PHIL 105 (3cr)
Potential for double dip with IA-HUM Foundation course

SPE 221 (3 cr)
Small Group and Team; currently listed as SPE 321

Money, World, Power (2cr)
Proposed as a new course to address the personal and civic components of Quantitative Literacy

4 cr: MATH
_____
College-level mathematics course for which all level intermediate algebra is the course prerequisite to address the professional component of Quantitative Literacy

3 cr:_____
Student/program select from a list of courses meeting the criteria for a Diverse Perspectives Foundation course
Potential for double dip with IA-HUM or IA-SS Foundation course

Growth and Exploration Electives
3 cr elec
3 cr elec
1 cr elec

The model supports students in personal growth and exploration in broad areas of knowledge and experience by

- allowing for choice among a list of restricted electives expected to include humanities, social sciences, and physical education courses

- ensuring variety (students will be limited to one performance-based humanities course and one physical education course in their selections)

- opening up opportunities for students to take art, literature and social science courses that may not be directly related to the ESLOs

Essential Studies
Required Curricular Elements

Communication	Humanities	Social Sciences	Natural Sciences	Ethical Reasoning	Teamwork	Quantitative Literacy	Diverse Perspectives	Growth & Exploration
	Inquiry and Analysis							

Essential Studies proposed solution

- á la carte menu
- lack of clarity and intentionality between institutional outcomes and the curriculum

- Coherent curriculum defined by ESLOs with clear pathways
- Connections from Foundation to Capstone
- Integrated into major and synthesis in the ESSE and Capstone

Essential Studies proposed solution

- Outcomes not clear to students
- Fail to see relevance of GE courses

- Requirements identify ESLOs and curricular pathways
- GE and major complementary
- Major programs place greater value on GE

Essential Studies proposed solution

• GE curriculum not vertically connected	• Curriculum builds from Foundation to Capstone • Depth outside the major in practice level courses

Essential Studies proposed solution

- Diverse Perspectives is not a GE requirement

- Diverse Perspectives Foundation course and pathway

Essential Studies proposed solution

- Reinforcement of writing not intentional

- Writing continues from Foundation to Capstone

Essential Studies proposed solution

• Weak inquiry and analysis skills	• Inquiry and Analysis courses and pathway • Essential Studies Synthesis Experience

Essential Studies proposed solution

- Varying expectations for Math Knowledge and Skills

- Money, World, Power addresses personal and civic
- Professional defined by the program

Essential Studies proposed solution

- Varying expectations for Math Knowledge and Skills

- PHIL 105 introduces foundational theories
- Program-Integrated courses address professional ethics

Essential Studies proposed solution

- No consistent requirement for teamwork foundational skills

- SPE 221 Foundation course
- Followed by practice in the discipline and the ESSE

Essential Studies proposed solution

- Distribution requirements, while flexible, are taken haphazardly

- Multi-year paths for ESLO development

Essential Studies proposed solution

- Students siloed in majors

- ESSE co-curricular experience focusing on collaborative problem solving

Essential Studies Mapping - Program: Radiologic Science

Capstone

Capstone Experience

- ensures that the ESLOs are demonstrated at the highest proficiency expected of Oregon Tech students before they graduate
- builds on practice-level skills
- can consist of more than one course or activity
- is identified by the major program

Course(s) or experience(s): **RDSC 410 Radiologic Science Externship**

Practice

Program-integrated practice courses (selected by programs) are approved courses that
- ensure that the ESLOs are demonstrated at the practice level within the major or through out-of-program courses selected by the program
- are limited to demonstration of no more than two ESLOs
- provide the intentional connection from foundation to capstone and between traditional general education offerings and program courses
- have been identified as a critical part of the program map and align with ESLOs

Required practice courses
- are taught by content area experts
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- emphasize particular outcomes (COM, IA)
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WRI/COM/SPE List - appropriate course selected by the program or left as choice for student

WRI List - appropriate course selected by the program: research, technical, documentation, and grant writing or examples

Program Coreq - course or courses that serve as context or content support for WRI course

IA 3 and 3 - programs/students will select from a practice level IA list with a foundation course as a

Essential Studies Synthesis Experience - 3 credits

A cross-disciplinary experience that
- provides a practice-level synthesis of all of the ESLOs
- is the trademark of the Essential Studies program
- is a mid-level seminar
- offers faculty from any discipline an innovative and collaborative opportunity

Approved seminars must allow for cross-disciplinary enrollment, demonstrate synthesis of the six ESLOs, and meet the established criteria.

