Program Mission
The purpose of the Radiologic Science Bachelor's (RDSC) Degree Program at Oregon Institute of Technology is to provide graduates with the knowledge, clinical skills, and compassion that will allow them to become exemplary medical imaging technologists and future leaders in radiology and advanced or post-primary imaging professions.

Program Alignment to Oregon Tech Mission and Core Themes
The Oregon Tech Radiologic Science program is the quintessential example of the University mission and core themes by providing students a unique hands-on learning experience in the field of medical imaging. Once a student is accepted into the Radiologic Science (RDSC) program, they will be exposed to learning opportunities including on campus didactic training and extensive laboratory experiences followed by an 11-month externship in the real-world clinical setting applying theory and skills that were presented on campus.

The RDSC student also exceeds the didactic training requirements in multiple post-primary modalities (MRI, CT, Mammography, and Interventional) as stated by the American Registry of Radiologic Technologists (ARRT). The student is then allotted a minimum of 12 weeks' clinical application where they can complete clinical competencies as required by the ARRT to sit for the post-primary modality national registry exam.

The Oregon Tech RDSC graduate can fit two unique niches in Oregon and throughout the Pacific Northwest:
1. Rural healthcare facilities prefer hiring technologists that are multimodality trained to reduce staffing burden.
2. Urban healthcare facilities prefer hiring technologists that have specialized training in a single post-primary imaging modality rather than cross training a general radiographer.

Core Theme 1: Applied Degree Programs: We are dedicated to providing the highest quality education in the medical imaging as demonstrated through the caliber of our faculty, the tremendous success of our alumni, and the enthusiastic support of health care facilities.

Core Theme 2: Student and Graduate Success: Our aim is to continue to partner with high potential students, from diverse backgrounds and perspectives, and assist them in becoming medical imaging leaders at the national level as well as organizational leaders.

Core Theme 3: Statewide Educational Opportunities: We will continue supporting bold intellectual pursuits that advance and expand the medical industry's comfort zone in order to improve and innovate the quality of individual patient care.

Core Theme 4: Public Service: We strive to partner with communities, industry, other colleges and universities, and private citizens to develop community-based solutions to community problems.

Program Educational Objectives
The following objectives are what the faculty expect graduates from this program to be able to accomplish upon graduation from the RDSC program:

- Be compassionate, caring healthcare professionals.
- Be eligible, well-prepared, and able to sit for and pass the ARRT credentialing examination.
- Have immediate job placement within six months of graduation.
- Work in advanced imaging fields and sit for advanced imaging registries.

Program Description and History:

The Oregon Tech Radiologic Science (RDSC) program was founded as a certificate program in 1952, it evolved into an associate degree program then transitioned into the first RDSC bachelor's degree offered in the United States. The program now boasts that every graduate is prepared to take the national registry exam administered by the American Registry of Radiologic Technologists (ARRT) and exceeds the didactic requirements for post-primary imaging modalities (MRI, CT, mammography, and interventional radiography). The senior year is an 11-month externship that is spent in a healthcare facility where students complete a minimum of 52 competency exams as required by the ARRT. In some cases, students can complete the 125 competency exams in a post-primary modality as well; allowing them to be dual certified in general radiography and one of the post-primary modalities listed above. By providing this opportunity to our students the RDSC program has been better able to meet industry needs in rural and urban healthcare facilities in the Pacific Northwest with the versatility of our graduates.

Program Location: Klamath Falls campus only.

Program Enrollment

The five-year history of enrollment numbers includes the online RDSC degree completion program, so they appear slightly elevated. The on-campus program accepts 48 students each spring from an applicant pool of 75 to 100 students. The attrition rate has been below 5% resulting in a total enrollment of 138 to 144 RDSC students each year. The program limits its enrollment in an attempt to maintain equilibrium between industry needs and graduates produced each year. There are indicators that industry demand for imaging professionals is increasing, therefore the program increased the number of accepted students resulting in a 2019-20 sophomore cohort of 55 students.

Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
163	154	160	152	154	157	156	157	146

Program Graduations

As stated in the program enrollment, the data has been aggregated to include the on-line degree completion graduates. Again, the data demonstrates annual consistency of graduates for past 5 years. This is one of the indicators of program sustainability that the faculty have struggled to achieve. Prior to implementing the student selection process the program had cyclical enrollment highs and lows that followed with the same cyclical industrial demand of technologist saturation and need. This equilibrium has been positive for the program, graduates, and industry alike in the opinion of the faculty.

2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2020-21
51	50	48	55	45	57	47	52	48	44

Employment Rates and Salaries

These data were not available at the time of this report.

