WSU Five-Year Program Review
Self-Study

Department/Program: School of Radiologic Sciences Undergraduate Programs

Certificates
- Radiography Practical Technologist (AZ-RPT)

Associate of Applied Science
- Radiography (RT)

Bachelor of Science
- Advanced Radiography
- Computed Tomography (CT)
- Diagnostic Medical Sonography
  - Medical Emphasis
  - Cardiac Emphasis
- Interventional Radiography
- Magnetic Resonance Imaging (MRI)
- Nuclear Medicine (NM)
- Radiation Therapy
- Women's Imaging: Mammography

Semester Submitted: Fall 2025

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Brief Introductory Statement

The School of Radiologic Sciences at Weber State University continues its vital role in addressing the critical, nationwide shortage of medical imaging professionals by providing dynamic and high-quality educational pathways. Our programs, encompassing the limited license certificate, Associate of Applied Science (Radiography), Bachelor of Science (12 emphasis), and Master of Sciences in Radiologic Sciences (3 emphasis), are strategically aligned to support the workforce needs of our alumni, clinical partners, and the diverse communities we serve.

In response to the unprecedented demand and our successful surge in enrollment from 2021-2025 (a 58.47% increase from 2021 to 2025), our current strategic focus is shifting from aggressive growth to sustainable quality and program maintenance. The 2023-2024 strategic goals build directly on the prior year's success in increasing access and creating career-ladder opportunities, while now emphasizing the enhancement of quality assurance, assessment metrics, and resource management.

Key to our continued success is the dual strategy of securing new clinical partnerships and maintaining our unique hybrid and virtual delivery models, which enable us to serve both local and rural communities, as well as regional and international students. This report highlights our commitment to retention, completion, and alignment with the WSU strategic themes of access, community, and learning, with a specific focus this year on refining assessment documentation to ensure every graduate meets the highest standards of professional competency. We remain committed to upholding a rich history of academic excellence, striving for innovation in our curricula, and expanding our graduate-level global competency initiatives.

Standard A - Mission Statement

The School of Radiologic Sciences at Weber State University is dedicated to advancing the radiologic sciences profession by fostering academic excellence, professional growth, and meaningful community engagement. Rooted in values of respect, integrity, and innovation, the program supports students and faculty through collaborative research opportunities, access to advanced technologies, and personalized academic advisement. We are committed to cultivating an inclusive and supportive learning environment, promoting responsible professional conduct, and preparing graduates to lead in clinical, educational, and research settings.

Serving imaging professionals locally, regionally, and across the nation, the School of Radiologic Sciences delivers flexible, high-quality academic programs that meet the evolving needs of healthcare. As the department continues to grow, we remain focused on expanding access and delivering relevant learning experiences that empower the next generation of imaging leaders. The School of Radiologic Sciences is dedicated to advancing the profession, a commitment directly supportive of the University's core mission of access, learning, and community engagement. Our strategic planning has evolved with recent disruptive and historical changes that have caused us to question and identify meaningful and measurable outcomes that directly address the critical workforce shortages facing the medical imaging industry.

Strategic Alignment and Assessment

Our program-level strategic planning serves as the continuous process for creating and reviewing this mission, ensuring its ongoing relevance to the rapidly changing healthcare landscape. The expected outcomes for all our degrees are aligned with three core strategic directions:

1. Access and Appropriate Growth: Maintaining and/or increasing enrollment while supporting our quality and extending our reach to students from a variety of geographic regions to serve their local communities.
2. Quality and Innovation: Maintaining competitive retention and graduation rates through innovative hybrid delivery models, career-ladder curricula, and interdisciplinary graduate experiences.
3. Accountability and Improvement: Systematically integrating assessment feedback, particularly the Biennial Assessment recommendation to implement an updated assessment plan.

These accomplishments will be assessed using a combination of metrics, including enrollment, retention, and graduation rates (verified with university data), national certification scores, and the newly scaffolded competency metrics, which incorporate documented levels of learning and formative and summative evidence. This data-driven approach to assessment ensures that we meet both internal quality benchmarks and external accreditation and stakeholder expectations, ultimately fulfilling our mission to produce highly skilled, professional graduates who are ready to lead in the field.

Program Inventory

All Programs Offered (not including Independent Study, as these students do not have a typical enrollment schedule with rolling entry and 6 month completion options.)

Enrollments were determined by student registrations in Banner.							
CIP Code	**Award Level**	**Program Name**	**Fall 3rd Week Enrollment** F21	F22	F23	F24	F25
510911	Certificate of Proficiency	Arizona Practical Technologist in Radiology	8	37	22	34	52
510901	Certificate of Proficiency	Cardiology Technician	Not offered this academic year	8	26	34	35
510911	Certificate of Proficiency	Limited Radiographer	34	35	36	35	55
510911	AAS	Radiography	248	303	323	341	364
510911	BS	Advanced Radiologic Sciences, Advanced Radiologic Sciences Emphasis	7	8	12	9	23
510999	BS	Advanced Radiologic Sciences (BS), Computed Tomography (CT) Emphasis	16	16	8	12	16
510911	BS	Advanced Radiologic Sciences (BS), Interventional Radiology (IR) Emphasis	2	1	3	2	1
510920	BS	Advanced Radiologic Sciences (BS), Magnetic Resonance Imaging (MRI) Emphasis	15	43	34	22	25
510911	BS	Advanced Radiologic Sciences (BS), Women's Imaging Emphasis	10	9	5	10	6
510910	BS	Diagnostic Medical Sonography (BS), Cardiac	19	30	35	43	47
510910	BS	Diagnostic Medical Sonography (BS), Medical	61	58	64	77	82
510905	BS	Nuclear Medicine (BS)	18	16	29	37	41
510907	BS	Radiation Therapy (BS)	31	32	44	46	55
		Sum	469	596	641	702	802 58.4% Increase from 2021
TOTAL Department Faculty FTE			Total: 825 Undergraduate				
Department Faculty-to-Student Ratio			2024-2025 89.1				

Enrollment Data and Trends (2021–2025)
The enrollment data reflects a strategy of aggressive expansion to meet national workforce shortages, resulting in a substantial increase in the student body over the last five years.

- Total Growth: The total Fall 3rd Week Enrollment for the department rose from 469 students in Fall 2021 to 802 students in Fall 2025.
- Percentage Increase: This trajectory represents a 58.47% increase in enrollment from 2021 to 2025,.
- Student FTE: The total Department Student Full-Time Equivalent (FTE) is currently reported at 825.
- Student/Faculty Ratio: For the 2024-2025 is 89.1; reflecting the demands placed on faculty during this surge.
  Program-Specific Enrollment Highlights

The growth is distributed across the AAS and BS programs, with specific emphasis areas showing notable trends:

• AAS Radiography: As the largest program, it grew from 248 students in 2021 to 364 students in 2025.
• Diagnostic Medical Sonography: Both emphases saw growth, with the Medical emphasis rising from 61 to 82 students, and the Cardiac emphasis increasing from 19 to 47 students over the five-year period.
• Radiation Therapy: This program has seen significant expansion, growing from 31 students in 2021 to 55 students in 2025. The self-study notes that the therapy program effectively doubled in size over the last two years.
• Nuclear Medicine: Enrollment more than doubled from a low of 16 in 2022 to 41 students in 2025.
• MRI: Enrollment in the MRI emphasis has fluctuated, peaking at 43 in 2022 and settling at 25 in 2025.
• IR: Although IR enrollment continues to struggle, the challenge is community partners who support cross-training over educational training programs, resulting in increased numbers of professionals who work without certification within the state. For these professionals, students seeking degree completion and certification can be threatening. In response, the Program Director plans to restructure the now-suspended MSRS Cardiac Emphasis and redesign the IR program to include all Interventional Imaging, thereby expanding the offerings and attracting a larger cohort of students who can positively impact the interventional community.