Program-integrated 1: **RDSC 301**	Program-integrated 1: **RDSC 326**		Program-integrated 1: **RDSC 388**	Program-integrated 1: **RDSC 301**	Program-integrated 1: **RDSC 356**	Program-integrated 1: **RDSC 388**
Program-integrated 2: **RDSC 210**	Program-integrated 2: **RDSC 320**					
WRI/COM/SPE list 3 cr: **Elective**	3 cr: **Elective**	3 cr: **Elective** Select from a peculiar level IA list Intent is to encourage breadth outside the major	Program-integrated 2: **RDSC 205**	Program-integrated 2: **RDSC 211**	Program-integrated 2: **RDSC 202**	Program-integrated 2: **RDSC 205**
WRI list 3 cr: **WRI 227**						
Program Coreq **Junior year**						

Growth and Exploration Electives
3 cr elec
3 cr elec
1 cr elec

The model supports students in personal growth and exploration in broad areas of knowledge and experience by

- allowing for choice among a limited set of restricted electives expected to include humanities, social sciences, and physical education courses
- ensuring variety (students will be limited to one performance-based humanities course and one physical education course in their selections)
- opening up opportunities for students to take art, literature, and racial science courses that may not be directly related to the ESLOs

Foundation

Program/students choose from a select group of foundation courses that
- provide foundational knowledge and skills in each of Oregon Tech's six ESLOs
- satisfy established ESLO criteria
- are taught by content experts

WRI 122 (3 cr)	3 cr: **PHIL 105** Could be PHIL 105 or another course selected from the IA-HUM Foundation list Selected by the student or program	3 cr: **PSY 20X** Select from a list of approved Foundational IA-SS	4 cr: **CHEM 101/04** Laboratory-based science course selected by the student or program	**PHIL 105 (3 cr)** Selected for double dip with IA-HUM Foundation course	**SPE 221 (3 cr)** Small Group and Team; currently listed as SPE 321	**Money, World, Power (2 cr)** Proposed as a new course to address the personal and civic components of Quantitative Literacy	3 cr: **PSY 20X** Student/program select from a list of courses meeting the criteria for a Diverse Perspectives Foundation course Selected for double dip with IA-HUM or IA-SS Foundation course
WRI121 (3 cr)						4 cr: **MATH 111** College-level mathematics course for which all level intermediate algebra is the course prerequisite to address the professional component of Quantitative Literacy	
SPE111 (3 cr)							

Essential Studies Required Curricular Elements	Communication	Humanities	Social Science	Natural Science	Ethical Reasoning	Teamwork	Quantitative Literacy	Diverse Perspectives	Growth & Exploration
		Inquiry and Analysis							

Example Mapping—Radiologic Science

CURRENT PROGRAM MAP

Program: Radiologic Science

Freshman Year		Fall
BIO 231	Human Anatomy and Physiology I	4
CHE 101	Introduction to Elementary Chemistry	3
CHE 104	Intro. to Elementary Chemistry Lab	1
MATH 111	College Algebra	4
MIT103	Introduction to Medical Imaging	3
		15

Junior Year		Fall
BIO 336	Essentials of Pathophysiology	3
RDSC 30	Radiographic Positioning III	4
RDSC 32	urgical, Trauma and Mobile Radiograph	4
RDSC 35	Computed Tomography	4
		15

Freshman Year		Winter
BIO 233	Human Anatomy and Physiology II	4
MATH 112	Trigonometry	4
WRI 121	English Composition	3
	Humanities Elective	3
	Social Science Elective	3
		17

Junior Year		Winter
RDSC 35	Magnetic Resonance	4
SPE 321	Small Group and Team Communication	3
WRI 227	Technical Report Writing	3
	Business Elective (BUS 316, 317, or 313)	3
	Humanities elective	3
		16

Freshman Year		Spring
BIO 200	Medical Terminology	2
BIO 233	Human Anatomy and Physiology III	4
SPE 111	Public Speaking	3
WRI 122	Argumentative Writing	3
PSY 201	Psychology (201, 202, or 203)	3
		15