Pass Rates on Board and Licensure Exam

It is the program goal to have a 100% pass rate on the American Registry of Radiologic Technologists national exam for graduates that actually attempt. Upon reviewing the student pass rate we discovered that not all of our graduates passed the exam on their first attempt. Faculty have discussed this and have decided to set the program goal to have a 100% first attempt pass rate. This is a lofty goal but one that we strive for each year. Over the past 12 years only seven students that have applied for the examination are not documented as being successful in passing. Three of these students did not attempt the exam after registering due to various reasons, one of which was accepted into medical school while on externship. The other goal for the program is to have each cohort score at or above the national average in five criterions plus the percent of pass rate. Until 2017 the five criterions were:
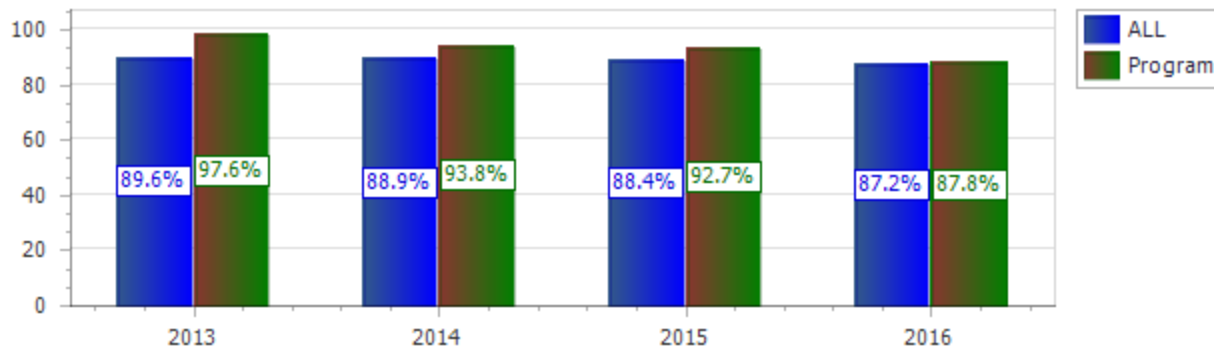
A.   Radiation Protection
B.   Equipment Operation and Quality Control

C.   Image Acquisition and Evaluation
D.   Imaging Procedures
E.   Patient Care and Education

Report based on dates from 01/2013 through 12/2016										
Radiography										
Calendar Year	Group	Number Candidates	Section Means					Total Mean	Percentile Rank	% Pass
			A	B	C	D	E			
2013	ALL	11684	8.6	8.2	8.1	8.5	8.6	84.1		89.6
2013	Program	42	8.8	8.4	8.4	8.8	8.9	86.8	72	97.6
2014	ALL	11831	8.5	8.1	8.2	8.5	8.5	83.8		88.9
2014	Program	48	8.7	8.1	8.3	8.7	8.8	85.3	60	93.8
2015	ALL	11485	8.4	8.0	8.2	8.4	8.6	83.7		88.4
2015	Program	41	8.6	8.2	8.3	8.7	9.0	85.8	64	92.7
2016	ALL	11740	8.4	8.2	8.3	8.4	8.3	83.3		87.2
2016	Program	49	8.1	7.8	8.2	8.6	8.4	82.7	45	87.8

Program vs Total Pass Percentage

In 2017 the ARRT changed the criterions and added subgroups allowing radiology programs to better analyze their outcomes. The eight criterions are:

Patient Care
1. Patient Interactions and Management

Safety
2. Radiation Physics and Radiobiology
3. Radiation Protection

Image Production
4. Image Acquisition and Technical Evaluation
5. Equipment Operation and Quality Assurance

Procedures
6. Head, Spine and Pelvis Procedures
7. Thorax and Abdomen Procedures
8. Extremity Procedures

Calendar Year	Group	Number Candidates	1	2	3	4	Section 5	Means 6	7	8	Total Mean	Percentile Rank	% Pass
2017	ALL	11166	8.4	8.2	8.2	8.2	8.1	8.9	8.4	8.7	83.6		89.3
2017	Program	41	8.9	8.5	8.7	8.5	8.5	9.0	8.8	8.9	87.1	72	100.0
2018	ALL	11,571	8.6	8.3	8.5	8.2	8.0	8.1	8.1	8.8	83.6		89.4
2018	Program	48	9.0	8.5	8.8	8.6	8.1	8.4	8.2	9.0	86.3	64	93.8
2019	ALL	11,769	8.4	8.2	8.2	8.1	8.1	8.5	8.4	8.6	83.4		89.0
2019	Program	44	9.0	8.6	8.8	8.5	8.4	8.7	8.6	8.9	86.8	72	97.7
2020	ALL	10,849	8.4	8.4	8.3	8.3	8.2	8.4	8.3	8.5	83.3		88.2
2020	Program	46	8.7	8.5	8.7	8.4	8.2	8.6	8.5	8.8	85.8	64	97.8
2021	ALL	12,252	8.4	8.2	8.1	8.2	8.1	8.3	8.2	8.3	82.3		83.8
2021	Program	44	8.9	8.3	8.3	8.7	8.2	8.9	8.6	8.7	85.4	60	97.7