Strategic Context
The surge from 2021 to 2025 was a response to unprecedented demand, but the department is now pivoting its strategic focus from aggressive growth to sustainable quality and program maintenance.

Standard B - Curriculum

Curriculum Map: The following curricular map highlights the competencies measured by the School of Radiologic Sciences, the courses in which these learning objectives are taught, and the level at which they are accomplished. (1 = Introduced, 2 = Developed, 3 = Mastery). A full list of grad maps is included in the addendum.

AZ PTR Certificate of Proficiency Objectives

AZ PTR Certificate of Proficiency	**Learning Objectives**																	
*Introduced 1; Developed 2; Mastered 3	Patient Care & Education 1.1 Students demonstrate appropriate patient education, safety, and comfort skills 1.2 Students know and use appropriate methods of infection control and prevention 1.3 Students administer contrast and monitor patients 1.4 Students respond to a variety of patient populations				Professional Development & Research 2.1 Students will demonstrate characteristics of professionalism 2.2 Students will act as mentors and leaders and value strategic planning 2.3 Students will gather literature and evaluate data through professional writing			Clinical Competency & Medical Ethics 3.1 Students will demonstrate legal, professional and ethical responsibility 3.2 Students will demon-strate clinical competency		Procedures, Anatomy & Physiology 4.1 Students will demonstrate knowledge of anatomy, sectional imaging, physiology, and pathophysiology 4.2 Students will properly evaluate and critique images demonstrating anatomy, physiology, and pathology		Instrumentation & Quality Care 5.1 Students will demonstrate proper safety and technical training 5.2 Students will understand principles of image production 5.3 Students will evaluate images and understand principles of quality control 5.4 Students will accurately interpret quality assurance tests.				Biological Effects & Assessment 6.1 Students will understand and demonstrate principles of patient safety (biological effects and radiation safety, MRI safety, and safe use of MI & TI in sonography 6.2 Students will use appropriate protective measures for self and patients	
Course Name	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	4.1	4.2	5.1	5.2	5.3	5.4	6.1	6.2
RADT 1022 Intro to Radiology Technology	1	1	1	1						1	1	1	1	1	1	1	1
RADT 1303 Principles of Radiographic Exposure I												1	1	1	1	1	1
RADT 1502 Radiographic Anatomy & Positioning I										1	1						
RADT 1601 Clinical Simulation I								1	1								

RADT 2042 Community Based Patient Care	1	1	1	1														
RADT 2861 Clinical Education					1	1		1	1									
RADT 1512 Radiographic Anatomy and Positiong II										2	2							
RADT 1621 Clinical Simulation II								2	2									
RADT 2043 Specialty Based Patient Care	2	2	2	2														
RADT 2866 Final Competency Evaluation	2	2	2	2	2	2		2		2	2	2	2	2	2	2	2	2
RADT 2862 Clinical Education								2	2									

AAS Radiography Objectives

AAS Radiography	Learning Objectives					
*Introduced 1; Developed 2; Mastered 3	Patient Care & Education 1.1 Students demonstrate appropriate patient education, safety, and comfort skills 1.2 Students know and use appropriate methods of infection control and prevention 1.3 Students administer contrast and monitor patients 1.4 Students respond to a variety of patient populations	Professional Development & Research 2.1 Students will demonstrate characteristics of professionalism 2.2 Students will act as mentors and leaders and value strategic planning 2.3 Students will gather literature and evaluate data through professional writing	Clinical Competency & Medical Ethics 3.1 Students will demonstrate legal, professional and ethical responsibility 3.2 Students will demon-strate clinical competency	Procedures, Anatomy & Physiology 4.1 Students will demonstrate knowledge of anatomy, sectional imaging, physiology, and pathophysiology 4.2 Students will properly evaluate and critique images demonstrating anatomy, physiology, and pathology	Instrumentation & Quality Care 5.1 Students will demonstrate proper safety and technical training 5.2 Students will understand principles of image production 5.3 Students will evaluate images and understand principles of quality control 5.4 Students will accurately interpret quality assurance tests.	Biological Effects & Assessment 6.1 Students will understand and demonstrate principles of patient safety (biological effects and radiation safety, MRI safety, and safe use of MI & TI in sonography 6.2 Students will use appropriate protective measures for self and patients

Course Name	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	4.1	4.2	5.1	5.2	5.3	5.4	6.1	6.2
RADT 1022 Intro to Radiology Technology	1	1	1	1						1	1	1	1	1	1	1	1
RADT 1303 Principles of Radiographic Exposure I												1	1	1	1	1	1
RADT 1502 Radiographic Anatomy & Positioning I										1	1						
RADT 1601 Clinical Simulation I								1	1								
RADT 2042 Community Based Patient Care	1	1	1	1													
RADT 2821 Directed Readings and Research I					1	1	1										
RADT 2861 Clinical Education								1	1								
RADT 1512 Radiographic Anatomy and Positiong II										1	1						
RADT 1621 Clinical Simulation II								1	1								
RADT 2043 Specialty Based Patient Care	2	2	2	2													
RADT 2403 Principles of Radiographic Exposure II	1	1		2	1			1		1	1	2	3	1	1	2	2
RADT 2822 Directed Readings and Research II					1	1	1										
RADT 2862 Clinical Education								2	2								
RADT 3443 Quality												3	3	3	3	3	3

Assurance in Radiology																	
RADT 1522 Radiographic Anatomy and Positioning III										2	2						
RADT 1641 Clinical Simulation III								2	2								
RADT 2803 Independent Research					2	2	2										
RADT 2823 Directed Readings and Research III					1	1	1										
RADT 2863 Clinical Education								2	2								
RADT 3003 Psychosocial Medicine	3	3	3	3													
RADT 3043 Medical Ethics and Law								2									
RADT 1532 Anatomy and Positioning IV										2	2						
RADT 1661 Clinical Simulation IV								2	2								
RADT 2824 Directed Readings and Research IV					1	1	1										
RADT 2864 Clinical Education								3	3								
RADT 3403 Radiobiology and Health Physics				2	2	2	1	3	3	1	1	3	3	2	2	3	3
RADT 3463 Computerized Imaging												3	3	3	3		
RADT 1542 Radiographic Anatomy and Positioning V										3	3						

RADT 1681 Clinical Simulation V								3	3								
RADT 2272 Basic Sectional Anatomy										3	3						
RADT 2825 Directed Readings and Research V					1	1	1										
RADT 2865 Clinical Education								3	3								
RADT 2913 Comprehensive Review	3	3	3	3						3	3	3	3	3	3	3	3
RADT 2942 Transition to Clinical Practice					3	3	3										