Junior Year		Spring
RDSC 32	Cardiovascular/Interventional Technology	4
RDSC 35	Mammography	
or		
RDSC 36	Advanced Quality Assurance/Quality Contro	4
RDSC 38	Externship Orientation	2
	Social Science elective	3
		13

Sophomore Year		Fall
PHY 217	Physics of Medical Imaging	3
RDSC 20	Imaging Techniques I	4
RDSC 23	Equipment Operation and Maintenance	3
	Communication elective	3
	Humanities elective	3
		16

Senior Year		Summer
RDSC 41	Radiologic Science Externship	15
		15

Senior Year		Fall
RDSC 41	Radiologic Science Externship	15
		15

Sophomore Year		Winter
RDSC 20	Imaging Techniques II	4
RDSC 20	Patient Care	4
RDSC 21	Radiographic Positioning I	4
RDSC 36	Radiographic Pathology	3
		15

Senior Year		Winter
RDSC 41	Radiologic Science Externship	15
		15

Sophomore Year		Spring
BIO 335	Cross-Sectional Anatomy	3
RDSC 21	Radiographic Positioning II	4
RDSC 23	Contrast Media Procedures	4
RDSC 27	Radiation Protection	3
	Social Science elective	3
		17

Senior Year		Spring
RDSC 41	Radiologic Science Externship	15
		15

Total 199

POTENTIAL PROGRAM MAP SATISFYING ESSENTIAL STUDIES

Program: Radiologic Science

Freshman Year		Fall
BIO 231	Human Anatomy and Physiology I	4
CHE 101	Introduction to Elementary Chemistry	3
CHE 104	Intro. to Elementary Chemistry Lab	1
MATH 111	College Algebra	4
MIT103	Introduction to Medical Imaging	3
		15

Junior Year		Fall
BIO 336	Essentials of Pathophysiology	3
RDSC 30	Radiographic Positioning III	4
RDSC 32	urgical, Trauma and Mobile Radiograph	4
RDSC 35	Computed Tomography	4
	Growth & Exploration Elective	1
		16

Freshman Year		Winter
BIO 233	Human Anatomy and Physiology II	4
MATH 112	Trigonometry	4
WRI 121	English Composition	3
	Growth & Exploration Elective	3
	Money, World, Power	2
		16

Junior Year		Winter
RDSC 35	Magnetic Resonance	4
	WRI/COM/SPE Elective	3
	WRI Course--Case Studies	3
	Business Elective (BUS 316, 317, or 313)	3
	IA-HUM Required Practice	3
		16

Freshman Year		Spring
BIO 200	Medical Terminology	2
BIO 233	Human Anatomy and Physiology III	4
SPE 111	Public Speaking	3
WRI 122	Argumentative Writing	3
PSY 201	Psychology (201, 202, or 203)	3
		15

Junior Year		Spring
RDSC 32	Cardiovascular/Interventional Technology	4
RDSC 35	Mammography or	
RDSC 36	Advanced Quality Assurance/Quality Contro	4
	Essential Studies Synthesis Experience	3
RDSC 38	Externship Orientation	2
	IA-SS Required Practice	3
		16

Sophomore Year		Fall
PHY 217	Physics of Medical Imaging	3
RDSC 20	Imaging Techniques I	4
RDSC 23	Equipment Operation and Maintenance	3
SPE 221	Small Group and Team Communication	3
PHIL 105	Introduction to Ethics	3
		16

Senior Year		Summer
RDSC 41	Radiologic Science Externship	15
		15

Senior Year		Fall
RDSC 41	Radiologic Science Externship	15
		15

Sophomore Year		Winter
RDSC 20	Imaging Techniques II	4
RDSC 20	Patient Care	4
RDSC 21	Radiographic Positioning I	4
RDSC 36	Radiographic Pathology	3
		15