National

Program vs Total Pass Percentage
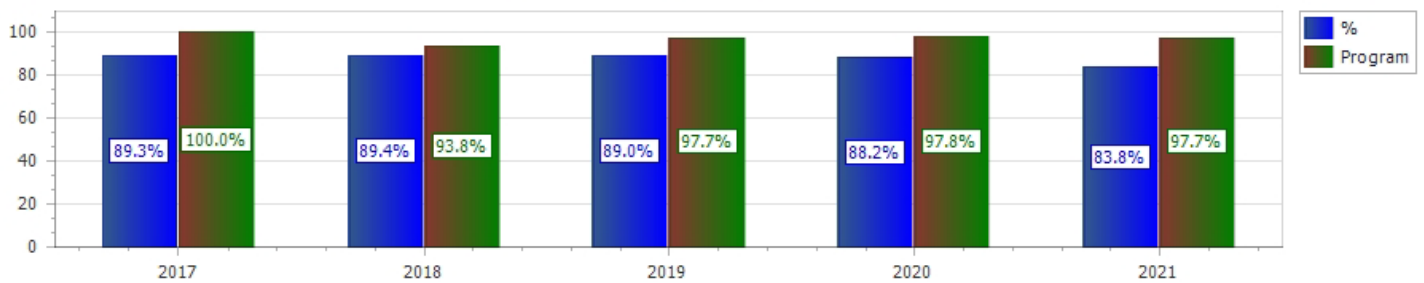
Registry Exam Data Analysis

The Oregon Tech Radiologic Science graduate success rate for passing the national registry exam is not accurately reflected in the above data. Upon drilling down in the data, the program assessment coordinator found that if a graduate does not take the exam in the same calendar year they applied, it counts as a non-pass. A second finding was that if a student is unsuccessful on their first attempt but is successful on the second or third attempt, it is not captured in the program comparison data. The pass rates in the table above are first attempt pass rates, graduates are allowed up to three attempts to pass the registry exam. The goal of exceeding the category national average has been achieve over the past nine years (yellow highlight), barring 2016 categories A, B, and C (red text).

The RDSC faculty met and reviewed the ARRT registry exam results on October 18, 2022 and discussed possible steps to taken to reach the 100% first attempt goal. In this review the faculty identified that student scores on average were lower in subjects:

Safety
2. Radiation Physics and Radiobiology
3. Radiation Protection

Image Production
4. Image Acquisition and Technical Evaluation
5. Equipment Operation and Quality Assurance

Interestingly enough these subjects contain a large volume of conceptual theories that our students have traditionally struggled. From straw polls that we have taken over the years a majority of RDSC students have identify themselves to be tactile, and audio/visual learners.

Currently seniors have two main review materials through an online program, Rad Tech Bootcamp and the American Society of Radiologic Technologists. It was noted that the that the first time attempt rate is up after the implementation of Rad Tech Bootcamp three years ago.

 Thoughts that were discussed included:
1. Providing voiceover review lectures to senior students on externship.
2. Providing additional practice exams to keep test taking skills fresh and to review material.
3. It is possible that a 100% first time registry exam pass rate is not achievable every year.

Showcase Learning Opportunities
During 2018-19 a partnership was developed with Konica-Minolta Healthcare that has led to new learning opportunities for RDSC students. Students have had an opportunity to beta test new imaging software has been developed, participate in project-based learning in applied research, and test/develop positioning devices for the hybrid imaging machines.

Fall of 2021 Konica-Minolta performed a $50,000 upgrade to one of the hybrid units to capture dynamic images while using lower radiation dose than traditional fluoroscopy. This has led to developing a partnership with the Oregon Tech mechanical engineering program to develop dynamic models to demonstrate the imaging device's capabilities.

RDSC students have additional learning opportunities through participation in Association of Collegiate Educators in Radiologic Technology (ACERT) conferences held in Las Vegas each year and attend the Oregon Society of Radiologic Technologists conference. Sophomore and junior students are registered as student members of the OSRT, while seniors on externship register as student members of the American Society of Radiologic Technologists. These memberships provide excellent opportunities for students to network, participate in society activities, and have access to a robust library of resources.

The Radiologic Science student club has developed a mentoring program that led to juniors helping sophomore navigate their first year in the program.

The RDSC program offers an elective course of cadaver imaging where students learn in a team setting that promotes problem solving and discovery. Summer of 2019 one of the teams presented their findings at a continuing education conference for radiologic technologist.

While all RDSC students are required to successfully complete courses in MRI, CT, and interventional radiography, the program offers elective imaging courses in mammography, advanced MRI, cadaver imaging, and advanced CT. On externship students are allotted 12 weeks to participate in one or multiple post-primary modalities to gain experience and have the potential to complete competencies for the ARRT registry exam.

Program Student Learning Outcomes

From the RDSC objectives the program faculty believe that every student in the program should possess the following abilities that 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.