BS Degree Programs Objectives

BS Degrees	**Learning Objectives**																
***Introduced 1; Developed 2; Mastered 3**	Patient Care & Education 1.1 Students demonstrate appropriate patient education, safety, and comfort skills 1.2 Students know and use appropriate methods of infection control and prevention 1.3 Students administer contrast and monitor patients 1.4 Students respond to a variety of patient populations				Professional Development & Research 2.1 Students will demonstrate characteristics of professionalism 2.2 Students will act as mentors and leaders and value strategic planning 2.3 Students will gather literature and evaluate data through professional writing			Clinical Competency & Medical Ethics 3.1 Students will demonstrate legal, professional and ethical responsibility 3.2 Students will demon-strate clinical competency		Procedures, Anatomy & Physiology 4.1 Students will demonstrate knowledge of anatomy, sectional imaging, physiology, and pathophysiology 4.2 Students will properly evaluate and critique images demonstrating anatomy, physiology, and pathology		Instrumentation & Quality Care 5.1 Students will demonstrate proper safety and technical training 5.2 Students will understand principles of image production 5.3 Students will evaluate images and understand principles of quality control 5.4 Students will accurately interpret quality assurance tests.				Biological Effects & Assessment 6.1 Students will understand and demonstrate principles of patient safety (biological effects and radiation safety, MRI safety, and safe use of MI & TI in sonography 6.2 Students will use appropriate protective measures for self and patients	
Advanced Radiologic Sciences	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	4.1	4.2	5.1	5.2	5.3	5.4	6.1	6.2
RADT 4933 Research Methods					2	2	2	2									
RADT 4943 Baccalaureate Thesis					3	3	3	3									
RADT 3003 Psycho-Social Medicine					3			3	3								
RADT 3043 Medical Ethics and Law																	

RADT 3423 Federal Regulations								3	3								
RADT 4203 Patient Education in Radiology	3	3	3	3													
RADT 3123 Sectional Anatomy										2	2						
RADT 3143 Imaging Pathophysiology I									2	2	2						
RADT 3144 Imaging Pathophysiology II									3	3	3						
RADT 3243 Community-Based Patient Care II	2	2	2	2													
RADT 3253 Specialty-Based Patient Care II	3	3	3	3													
RADT 3263 Diagnostic Services Pharmacology	2	2	3	2													
RADT 3403 Radiology Biology and Health Physics	1			2	1			2	2	1	1	2	2	1	2	3	3
RADT 3443 Quality Assurance in Radiology																	
RADT 3463 Computerized Imaging																	
RADT 3563 Managing Clinical Information																	
RADT 3863 Clinical Internship	2	2	2	2				2	2	2	2	2	2	2	2	2	2
RADT 4213 Supervision and Staff Development																	
RADT 4223 Promotional Strategies																	
RADT 4233 Fiscal Analysis in Radiology					1	1	2	2									
RADT 4243 Quality Management																	
RADT 4253 Risk Management		1	1				1	1				1				2	2
RADT 4303 Cardiology																	
RADT 4403 Imaging Pathology																	
RADT 4413 Forensic Radiology																	
RADT 4433 PACS Administration																	
RADT 4443 Imaging Informatics																	
RADT 4543 Bone Densitometry	2	2	2	2				2	2	2	2	2	2	2	2	2	2
RADT 4572 Advanced Breast Imaging																	

RADT 4573 The Female Patient and Medical Imaging																		
RADT 4803 Individual Research *																		
RADT 4453 Advanced Imaging: 3D Visualization and 3D Printing																		
RADT 4833 Directed Readings and Research																		
RADT 4863 Clinical Internship *	3	3	3	3				3	3	3	3	3	3	3	3	3	3	3
RADT 4942 Transition to Practice	3	3	3	3	3													
RADT 4992 Seminar* (1-3)																		
Diagnostic Medical Sonography																		
DMS 4100 Introduction to Sonography Principles and Instrumentation												1	1	1	1	1	1	1
DMS 4310 Abdominal Sonography								2	2	2	2	2	2	2	2	2	2	2
DMS 4620 Medical Sonography – Clinical Simulation I	1	1	1	1						1	1	1	1	1	1	1	1	1
DMS 4820 Orientation to Clinical Education	1	1	1	1				1	1	1	1	1	1	1	1	1	1	1
DMS 4110 Sonography Principles and Instrumentation												2	2	2	2	2	2	2
DMS 4330 Gynecologic Sonography								2	2	2	2	2	2	2	2	2	2	2
DMS 4340 Obstetric Sonography								2	2	2	2	2	2	2	2	2	2	2
DMS 4821 Medical Clinical I	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	2
DMS 4410 Vascular Sonography I								2	2	2	2	2	2	2	2	2	2	2
DMS 4621 Medical Sonography – Clinical Simulation II	2	2	2	2	2	2				2	2	2	2	2	2	2	2	2
DMS 4120 Quality Assurance (SI)												3	3	3	3	3	3	3
DMS 4420 Vascular Sonography II								2	2	2	2	2	2	2	2	2	2	2
DMS 4822 Medical Clinical II	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	2
DMS 4622 Medical Sonography – Clinical Simulation III	2	2	2	2	2	2				2	2	2	2	2	2	2	2	2

DMS 4350 Fundamentals for Abdominal Sonography Certification					3	3	3			3	3							
DMS 4360 Fundamentals for OB/GYN Sonography Certification					3	3	3			3	3							
DMS 4823 Medical Clinical III	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	
Diagnostic Cardiac Sonography																		
DMS 4100 Introduction to Sonography Principles and Instrumentation								2				1	1	1	1	1	1	
DMS 4210 Cardiac Sonography I									2	2	2	2	2	2	2	2	2	
DMS 4610 Cardiac Sonography – Clinical Simulation I																		
RADT 3263 Diagnostic Services Pharmacology																		
DMS 4820 Orientation to Clinical Education																		
DMS 4110 Sonography Principles and Instrumentation																		
DMS 4220 Cardiac Sonography II								2	2	2	2	2	2	2	2	2	2	
DMS 4811 Cardiac Clinical I	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	
DMS 4410 Vascular Sonography I								2	2	2	2	2	2	2	2	2	2	
DMS 4120 Quality Assurance (SI)												3	3	3	3	3	3	
DMS 4230 Cardiac Sonography III								3	3	3	3							
DMS 4420 Vascular Sonography II								2	2	2	2	2	2	2	2	2	2	
DMS 4812 Cardiac Clinical II	2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	
DMS 4813 Cardiac Clinical III	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	
DMS 4240 Fundamentals for Cardiac Sonography Certification					3	3	3			3	3							
Computed Tomography																		
RADT 4663 CT Physics, Instrumentation, & Safety	2	2	2	2				2	2			2	2	2	2	2	2	
RADT 4613 CT Imaging of the Torso and Limbs					2	2	2			1	1							
RADT 4653 CT Imaging of the Central Nervous System					2	2	2			2	2							

RADT 4942 Transition to Specialty Practice	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
RADT 4863 Clinical Education	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
RADT 3863 Clinical Education	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
RADT 3863 Clinical Education	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nuclear Medicine																	
NUCM 4103 Radiopharmaceuticals and Dosages	2	2	2	2	2			1	2	2	2	2	2	2	2	2	2
NUCM 4203 Scanning and Imaging I	2	2	2	2	2					1	1	1	1	1	1		
NUCM 4303 Radionuclide Physics and Instrumentation	2	3	3	2	2			2	2	2	2	3	3	2	2	2	2
NUCM 4861 Clinical Education	1	1	1	1				1	1	1	1	1	1	1	1	1	1
NUCM 4223 Nuclear Cardiology	2	2	2	2	2			2	2	3	3	3	3	3	2	3	3
NUCM 4862 Clinical Education								2	2	2	2	2	2	2	2	2	2
NUCM 4213 Scanning and Imaging II	3									2	2	2	2	2	2		
NUCM 4333 Quality Assurance (SI)	2	2	2	2	2							3	3	3	3		
NUCM 4863 Clinical Education								3	3	3	3	3	3	3	3	3	3
Radiation Therapy																	
RADT 4942 Transition to Specialty Practice	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
RADT 4992 Seminar	2	2	2	2						2	2						
RATH 4330 Radiation Therapy Physics												2	2	2	2	2	2
RATH 4342 Introduction to Treatment Planning	2	2	2	2				2	2	2	2	2	2	2	2	2	2
RATH 4410 Radiation Oncology I	1	1	1	1				1	1	1	1	1	1	1	1	1	1
RATH 4412 Radiation Oncology II	2	2	2	2				2	2	2	2	2	2	2	2	2	2
RATH 4414 Radiation Oncology III	3	3	3	3				3	3	3	3	3	3	3	3	3	3
RATH 4444 Advanced Treatment Planning/ Brachytherapy	3	3	3	3				3	3	3	3	3	3	2	3	3	3
RATH 4446 Quality Assurance (SI)												3	3	3	3		