Senior Year		Winter
RDSC 41	Radiologic Science Externship	15
		15

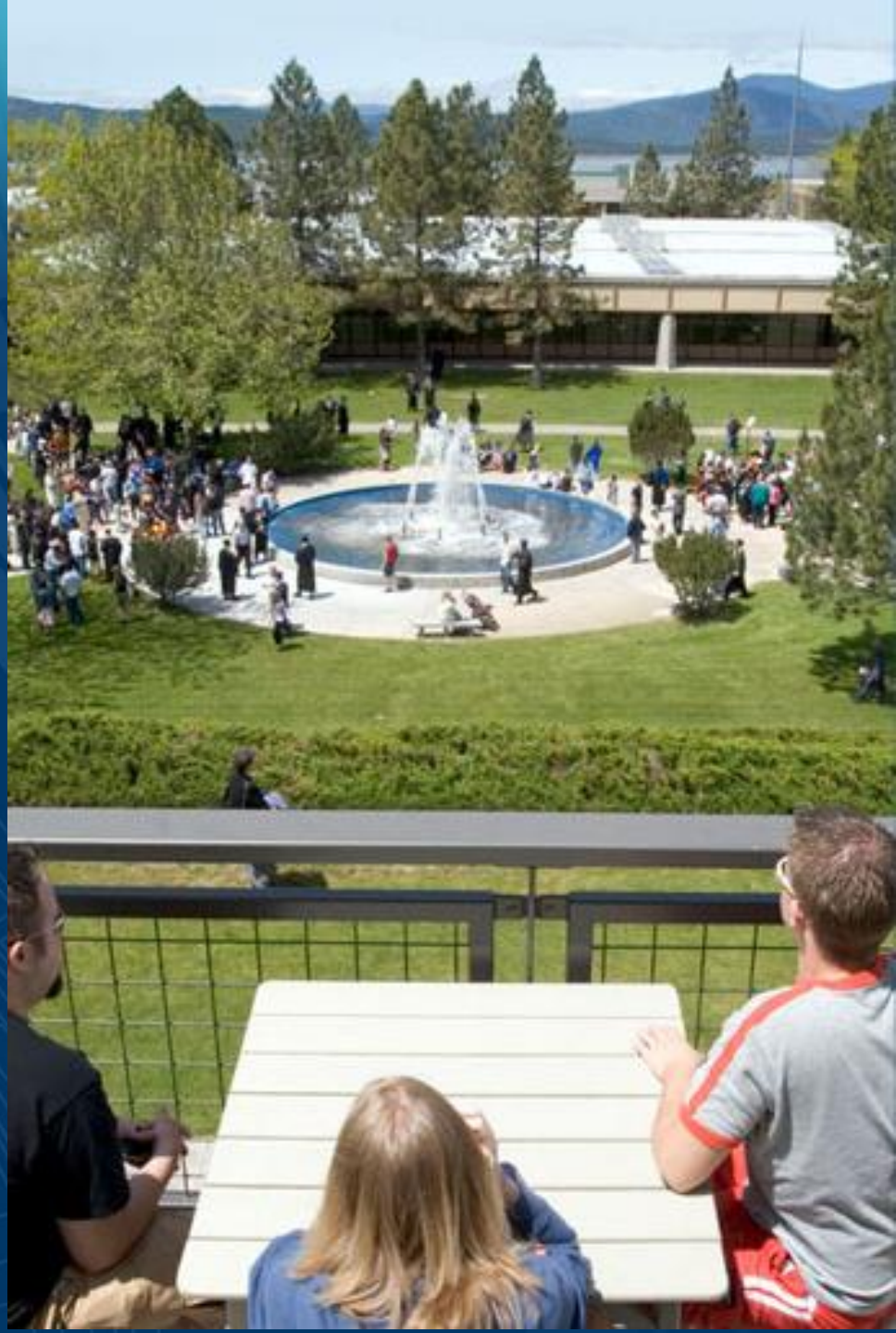
Sophomore Year		Spring
BIO 335	Cross-Sectional Anatomy	3
RDSC 21	Radiographic Positioning II	4
RDSC 23	Contrast Media Procedures	4
RDSC 27	Radiation Protection	3
	Growth & Exploration Elective	3
		17

Senior Year		Spring
RDSC 41	Radiologic Science Externship	15
		15

Total 202

Your turn

1. How does your current curriculum fit the new model
2. Proposed new program curriculum map
3. Your insights and feedback



Follow up

1. Complete maps with program faculty input and submit to GERTF
2. Schedule a department meeting with GERTF to provide feedback