Curriculum Map

Course	PSLO #1 ESLO #1	PSLO #2 ESLO #2	PSLO #3 ESLO #3	PSLO #4 ESLO #4	PSLO #5 ESLO #5	PSLO #6 ESLO #6	PSLO #7	PSLO #8	PSLO #9
RDSC 201		P			F			F	F
PHY 217					F			P	
RDSC 202		P	P		P			F	P
RDSC 205	P			P		P	F		
RDSC 210	P		P	P		P	F	P	P
RDSC 211	P		P	P	P	P	P	P	P
RDSC 233				P				P	P
RDSC 235		P					P	F	
RDSC 272					P				P
RDSC 301	P		P	P	P	P	P	P	P
RDSC 320		P	P	P	P	P	P	P	P
RDSC 326			P	P	P	P	P		P
RDSC 410	C	C	C	C	C	C	C	C	C

F = Foundational
P = Practice
C = Capstone

Assessment Cycle **Radiologic Science Outcome Assessment**	2021 2022	2022 2023	2023 2024	2024 2025	2025 2026	2026 2027
ESLO #1 Communication PSLO #1 Communication effectively in the health care setting.		P I			P I	
ESLO #2 Inquiry & Analysis PSLO #2 Demonstrate effective critical thinking and problem solving skills in the health care setting.			P I			P I
ESLO #3 Ethical Reasoning PSLO #3 Demonstrate professional conduct and ethical decision making in the health care setting.	P			P		
ESLO #4 Teamwork PSLO #4 Demonstrate teamwork skills while conducting patient procedures.		P			P	
ESLO #5 Quantitative Literacy PSLO # 5 Demonstrate knowledge of x-ray physics and related math in the medical imaging setting.			P			P
ESLO #6 Diverse Perspective PSLO # 6 Demonstrate diverse perspective in the health care setting.	P I			P I		
PSLO #7 Demonstrate effective patient care skills.			P			P
PSLO #8 Demonstrate technical ability in the medical imaging setting.	P			P		
PSLO #9 Demonstrate radiation safety for self, staff, and patients as set forth by the ALARA standard.		P			P	

P = Program Assessment Cycle
I = Institutional Assessment Cycle

Analysis of PSLOs

On October 18, 2022 reviewed the current PSLOs and determined that two (PSLO 4 and 8) need additional clarification. PSLO #4 will be edited to "*Demonstrate teamwork in the diagnostic and medical setting*" and PSLO #8 will read *"Demonstrate application of technical ability on equipment and software in medical imaging".* To the layperson these edits may appear minor; however, for professional healthcare workers, the clarification will provide better direction when assessing these measures.

Program Student Learning Outcomes Assessment Cycle Courses

PROGRAM STUDENT LEARNING OUTCOMES 6-Year Cycle Radiologic Science B.S.	2021 2022	2022 2023	2023 2024	2024 2025	2025 2026	2026 2027
Communication effectively in health care setting.		RDSC 202 RDSC 205 RDSC 211 RDSC 410			RDSC 202 RDSC 205 RDSC 211 RDSC 410	
Demonstrate effective critical thinking and problem-solving skills in the healthcare setting.			RDSC 320 RDSC 410			RDSC 320 RDSC 410
Demonstrate professional conduct and ethical decision making in the healthcare setting.	RDSC 202 RDSC 205 RDSC 211 RDSC 410			RDSC 202 RDSC 205 RDSC 211 RDSC 410		
Demonstrate teamwork skills while conducting patient procedures.		RDSC 202 RDSC 205 RDSC 301 RDSC 410			RDSC 202 RDSC 205 RDSC 301 RDSC 410	
Demonstrate knowledge of x-ray physics and related math in the medical imaging setting.			RDSC 202 RDSC 410			RDSC 202 RDSC 410
Demonstrate diverse perspective in the healthcare setting.	RDSC 205 RDSC 410			RDSC 205 RDSC 410		
Demonstrate effective patient care skills.			RDSC 205 RDSC 410			RDSC 205 RDSC 410
Demonstrate technical ability in the medical imaging setting.	RDSC 410			RDSC 410		
Demonstrate radiation safety for self, staff, and patients as set forth by the ALARA standard.		RDSC 272 RDSC 410			RDSC 272 RDSC 410	

Methods for Assessment

The RDSC PSLOs that were assessed for academic year 2021-22 were:

PSLO 3 – Demonstrate professional conduct and ethical decision making in the health care setting.
PSLO 6 – Demonstrate diverse perspective in the health care setting.
PSLO 8 – Demonstrate technical ability in the medical imaging setting.

The common assessment tools used for the capstone level for these PSLOs were the student exit survey which was administered spring term asking the students to rate their proficiency in the program student learning outcomes. We also administered a survey to the clinical instructors (CI) asking them to rate the student(s) proficiency in the same skill sets. The program has found that observation of students in the real-world setting by medical imaging professionals may have a degree of scoring variability; however, it provides valuable information regarding the student's ability to meet industry standards in our desired skill sets.

For the practicing level of the PSLOs we applied application testing in the laboratory setting and test questions as outlined below.