RATH 4448 New Technology in Radiation Therapy	2	2	2	2			3	2	2	2	2						
RATH 4861 Clinical Education I	1	1	1	1				1	1	1	1	1		1		1	1
RATH 4862 Clinical Education	2	2	2	2				2	2	2	2	2		2		2	2
RATH 4863 Clinical Education III	3	3	3	3				3	3	3	3	3		3		3	3
Interventional Radiology Emphasis																	
RADT 3863 Clinical Internship	1	1	1	1				1	1	1	1	1		1		1	
RADT 3863 Clinical Internship	2	2	2	2				2	2	2	2	2		2		2	
RADT 4313 Visceral, Pelvic, and Extremity Angiography	1	1	1	1	1			1	1	1	1	1				1	1
RADT 4333 Head and Neck Angiography	3	3	3	3	3			3	3	3	3	3		3		3	3
RADT 4343 Thoracic and Venous Procedures	2	2	2	2	2			2	2	2	2	2		2		2	2
RADT 4863 Clinical Internship	3	3	3	3	3			3	3	3	3	3		3		3	3
RADT 4942 Transition to Specialty Practice	3	3	3	3	3			3	3	3	3	3		3		3	3
Mammography Emphasis																	
RADT 4553 Breast Anatomy, Physiology, and Pathology	1	1	1	1				1	1	1	1						
RADT 4563 Mammographic Positioning Imaging Techniques	2	2	2	2				2	2	2	2	1	1	1	1	1	1
RADT 4583 Mammographic Equipment and Quality Assurance	2	2	2	2				2	2	2	2	2	2	2	2	2	2
RADT 4863 Clinical Internship	3	3	3	3	3			3	3	3	3	3	3	3	3	3	3
MRI																	
RADT 3143: Imaging Pathophysiology										1	1						
RADT 4601 MRI Entry Level Patient Care & Safety	1	1	1	1												2	2
RADT 4623 Advanced MRI Procedures	3	3	3	3						3	3	3	3	3	3	3	3
RADT 4643 MRI Imaging of the Torso and Limbs	2	2	2	2						2	2						
RADT 4633 MRI Imaging of the Central Nervous	2	2	2	2						3	3						
RADT 4630 MRI Simulation 1	1	1	1	1				1	1	1	1	1	1	1		1	1

RADT 4631 MRI Simulation 2	2	2	2	2				2	2	2	2	2	2	2		2	2
RADT 4632 MRI Simulation 3	3	3	3	3				3	3	3	3	3	3	3		3	3
RADT 4945 Fundamentals in MRI Certification					3	3	3										
RADT 4863 Clinical Education	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
RADT 3863 Clinical Education	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
RADT 3863 Clinical Education	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Describe the scope of instruction, learning outcomes, academic rigor, pedagogy, quality of assessment, and relevance for the instructional programs listed.

1. Scope of Instruction

The scope of instruction outlined in these objectives is comprehensive, bridging the gap between high-touch patient care and high-tech scientific application. It moves beyond simple technical training to encompass the full spectrum of a healthcare provider's role.

- **Clinical & Technical Breadth:** The curriculum covers the essential "hard sciences" of medical imaging, including anatomy, physiology, pathophysiology (4.1), and the physics of image production (5.2). It extends into the specialized operation of instrumentation and quality control (5.3, 5.4).
- **Humanistic & Ethical Depth:** There is a significant emphasis on "soft skills" that are critical in healthcare, such as patient education (1.1), responding to diverse populations (1.4), and navigating complex ethical/legal landscapes (3.1).
- **Professional Evolution:** Uniquely, the scope includes research and leadership (2.2, 2.3), indicating that the instruction is designed not just to train technicians, but to cultivate future leaders and evidence-based practitioners.

2. Learning Outcomes

The learning outcomes are actionable and measurable, designed to produce graduates who are well-rounded and multifaceted. Based on the objectives, a successful graduate will be able to:

- **Execute Clinical Protocols:** Competently administer contrast, position patients, and manage infection control (1.2, 1.3).
- **Ensure Safety:** Apply rigorous safety standards for radiation, MRI, and biological effects to protect both self and patients (6.1, 6.2).
- **Analyze & Critique:** Move beyond taking an image to *evaluating* it for diagnostic quality and pathology (4.2, 5.3).
- **Synthesize Information:** Gather professional literature and write professionally, demonstrating an ability to engage with the academic side of the field (2.3).

3. Academic Rigor

The program employs a range of rigor, from introductory to mastery, gradually escalating the cognitive load as the student progresses.

- **Foundational (Knowledge & Comprehension):** Objectives such as "Students know and use appropriate methods" (1.2) or "Students will understand principles" (5.2) represent the foundational layer where students acquire essential facts and terminology.

- **Application & Analysis:** The rigor increases as students are asked to "administer contrast" (1.3) or "respond to a variety of patient populations" (1.4), requiring the application of knowledge in dynamic scenarios.
- **Mastery (Synthesis & Evaluation):** The highest level of rigor is evident in objectives requiring critical thinking, such as "evaluate and critique images" (4.2), "interpret quality assurance tests" (5.4), and "evaluate data through professional writing" (2.3). This progression of learning ensures students are not just memorizing steps but mastering the reasoning behind them.

4. Pedagogy

The objectives suggest a hybrid pedagogical approach that blends didactic learning with experiential clinical application.

- **Didactic/Classroom:** Objectives involving anatomy, physiology, and research (4.1, 2.3) imply traditional lectures, seminars, and laboratory work to build the theoretical framework.
- **Clinical/Hands-On:** Objectives focusing on "demonstrating" skills (1.1, 3.2, 5.1) suggest a strong reliance on clinical rotations, simulation labs, and mentorship. The requirement to "act as mentors" (2.2) also suggests peer-to-peer teaching models.
- **Evidence-Based Practice:** The inclusion of research and literature evaluation (2.3) indicates a pedagogy that values inquiry and scientific literacy.

5. Quality of Assessment

The quality of assessment is based on the specific skill or knowledge to be performed and provided in both summative and formative ways.

- **Formative Assessment (Assessment *for* Learning):** Likely used for objectives like "demonstrate appropriate patient education" (1.1) or "act as mentors" (2.2). These would be assessed through observation, checklists during lab simulations, and feedback during clinical rotations.
- **Summative Assessment (Assessment *of* Learning):** High-stakes assessments are implied for critical safety and technical competencies. For example, "accurately interpret quality assurance tests" (5.4) or "demonstrate knowledge of anatomy" (4.1) would likely be measured via comprehensive final exams, board certification mock exams, and final clinical competency evaluations.
- **Performance-Based:** Crucially, assessment is not limited to written tests. Objectives requiring students to "demonstrate clinical competency" (3.2) necessitate direct observation of the student performing procedures on actual patients under the supervision of a qualified healthcare professional.