PSLO 3 – Demonstrate professional conduct and ethical decision making in the health care setting.

Professional conduct and ethical reasoning are taught implicitly throughout the RDSC program and are currently measured three times in the program using four different tools. Below you will find the courses and methods used to collect data.

- RDSC 205 – Patient Care
  - All sophomore students (n=46) completed an assignment (Appendix B) using the ARRT Code of Ethics where they reviewed a scenario then listed what they felt were the three most important provisions, explain why, and provide an example using each provision.
- RDSC 210 and RDSC 211 – Radiographic Positioning I & II
  - Four exam questions were added to course exams (Appendix C).
- RDSC 410 – Clinical Externship
  - Students are observed by medical imaging professionals in a health care facility for a total of 11 months while the students perform medical imaging duties. The CI documents their observations in the student's professional evaluation (Appendix A) then responds to an end of the year survey that asks "In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects?"

RDSC 205 Exam Questions

Assessment method	Measurement scale	Minimal acceptable performance	Score of 32 or better (>/=80%)	Less than 32 points (<80%)
Assignment	40 points	80% pass with 32 points or better	100% (n=46)	0% (n=0)

RDSC 210 & RDSC 21 Exam Questions

Assessment method	Measurement scale	Minimal acceptable performance	Pass	No Pass
Exam Question 1	Pass/No Pass	80% at Pass	95% (n=19)	5% (n=1)
Exam Question 2	Pass/No Pass	80% at Pass	97.8% (n=44)	2.2% (n=1)
Exam Question 3	Pass/No Pass	80% at Pass	100% (n=26)	0% (n=0)
Exam Question 4	Pass/No Pass	80% at Pass	95.8% (n=23)	4.2% (n=1)

CI Survey Results
In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects? (n=13)

Question	Not Proficient	Some Proficiency	Proficient	High Proficiency
Demonstrate professional conduct and ethical decision making in the health care setting.	0%	0%	23.1% (n=3)	76.9% (n=10)

Student Survey Results
Please rate your proficiency in the following areas. (n=42)

Question	High proficiency	Proficiency	Some proficiency	Limited proficiency
Demonstrate professional conduct and ethical decision making in the health care setting.	76.2% (n=32)	23.8% (n=10)	0%	0%

Results
The program goal is for 80% of the students score an 80% or proficiency/high proficiency in each measure. The 2022 graduates exceeded this measure.

Analysis
RDSC faculty reviewed the data October 20, 2022 and determined this PSLO is being addressed appropriately at this point.

Action Plan
No further action is needed for this PSLO at this point.

PSLO 6 – Demonstrate diverse perspective in the health care setting.
Like ethical reasoning, diverse perspective is taught implicitly throughout the RDSC program and is measured the first time in RDSC 205 followed by RDSC 410 surveys.

- RDSC 205 – Patient Care
  - All sophomore students (n=23) were assessed in this PSLO with an assignment regarding geriatric patients. The assignment (Appendix D) was scored using the Oregon Tech Diversity rubric (Appendix E).
- RDSC 410 – Clinical Externship
  - Students are observed by medical imaging professionals in a health care facility for a total of 11 months while the students perform medical imaging duties. The CI documents their observations in the student's professional evaluation then responds to an end of the year survey that asks, "In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects?"

RDSC 205 Assignment

Assessment method	Measurement scale	Minimal acceptable performance	Passed with minimum of 80%	Did not pass <80%
Assignment	Percentage	80% of students at 80% or better	95.7% (n=22)	4.3% (n=1)

CI Survey Results

In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects? (n=13)

Question	Not Proficient	Some Proficiency	Proficient	High Proficiency
Demonstrate diverse perspective in the health care setting.	0%	15.4% (n=2)	23.1% (n=3)	61.5% (n=8)

Student Survey Results

Please rate your proficiency in the following areas. (n=42)

Question	High proficiency	Proficiency	Some proficiency	Limited proficiency
Demonstrate diverse perspective in the health care setting.	64.3% (n=27)	33.3% (n=14)	2.4% (n=1)	0%

Results

Students met or exceeded faculty expectations in this PSLO.

Analysis

Upon reviewing the results of the diversity assignment, the clinical instructor survey, and student exit survey, the faculty believe that there is no evidence for corrective steps at this time. The faculty feel that the addition of geriatric lab suits has had a positive impact on the learning outcome in diverse perspective for the students. The suits simulate the symptoms that geriatric patients experience with the intent to develop empathy for this population.

The cohort exceeded the goal of scoring a minimum of 80% each measure.

Action Plan

No action plan is needed at this time.

PSLO 8 – Demonstrate technical ability in the medical imaging setting.

This is a new PSLO that the faculty recently developed with a broad scope that was not well defined. Data for this measure was not collected on campus this year due to broad nature. It was collected for senior students through the exit and clinical instructor surveys. Faculty will revisit this PSLO to better define or replace the measure.

- RDSC 410 – Clinical Externship
  - Students are observed by medical imaging professionals in a health care facility for a total of 11 month months while the students perform medical imaging duties. The CI documents their observations in the student's professional evaluation then responds to an end of the year survey that asked "In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects?"

CI Survey results

In your opinion, how well did the Oregon Tech RDSC program prepare your extern student(s) in the following subjects? (n=13)

Question	Not Proficient	Some Proficiency	Proficient	High Proficiency
Demonstrate technical ability in the medical imaging setting.	0%	7.6% (n=1)	46.4% (n=6)	46.2% (n=6)

Student Results

Please rate your proficiency in the following areas. (n=41)

Question	High proficiency	Proficiency	Some proficiency	Limited proficiency
Demonstrate technical ability in the medical imaging setting.	73.2% (n=30)	26.8% (n=11)	0%	0%

Results

Students met or exceeded expectations in this PSLO. The intent of this measure is to analyze the students' overall technical abilities

Analysis

This is a broad or weakly defined PSLO that lacks direction. The intent of this measure is to analyze the students' overall technical abilities. However, there is concern that there was not consistency in how surveyed parties interpreted the survey questions resulting weak data.

Action Plan

This PSLO has been revised for the 2024-25 assessment cycle to read, "PSLO #8 – Demonstrate the application of technical ability on equipment and software in medical imaging".

Analysis of Program Laboratory Equipment

The administration and Board of Trustees decided to replace eight of the exposure rooms with new state of the art Digital Radiology (DR) rooms including a hybrid room, two trauma bays, plus a simulation hybrid room, and a portable DR x-ray machine by fall term 2019. This $1.8 million project was completed summer 2019. This has had a positive impact on RDSC student learning experience.

The reconfiguration of the laboratory space has led to increased adaptability to accommodate a wider variety of lab projects. The hybrid imaging equipment has greatly enhanced the learning experience for students, as they are now forced to "think outside of the box" when positioning patients for radiographic procedures. With the new portable machine, students can now capture real time images in the cadaver dissection lab.

The new radiology laboratory configuration and equipment has greatly enhanced Oregon Tech RDSC students' learning experience. It has also enabled the program to increase cohort size. The program director will continue to encourage administration to follow the program strategic equipment sustainability plan for maintaining and replacing equipment.

Evidence of Improvement in Student Learning.
This past academic year, faculty reviewed the RDSC curriculum compared to the American Society of Radiologic Technologists educational criteria for educational programs. The curriculum met the goal of presenting each criterion in a minimum of two programmatic courses.

Data-driven Action Plans: Changes Resulting from Assessment
As mentioned above, it is faculty's desire to achieve a 100% first attempt pass rate on the ARRT registry exam. The first step that has been implemented; faculty have reviewed program curricular content to the ASRT exam content. The goal was to find subjects that may need to be reinforced throughout the program. Faculty found that the program did align with the ASRT curriculum standards, meeting the goal of addressing each criterion in a minimum of two programmatic courses.

To better prepare graduates for the national registry exam, faculty will encourage students to use the current review materials through Rad Tech Bootcamp, ASRT registry review materials. Faculty will also provide additional exam materials to maintain test taking skills and encourage review.

"PSLO 8 – Demonstrate technical ability in the medical imaging setting" has been edited to "PSLO #8 Demonstrate the application of technical ability on equipment and software in medical imaging".

Appendix A

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OREGON INSTITUTE OF TECHNOLOGY
Medical Imaging Department
RDSC SELF PROFESSIONAL EVALUATION 20xx

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Student's Name: _____ **Course:** _____ **Date:** _____

Faculty/Evaluator: _____

Performance Rating: Use the following scale to evaluate the student. A number range may be used.

E	(P)	**Exceptional**	**Performance exceeds expectations for skill level**
C	(P)	**Competency**	**Performance is at expected skill level**
D	(P)	**Developing/Digressing**	**Performance requires modification**
F	(F)	**Failing**	**Performance fails expectation for skill level**

			E	C	D	F
1)	**Organizational Skills**					
	Prioritizes lab activities Shows an efficient and methodical approach while working Performs procedures in sequential steps Develops and follows a process that works for him/her	**Comments:**				
2)	**Quantity of lecture & lab work**					
	Completes expected amount of work Contributes equally in lab projects Utilizes lab time efficiently	**Comments:**				
3)	**Quality of lab work**					
	Continuously shows improvement of work Achieves mastery of skills at performance level	**Comments:** **Current Grade _____**				
4)	**Comprehension of lab procedures**					
	Understands lab objectives Applies logic/methodology to completion of lab activities Asks for help when needed	**Comments:**				
5)	**Performance under pressure**					
	Maintains composure in a stressful environment Manages accurate performance with increased stress Performs well in a continuously changing environment	**Comments:**				
6)	**Judgment and critical thinking**					
	Assesses situation before taking action Anticipates potential problems Applies knowledge and uses judgment when problem solving	**Comments:**				
7)	**Perseverance**					
	Shows an interest in learning despite setbacks Continuous effort to complete all task and improve work	**Comments:**				
8)	**Self confidence**					
	Develops confidence in abilities Performs collaboratively and independently Demonstrates self-reliance	**Comments:**				