6. Relevance

The ultimate relevance of these objectives is to create professionals who are competent and compassionate healthcare providers.

- **Competence:** By enforcing strict standards on image production, anatomy, and safety (Sections 4, 5, and 6), the program ensures that graduates provide high-quality diagnostic information that physicians rely on for patient treatment.
- **Compassion:** By prioritizing patient comfort, education, and response to diverse populations (Section 1), the program ensures the human element of healthcare is preserved.
- **Professional Development:** By including research and professional development (Section 2), the program ensures graduates remain relevant as technology evolves, and are capable of leading the field rather than just working within it.

Standard C - Student Learning Outcomes and Assessment

A. Measurable Program Learning Outcomes: A sample of measurable program learning outcomes across varied levels of mastery is provided for all programs. This model of review was improved from the last review based on requests for detailed and interpreted results of learning outcomes surpassing board examination scores.

PTR Certificate of Proficiency (Introductory to Intermediate Level of Learning)

Learning Objectives	Foundational Class	Intermediate Class
Patient Care & Education	**RADT 2042 Community Based Patient Care**	**RADT 2043 Specialty Based Care**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions,	Formative: Weekly Assignments, Biweekly Exams
	Summative: Weekly Examinations, Comprehensive Examination	Summative: Biweekly Exams
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	90% of students scored 85% or better on all examinations	Over the past year, the average Scores of all students on the comprehensive examination was higher than 80% 2024: 99.73% 2025: 94.65%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning
Research & Professional Development	**RADT 2861 Clinical Education**	**RADT 2862 Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours .	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours.

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Competencies 50% grade, PPGA 25%, Clinical Hours 20%, Clinical Logbook 5%	Competencies 50% grade, PPGA 25%, Clinical Hours 20%, Clinical Logbook 5%
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	90% of students are board eligible and meet the clinical requirements for ARRT certification	90% of students are board eligible and meet the clinical requirements for ARRT certification
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning
Clinical Competency & Medical Ethics	**RADT 1601 Clinical Simulation**	**RADT 2861 Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Semester End Competencies Reviewed with CIs	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours .
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	At least 85% of students will achieve an average score of 80% or better across all Weekly Assignments and Case Study Presentations, indicating consistent mastery of foundational lab concepts.	Competencies 50% grade, PPGA 25%, Clinical Hours 20%, Clinical Logbook 5%
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Data reveals robust performance in the lab setting, with 95% of students achieving a grade of 85% or higher in the course. Furthermore, all students successfully completed their required Semester End Competencies within the designated timeframe.	90% of students are board eligible and meet the clinical requirements for ARRT certification
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 1502 Radiographic Anatomy & Positioning I**	**RADT 1512 Radiographic Anatomy & Positioning II**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies, Section Exams	Formative: Weekly Assignments, Class Discussions, Case Studies, Section Exams, RadTech Bootcamp Quizzes
	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, Comprehensive Final Exam,	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, Comprehensive Final exam,

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students will complete a comprehensive review and score 80% or above.	Students will complete a comprehensive review and score 80% or above.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	This is a new requirement, and in 2025 all students met the threshold of 80% or above. Most students scored above 90%	This is a new requirement, and in 2025, all students met the threshold of 80% or above. Most students scored above 90%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Instrumentation & Quality Control	**RADT 1022 Intro to Radiology Technology**	**RADT 1303 Principles of Radiographic Exposure I**
Method of Measure (Direct & Indirect)	Formative: Class Discussions	Formative: Class Discussions and Student Presentations
	Summative: Section Exams	Summative: Comprehensive Examination
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students must pass each exam at 80% or above.	Average Score for Comprehensive Examination 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	On the average, students have scored a B average (80-83%).	Summative: Comprehensive Examination 2021 = 83.4% 2022 = 88.9% 2023 = 93.6% 2024 = 93.6% 2025 = 93.6%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning

*Overall: 90% or better of students within the AZ PTR certificate program have become board eligible. About 10% of these students have gone on to complete the AAS RT Program.

AAS Radiography Learning Outcomes

Learning Objectives	Foundational Class = 1	Intermediate Class = 2	Advanced Class = 3
Patient Care & Education	**RADT 2042 Community Based Patient Care**	**RADT 2043 Specialty Based Care**	**RADT 3003 Psychosocial Medicine**

Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions	Formative: Weekly Assignments, Class Discussions,	Formative: Class Discussions
	Summative: Weekly Examinations, Comprehensive Examination	Summative: Weekly Examinations, Comprehensive Examination	Summative: End of semester Reflective Essay-Promotes deep self-reflection and metacognition, encouraging lifelong learning and advocacy.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher	At least 80% of students will earn a final course grade of B (83%) or better, demonstrating both consistent mastery of weekly content and the ability to synthesize knowledge and reflect effectively in the final summative essay.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	90% of students scored 85% or better on all examinations	90% of students scored 85% or better on all examinations	Across the academic year, all enrolled students achieved a final course score exceeding the learning objective threshold of 83%. While this data is preliminary, based on only the first year of course implementation, it suggests high initial fidelity between instructional methods and desired student outcomes.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning
Research & Professional Development	**RADT 2821 Directed Readings**	**RADT 2803 Independent Research**	**RADT 2942 Transition to Practice - Casey**
Method of Measure (Direct & Indirect)	Formative: This course requires the completion of semester-specific directed readings that are discussed within various courses to highlight the evolution of information/technology published through national societies.	Formative: Class Discussions and Peer-Reviews	Formative: Weekly Writings, Topic Assignments and Exercises, Class Discussions
	Summative: Directed Reading Quizzes	Summative: Completion of Case Study	Summative: Professional Portfolio Completion consisting of career advancing material (e.g., resume, cover letter, goals, etc.).
Threshold for Evidence of Student Learning (Ex. 85% of students will	Average Score for Directed Readings Quizzes 80% or higher	Completion of a Case Study	Completion of Professional Portfolio

score 80% or better on 10 questions)			
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	RADT 2821 Average Directed Readings Quiz Scores 2020 95.06% 2021 95.45% 2022 95.64% 2023 94.87% 2024 94.12% 2025 94.6%	Students successfully complete a Case Study using ASRT as a guideline. The rubric is as follows: Parts of Case Study Title (5); Abstract (5); Introduction/Background (25); Case Description (20), Discussion & Conclusions (20), Figures/Illustrations (10), Style (5), and References (10)	Students successfully complete a Professional Portfolio using guidelines from course materials. Portfolio contains Resume, Networking contact list, References, Cover Letter, Thank You Letter, Long Term Goals, Short Term Goals, Lifeline assignment
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	All students completed case studies above 80%; from 2020 to 2025, a minimum of 3 Case Studies have been submitted to ACERT Conference. Since 2021, students have earned placement as 1st, 2nd, or 3rd from Weber State University.	All students complete the Professional Portfolio using the course guidelines.
Clinical Competency & Medical Ethics	**RADT 1601 Clinical Simulation**	**RADT 3043 Medical Ethics and Law**	**RADT 2865 Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	**Formative**: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Semester End Competencies Reviewed with CIs	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	At least 85% of students will achieve an average score of 80% or better across all Weekly Assignments and Case Study Presentations, indicating consistent mastery of foundational lab concepts.	85% of students will score 80% or better on the final project case study	Competencies 50% grade, PPGA 25%, Clinical Hours 20%, Clinical Logbook 5%
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Data reveals robust performance in the lab setting, with 95% of students achieving a grade of 85% or higher in the course. Furthermore, all students successfully completed their required Semester End	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	90% of students are board eligible and meet the clinical requirements for ARRT certification