		E	C	D	F
9)	**Attention to detail and instructions**				
	Demonstrates attention to details Demonstrates ability to retain and follow written instructions Demonstrates ability to retain and follow verbal instructions	**Comments:**			
10)	**Initiative**				
	Shows interest in participating without being told Actively seeks learning opportunities	**Comments:**			
11)	**Attitude toward assigned tasks**				
	Accepts all tasks and assignments with a positive attitude Engages in all assigned lab exercises and activities	**Comments:**			
12)	**Attitude towards criticism**				
	Accepts advice without negative comments or behavior Engages in respectful dialogue to better understand instruction Embraces criticism positively with a desire to improve	**Comments:**			
13)	**Punctuality & attendance**				
	Always in attendance Arrives on time Is ready to begin work	**Comments:**			
14)	**Appearance**				
	Follows department dress code policy Hygienic and neat in appearance Appearance is appropriate for clinical workplace setting	**Comments:**			
15)	**Interpersonal relationship with peers/faculty**				
	Interaction with peers is respectful, supportive and kind Interacts appropriately and respectfully with faculty Verbal communication skills Written Communication skills	**Comments:**			
16)	**Teamwork**				
	Works well in a group situation and contributes equally Communicates effectively with peers and faculty Resolves conflict Works collaboratively to accomplish objectives	**Comments:**			
17)	**Knowledge of lab/classroom policies and procedures**				
	Observes all lab/classroom requirements Adheres to all rules as stated in the course syllabi In compliance with MIT student handbook policies	**Comments:**			

List three strengths:

List three areas of focus:

Student signature:_____   **Faculty signature:**_____

The information on this evaluation has been reviewed and:

I concur_____   **I do not concur**_____**Comments:**

Appendix B

Ethics Homework Assignment

For this assignment, please use the ARRT code of ethics. The attached rubric will be used to evaluate your proficiency on this assignment.

I. List three provisions in the professional ethics code that you think are very important. For each provision, explain why you have selected it as important. Give an example of how this provision might be applied in a professional situation.

Provision 1:
    a. List provision
    b. Reason for importance and relevance to profession
    c. Applied example illustrating importance

Provision 2:
    a. List provision
    b. Reason for importance and relevance to profession
    c. Applied example illustrating importance

Provision 3:
    a. List provision
    b. Reason for importance and relevance to profession
    c. Applied example illustrating importance

Read the ethical scenario below, and answer the questions which follow it.

CASE

Carol Smith has been a radiologic technologist for 10 years and works full time in Computed Tomography. Her best friend's husband, Bob McComb, has been admitted to the hospital and is scheduled to have a CT of the abdomen/pelvis with IV contrast. As part of IV contrast pre-screening Carol researches the patient's blood chemistry and discovers that blood tests completed upon admission list Bob as HIV positive. After the initial shock, Carol confirms with the hospital lab that Bob was HIV negative 3 months ago and this recent blood test is now HIV positive. Carol further researches Bob's hospital record and he has had no surgeries or blood transfusions for the past 5 years. When Bob arrives later that day in CT, Carol expands her patient pre-screening questions to include HIV status. Bob hesitates at the question and answers with "his doctor told him just yesterday that he was HIV positive." He asks Carol not to tell his wife anything about his HIV. Carol completes the CT and transports Bob back to his room.

Carol constantly thinks about her friend, Sue, and what she should do next.

1. Using your professional ARRT code of ethics, describe the ethical issue(s).

2. Describe the parties who are or should be involved in the issue(s) and discuss their point(s) of view.

3. Describe and analyze possible/alternative approaches to the issue(s).

4. Choose one of the approaches that you think is best and explain the benefits and risks.

Appendix C

RDSC 210 & 211 – Radiographic Positioning I & II Sample Exam Questions

1. During a radiographic procedure, a patient requests to see her/his recorded medical information/chart. Which of the following would be the most appropriate response?
    a. The record is restricted and they are not permitted access.
    b. Inform the patient that you do not know how to access the records.
    c. Leave them your password to the RIS system with instructions to view only their personal information and not those of other patients.
    d. *Advise the patient they may have access to their records but should request to view them with a physician so they may be interpreted properly.*

2. Adding your name to a study you did not perform can be described as:
    a. Teamwork
    b. Completing the exam record
    c. Malpractice
    d. *Falsifying a medical record*

3. If a radiographer deliberately refuses to perform a routine shoulder examination on a patient because of the way she/he looks the following charges may be brought against the Technologist?
    a. False imprisonment
    b. Defamation
    c. *Discrimination*
    d. Assault
    e. Invasion of privacy

4. What ethical principle relates to truthfulness and actions that reflect an absence of deception?
    a. Autonomy
    b. Altruism
    c. Empathy
    d. Fidelity
    e. Beneficence
    f. *Veracity*
    g. Honesty

Italics indicates the correct answer

Appendix D

Geriatric Assignment:

The ultimate goal of the Geriatrics Assignment is to help students learn about the many physical and cognitive challenges of aging and develop a sense of empathy and sensitivity towards the geriatric population. You may complete one of the following for your Geriatrics assignment.

1. **Interview** an individual age 70 or older addressing some of the topics associated with aging and one or more healthcare experiences. Individuals can be current patients, family members, cancer survivors, assisted living residents, etc. Each student will then be required to complete a written summary of this interview based on the rubric provided. You will need to develop a minimum of 10 questions. Question content may include but are not limited to:

   General Geriatric question content:
   - Physical limitations
   - Visual limitations
   - Hearing limitations
   - Any mental limitations
   - Impact of these limitations on everyday life

   Healthcare Experience question content:
   - Most memorable healthcare experience (good or bad) – expand on this
   - Healthcare worker's attitude and demeanor
   - Patient Transport
   - Communication issues (good or bad)
   - Patient's overall experience with the doctor, nurse, technologist, department, etc.
   - Experience with lab work or venipuncture
   - Patient's experience with the Medical Imaging Dept.
   - Impact of patient limitations when trying to complete a healthcare exam. *For example a stress test, a barium enema, or a general x-ray.*
   - Has this person had any physical therapy and what were the struggles with that experience?

   Interview Summary
   - Interviews are to be written as a summary, not a list of questions with answers.
   - Patient's first name only
   - Patient's approximate age (70's 80's 90's. etc.)
   - Facility or facilities the patient's experience took place (hospital, clinic, physician's office)
   - How the patient's experience relates to what you have learned in class and in the overall program.

2. **Research** the topic of Geriatrics. Write a brief summary on what you've learned about geriatrics in general, and then compare and contrast **3 diverse** older patient groups.

   Your research must include:
   - Steps taken to increase your knowledge of *geriatrics* in general.
   - Demographics of the subset of individuals.

- Beliefs and practices of those individuals.
- Similarities you share with that subset of individuals.
- Differences from your own beliefs/practices
- Curiosity – i.e What questions did you ask of the individual (patient) to gain a better understanding?
- What skills are needed to communicate effectively?

Submission of Geriatric Assignment

Students will be required to complete a 3 page summary and submit through Canvas. Summary format:
- 3 pages double spaced, 12 pt font

Diversity Self-Assessment	4	3	2	1
Knowledge *Cultural self-awareness **8pts***	Articulates insights into own cultural rules and bases (e.g. seeking complexity, aware of how her/his experiences have shape these rules, and how to recognize and respond to cultural biases resulting in a shift in self-description.)	Recognizes new perspectives about own cultural rules and biases (e.g. not looking for sameness, comfortable with the complexities that new perspectives offer.)	Identifies own cultural rules and biases (e.g. with a strong preference for those rules shared with own cultural group and seeks the same in others,)	Shows minimal awareness of own cultural rules and biases (even those shared with own cultural group(s)(e.g. uncomfortable with identifying possible cultural differences with others.)
Skills *Empathy **8pts***	Interprets intercultural experience from the perspectives of own and more than one worldview and demonstrates ability to act in a supportive manner that recognizes the feelings of another cultural group.	Recognizes intellectual and emotional dimensions of more than one worldview and sometimes uses more than one worldview in interactions	Identifies components of other cultural perspectives but responds in all situations with own worldview.	Views experience of others but does so through own cultural worldview.
Skills *Verbal and nonverbal communication **8pts***	Articulates a complex understanding of cultural differences in verbal and nonverbal communication (e,g, demonstrates understanding of the degree to which people use physical contact while communicating in different cultures or use direct/indirect and explicit/implicit meanings) and is able to skillfully negotiate a shared understanding based on those differences,	Recognizes and participates in cultural differences in verbal and nonverbal communication and begins to negotiate a shared understanding based on those differences,	Identifies some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.	Has a minimal level of understanding of cultural differences in verbal and nonverbal communication, is unable to negotiate a shared understanding,
Attitudes *Curiosity* **8pts**	Asks complex questions about other cultures, seeks out and articulates answers to these questions that reflect multiple cultural perspectives.	Asks deeper questions about other cultures and seeks out answers to these questions	Asks simple or surface questions about other cultures,	States minimal interest in learning more about other cultures.
Attitudes *Openness* **8pts**	Initiates and develops interactions with culturally different others. Suspends judgment in valuing her/his interactions with culturally different others.	Begins to initiate and develop interactions with culturally different others. Begins to suspend judgment in valuing her/his interactions with culturally different others,	Expresses openness to most, if not all, interactions with culturally different others, Has difficulty suspending any judgment in her/his interactions with culturally different others, and is aware of own judgment and expresses a willingness to change.	Receptive to interacting with culturally different others. Has difficulty suspending any judgment in her/his interactions with culturally different others, but is unaware of own judgment.