	Competencies within the designated timeframe.		
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 1502 Radiographic Anatomy & Positioning I**	**RADT 1532 Radiographic Anatomy & Positioning IV**	**RADT 2272 Basic Sectional Anatomy**
Method of Measure (Direct & Indirect)	Formative: Class Discussions, Case Studies	Formative: Class Discussions, Case Studies	Formative: Class Discussions, Workbook, and Case Study
	Summative: Final Comprehensive Examination	Summative: Final Comprehensive Examination	Summative: Body Region Examinations
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	90% of the students will perform 80% or better on the final comprehensive examination.	90% of the students will perform 80% or better on the final comprehensive examination.	For each body region, students should score 80% or better. A difficult section for radiography students is Abdomen because it includes several organs and systems that are not readily demonstrated in general radiography. Therefore, this is an excellent examination as benchmark.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 89.3% 2022 89.8% 2023 88.7% 2024 88.5% 2025 91.0%	2021 100% 2022 99.8% 2023 93.9% 2024 93.0% 2025 97.6%	2021 - 94.8% 2022 - 97.7% 2023 - 95.0 % 2024 - 97% 2025 - 95%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning
Instrumentation & Quality Control	**RADT 1303 Principles of Radiographic Exposure I**	**RADT 2403 Principles of Radiographic Exposure II**	**RADT 3403 Radiobiology & Health Physics**
Method of Measure (Direct & Indirect)	Formative: Class Discussions and Student Presentations	Formative: Weekly Workbook Assignments, Biweekly Quizzes, Biweekly Exams.	Formative: Weekly Assignments, Biweekly Quizzes, Biweekly Exams
	Summative: Comprehensive Examination	Summative: Comprehensive Examination	Summative: 7 Exams, & Quizzes 2021-2023. Comprehensive exam implemented in 2024.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher

Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	**2021 = 88.88% 2022 = 88.4% 2023 = 90.35% 2024 = 89.64% 2025 = 92.64%**	**2021 = 83.4% 2022 = 88.9% 2023 = 93.6% 2024 = 93.6% 2025 = 93.6%**	**2021 = 95.72% 2022 = 97.52% 2023 = 96.87% 2024 = 99.29% (Comprehensive Final Exam) 2025 = 97.8% (Comprehensive Final Exam)**
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning

*Students who are eligible for ARRT certification must pass a board examination of up to 120 questions at 75% or above.

ARRT CERTIFICATION COMPREHENSIVE ASSESSMENT		
Content Category	Years	ARRT Board Results
Patient Care (33)		
Patient Interactions & Management	2017	8.5
	2018	8.7
	2019	8.6
	2020	8.5
	2021	8.6
	2022	8.7
	2023	8.3
	2024	8
	2025	8.2
Safety (50)		
Radiation Physics & Radiobiology (21)	2017	8.1
	2018	8.6
	2019	8.4
	2020	8.4
	2021	8.3
	2022	8.5
	2023	8.2
	2024	8.1
	2025	8.2
Radiation Protection (29)	2017	8.2
	2018	8.6
	2019	8.3
	2020	8.4
	2021	8.1
	2022	8.4
	2023	7.9
	2024	7.9
	2025	7.9
Image Production (51)		
Image Acquisition & Evaluation (26)	2017	8
	2018	8.4
	2019	8.1
	2020	8.4
	2021	8.1
	2022	8.4
	2023	7.9
	2024	7.9
	2025	7.9
Equipment Operation and Quality Assurance (25)	2017	8.2
	2018	8.4
	2019	8.2
	2020	8.5

	2021	8
	2022	8
	2023	8.2
	2024	8.3
	2025	8.2
Procedures (66)		
Head, Spine, & Pelvis Procedures (18)	2017	8.5
	2018	8.1
	2019	8.3
	2020	8.2
	2021	8

	2022	8.1
	2023	7.6
	2024	7.4
	2025	7.6
Thorax & Abdomen Procedures (20)	2017	8.4
	2018	8.2
	2019	8.3
	2020	8.3
	2021	8.1
	2022	8.4
	2023	7.9

	2024	7.8
	2025	7.8
Extremity Procedures (28)	2017	8.4
	2018	8.9
	2019	8.6
	2020	8.3
	2021	8.2
	2022	8.4
	2023	7.8
	2024	7.9
	2025	7.9

Overall Pass Rates for ARRT Radiography

OVERALL PASS RATES			
Years – Based on Student's Reported Graduation Year	Number of Students Reported (data from ARRT.org)	Pass Rate	Average Score
2017	90	86.70%	83%
2018	89	88.80%	85%
2019	106	89.60%	84%
2020	108	90.70%	84%
2021	120	85.00%	82%
2022	113	81.40%	83%
2023	166 55% Increase From 2017	77.10%	80%
2024	173	74.60%	80%
2025	166	80%	80%

Overall, the pass rates for the ARRT board examination are improving and moving in the correct direction. The pass rate was lowest due to a significant surge in enrollment. At that point, we were accepting students who were below our normal threshold but met our minimum standard. The other critical reason we can attribute to this dip in pass rate is the sheer number of independent study students who flocked to WSU for remediation, who had failed other programs around the country. Based on this data, we have chosen to tighten our standard for acceptance into remediation and have made the coursework more robust for the certificate.

Graduates of the School of Radiologic Sciences demonstrate exceptional clinical proficiency and workforce readiness, having successfully completed a rigorous clinical education comprising 1,488 hours and mastered 51 distinct clinical competencies. This comprehensive training ensures that every student possesses the technical expertise, patient care skills, and professional adaptability required to meet the evolving healthcare needs of our local and regional communities. By integrating extensive hands-on experience with high academic standards, we produce confident, competent practitioners who are immediately prepared to serve as integral members of the healthcare team.

BS Programs Learning Outcomes

Advanced Radiography – This is a non-clinical track designed for students who would like to complete the BS degree and maintain their expertise and focus in Radiography (RT)

Learning Objectives	Foundational Class = 1	Intermediate Class = 2	Advanced Class = 3
Patient Care & Education	**RADT 2042 Community Based Patient Care**	**RADT 2043 Specialty Based Care**	**RADT 3003 Psychosocial Medicine**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions	Formative: Weekly Assignments, Class Discussions,	Formative: Class Discussions
	Summative: Weekly Examinations, Comprehensive Examination	Summative: Weekly Examinations, Comprehensive Examination	Summative: End-of-semester Reflective Essay-Promotes deep self-reflection and metacognition, encouraging lifelong learning and advocacy.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher	At least 80% of students will earn a final course grade of B (83%) or better, demonstrating both consistent mastery of weekly content and the ability to synthesize knowledge and reflect effectively in the final summative essay.
Findings Linked to Learning Outcomes (Ex. 93% of students	90% of students scored 85% or better on all examinations	90% of students scored 85% or better on all examinations	Across the academic year, all enrolled students achieved a final course score exceeding the learning objective threshold of

scored 80% or better on 10 questions)			83%. While this data is preliminary, based on only the first year of course implementation, it suggests high initial fidelity between instructional methods and desired student outcomes.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning
Research & Professional Development	**RADT 2821 Directed Readings**	**RADT 2803 Independent Research**	**RADT 2942 Transition to Practice**
Method of Measure (Direct & Indirect)	Formative: This course requires the completion of semester-specific directed readings that are discussed within various courses to highlight the evolution of information/technology published through national societies.	Formative: Class Discussions and Peer-Reviews	Formative: Weekly Writings, Topic Assignments and Exercises, Class Discussions
	Summative: Directed Reading Quizzes	Summative: Completion of Case Study	Summative: Professional Portfolio Completion consisting of career advancing material (e.g., resume, cover letter, goals, etc.).
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Directed Readings Quizzes 80% or higher	Completion of a Case Study	Completion of Professional Portfolio
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	RADT 2821 Average Directed Readings Quiz Scores 2020 95.06% 2021 95.45% 2022 95.64% 2023 94.87% 2024 94.12% 2025 94.6%	Students successfully complete a Case Study using ASRT as a guideline. The rubric is as follows: Parts of Case Study Title (5); Abstract (5); Introduction/Background (25); Case Description (20), Discussion &	Students successfully complete a Professional Portfolio using guidelines from course materials. Portfolio contains Resume, Networking contact list, References, Cover Letter, Thank

		Conclusions (20), Figures/Illustrations (10), Style (5), and References (10)	You Letter, Long Term Goals, Short Term Goals, Lifeline assignment
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	All students completed case studies above 80%; from 2020 to 2025, a minimum of 3 Case Studies have been submitted to ACERT Conference. Since 2021, students have earned placement as 1st, 2nd, or 3rd from Weber State University.	All students complete the Professional Portfolio using the course guidelines.
Clinical Competency & Medical Ethics	**RADT 1601 Clinical Simulation**	**RADT 3043 Medical Ethics and Law**	**RADT 2865 Clinical**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Semester End Competencies Reviewed with CIs	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	At least 85% of students will achieve an average score of 80% or better across all Weekly Assignments and Case Study Presentations, indicating consistent mastery of foundational lab concepts.	85% of students will score 80% or better on the final project case study	Competencies 50% grade, PPGA 25%, Clinical Hours 20%, Clinical Logbook 5%
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Data reveals robust performance in the lab setting, with 95% of students achieving a grade of 85% or higher in the course. Furthermore, all students successfully completed their required Semester End Competencies within the designated timeframe.	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	90% of students are board eligible and meet the clinical requirements for ARRT certification

Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 1502 Radiographic Anatomy & Positioning I**	**RADT 1532 Radiographic Anatomy & Positioning IV**	**RADT 2272 Basic Sectional Anatomy**
Method of Measure (Direct & Indirect)	Formative: Class Discussions, Case Studies	Formative: Class Discussions, Case Studies	Formative: Class Discussions, Workbook, and Case Study
	Summative: Final Comprehensive Examination	Summative: Final Comprehensive Examination	Summative: Body Region Examinations
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	90% of the students will perform 80% or better on the final comprehensive examination.	90% of the students will perform 80% or better on the final comprehensive examination.	For each body region, students should score 80% or better. A difficult section for radiography students is Abdomen because it includes several organs and systems that are not readily demonstrated in general radiography. Therefore, this is an excellent examination as benchmark.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 89.3% 2022 89.8% 2023 88.7% 2024 88.5% 2025 91.0%	2021 100% 2022 99.8% 2023 93.9% 2024 93.0% 2025 97.6%	2021 - 94.8% 2022 - 97.7% 2023 - 95.0 % 2024 - 97% 2025 - 95%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning
Instrumentation & Quality Control	RADT 1303 Principles of Radiographic Exposure I	RADT 2403 Principles of Radiographic Exposure II	RADT 3403 Radiobiology & Health Physics
Method of Measure (Direct & Indirect)	Formative: Class Discussions and Student Presentations	Formative: Weekly Workbook Assignments, Biweekly Quizzes, Biweekly Exams.	Formative: Weekly Assignments, Biweekly Quizzes, Biweekly Exams
	Summative: Comprehensive Examination	Summative: Comprehensive Examination	Summative: 7 Exams & Quizzes 2021-2023. Comprehensive exam implemented in 2024.

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 = 88.88% 2022 = 88.4% 2023 = 90.35% 2024 = 89.64% 2025 = 92.64%	2021 = 83.4% 2022 = 88.9% 2023 = 93.6% 2024 = 93.6% 2025 = 93.6%	2021 = 95.72% 2022 = 97.52% 2023 = 96.87% 2024 = 99.29% (Comprehensive Final Exam) 2025 = 97.8% (Comprehensive Final Exam)
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning

Computed Tomography (CT)

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RADT 3863 Clinical Education**	**RADT 4663 CT Physics and Instrumentation**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	**Formative**: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress	**Formative**: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of patient care.	**Formative**: Class Discussion and in-class review activities
	Summative: Summative: Semester End Competencies Reviewed with CIs, Board Exams Pass Rates, final semester PPGA scores	**Summative**: Section 3 & 4 examinations allow summative assessment on aspects of patient care and safety in CT.	**Summative**: Comprehensive Exam #1 focuses on patient care. Board Exams Pass Rates
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for PPGA 80% or higher	Average Score for Exam #3 & #4 80% or higher	Average Score for Comp Exam #1 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average PPGA Scores by year 2021: 91% 2022: 86% 2023: 100%	Average Scores by year Exam 3, Exam 4 2021: 96%, 81% 2022: 92%, 80% 2023: 97%, 87%	Average Scores by year 2021: 85% 2022: 75% 2023: 85%

	2024: 100% 2025: 91%	2024: 94%,86% 2025: 91%, 86%	2024: 85% 2025: 92%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning in all years except in 2022
Research & Professional Development	**RADT 3043 Medical Ethics & Law**	**RADT 4933 Research Methods**	**RADT 4863 Clinical Education**
Method of Measure (Direct & Indirect)	**Formative**: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	**Formative**: Module Assignments, Quizzes, and in-Class Discussions/Activities	**Formative:** Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.
	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	**Summative**: Completion of Final Project Concept Map. Rubric	**Summative**: Final clinical PPGA forms, completed by clinical instructors overseeing students at the clinical site, facilitate summative assessment. Clinical Logbook – documentation of repetitions through the ARRT account is used to provide a summative assessment of progress towards and attainment of board eligibility.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of students will score 80% or better on the final project case study	Average scores 80% or higher on the final project.	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Average PPGA Scores by year 2021: 99% 2022: 100% 2023: 100% 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Students met or exceeded the threshold of evidence for student learning

Clinical Competency & Medical Ethics	**RADT 3863 Clinical Education**	**RADT 4663 CT Physics and Instrumentation**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	**Formative**: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress	**Formative**: Objective Assignments and in-Class Discussions. To complete the objectives assignments, students are required to write out answers to a series of questions and explain the critical aspects of CT clinical expectations and medical ethics	**Formative**: Class Discussion and in-class review activities
	Summative: Summative: Semester End Competencies Reviewed with CIs, Board Exams Pass Rates, final semester PPGA scores	**Summative**: The Section 3 examination allows for summative assessment of aspects of ethics.	**Summative**: Comprehensive Exams #1 & #2 focus on patient care, safety, ethics, and imaging procedures (clinical competency).
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for PPGA 80% or higher	Average Score for Exam #3 80% or higher	Average Score for Comprehensive Exams #1 & #2 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average PPGA Scores by year 2021: 91% 2022: 86% 2023: 100% 2024: 100% 2025: 91%	Average Scores by year 2021: 96% 2022: 92% 2023: 97% 2024: 97% 2025: 95%	Average Scores by year Comp Exam 1, Comp Exam 2 2021: 85%, 86% 2022: 75%, 85% 2023: 85%, 90% 2024: 85%, 87% 2025: 92%, 91%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning in all years except exam 1 in 2022
Procedures, Anatomy, and Pathophysiology	**RADT 4613 CT Imaging of the Torso and Limbs**	**RADT 4653 CT Imaging of the CNS**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	**Formative**: Weekly 'Case-of-the-days', Protocol Forms	**Formative**: Protocol Forms, Class Discussions	**Formative**: Class Discussion and in-class review activities
	Summative: Final Section Exams #1-4	**Summative**: Final Case Studies (Rubric), Section Exams #1 & 2	**Summative**: Comprehensive Exam #2 is focused on imaging procedures, anatomy, and pathophysiology.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Exam #1-4 80% or higher	Average Score for Exam #1 & #2 80% or higher	Average Score for Exam #2 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of	Average Scores by year Exam 1, Exam 2, Exam 3, Exam 4	Average Scores by year Exam 1, Exam 2	Average Scores by year 2021: 88%

students scored 80% or better on 10 questions)	2021: 94%, 84%, 84%, 84% 2022: 88%, 88%, 84%, 88% 2023: 95%, 85%, 84%, 91% 2024: 93%, 85%, 82%, 81% 2025: 83%, 82%, 85%, 87%	2021: 87%, 93% 2022: 87%, 91% 2023: 86%, 92% 2024: 82%, 84% 2025: 87%, 88%	2022: 84% 2023: 87% 2024: 92% 2025: 87%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning
Instrumentation & Quality Control	**RADT 3863 Clinical Education**	**RADT 4663 CT Physics and Instrumentation**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	**Formative**: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress	**Formative**: Formative assessments include the completion of objectives. Students are required to write out answers to a series of questions and explain the critical aspects of CT physics and instrumentation.	**Formative**: Class Discussion and in-class review activities
	Summative: Summative: Semester End Competencies Reviewed with CIs, Board Exams Pass Rates, final semester PPGA scores	**Summative**: Sections 1 & 2 examinations allow summative assessment on aspects of physics, instrumentation, and quality control. Board Exam pass rates	**Summative**: Comprehensive Exams #3 is focused on CT physics and instrumentation. Board Exam Pass Rates
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for PPGA 80% or higher	Average Score for Exam #1 & #2 80% or higher	Average Score for Exam #3 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average PPGA Scores by year 2021: 91% 2022: 86% 2023: 100% 2024: 100% 2025: 91%	Average Scores by year Exam 1, Exam 2 2021: 90%, 85% 2022: 86%, 79% 2023: 85%, 87% 2024: 86%, 83% 2025: 90%, 92%	Average Scores by year 2021: 86% 2022: 81% 2023: 89% 2024: 85% 2025: 87%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning in all years except exam 2 in 2022 (79%)	Students exceeded the threshold of evidence for student learning

*Students who are eligible for ARRT certification must pass a board examination at 75% or above.

CT Pass Rate (2019-2024): 80%

Diagnostic Medical Sonography (DMS) – Medical Emphasis

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RADT 3563 Managing Clinical Information**	**DMS 4620 Medical Sonography - Clinical Simulation I**	**RADT 4621 Medical Sonography - Clinical Simulation II**
Method of Measure (Direct & Indirect)	**Formative:** Objectives, Assignments, in-class discussions	**Formative:** Weekly Assignments, SonoSim Scanning Simulation, and in-class scanning simulations	**Formative:** Weekly Assignments, SonoSim Scanning simulation, Class Discussions, In-class Interactive activities-Allows students to test strategies in a safe space, receive immediate feedback, and adjust their approach in real time.
	Summative: Section exams 1-4. Average for all for 4 exams to evaluate summative knowledge retention.	**Summative:** Simulation hours completion, Scanning Proficiency Examination	**Summative:** End-of-semester Reflective Essay-Promotes deep self-reflection and metacognition, encouraging lifelong learning and advocacy. Completion of simulated lab hours.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for all 4 exams 80% or higher	Students pass a scanning proficiency exam with 80% or higher	
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2021: 93% 2022: 95% 2023: 94% 2024: 95% 2025: 96%	Proficiency exam scores 2025 - 90% 2024 - 93% 2023 - 91% 2022 - 93% 2021 - 88%	Documentation of completion of simulation hours 2025 - 99% 2024 - 100% 2023 - 99% 2022 - 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Data shows that majority of students are meeting the minimum threshold for evidence of learning.	Data shows that majority of students are meeting the minimum threshold for evidence of learning.
Research & Professional Development	**DMS 4820 Orientation to Clinical Education**	**RADT 4933 Research Methods**	**RADT 4943 BS Thesis**
Method of Measure (Direct & Indirect)	Formative: Assignments, Clinical Instructor evaluation and completion of clinical hours	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis, Laboratory Involvement and Documentation of Mentoring
	Summative: Documentation of completed clinical hours, CI evaluation	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students will demonstrate completion of 80 clinical hours at their assigned clinical site	Average scores 80% or higher on the final project.	Students will work in small teams and/or alone on a research mentoring project. Each team is responsible for mentoring students within the lab, maintaining both qualitative and quantitative data, and compiling the

			data into a final thesis. Rubric: Topic (5) Abstract (5) Intro/Lit Review (30) Methods/Procedure (20) Results/Disc/Conclusions (30) References (10)
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Clinical Hours Documentation 2025 - 99% 2024 - 100% 2023 - 100%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Thesis topics completed by classes: 2021: Improving Sonographer and Patient Care 2022: Lessons Learned through Sonography Peer-Mentoring 2023: The Benefits and Challenges of Peer Mentoring 2024: The Effect of Learning Styles on Peer Mentoring 2025: Enhancing Student Confidence and Competence Through Peer-Mentoring in Sonography
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	This class began in 2023	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Through their writing, students demonstrate their ability to critically assess data, enhance their mentoring skills, and identify areas for improvement. This is key for the next generation of clinical instructors.
Clinical Competency & Medical Ethics	**DMS 4821 Medical Clinical I**	**DMS 4822 Medical Clinical II**	**DMS 4823 Medical Clinical III**
Method of Measure (Direct & Indirect)	Formative: Mid-term and end-of-semester student evaluations to assess progress,	Formative: Mid-term and end-of-semester student evaluations to assess progress,	Formative: Mid-term and end-of-semester student evaluations to assess progress,
	Summative: Semester End Competencies, and documentation of completed hours	Summative: Semester End Competencies, and documentation of completed hours	Summative: Semester End Competencies, and documentation of completed hours, CV form
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score of 80% or higher on clinical hour documentation assignment	Average Score of 80% or higher on scanning competencies assignment	80% or higher on CV form assignment
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2025 - 100% 2024 - 98% 2023 - 99% 2022 - 99%	2025 - 98% 2024 - 95% 2023 - 100% 2022 - 96%	2025 - 100% 2024 - 100% 2023 - 100% 2022 - 100% 2021 - 97%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 3123 Sectional Anatomy**	**DMS 4310 Abdominal Sonography**	**RADT 4340 Obstetric Sonography**

Method of Measure (Direct & Indirect)	Formative: Weekly Annotation Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies, Section Exams, RadTech Bootcamp Quizzes	Formative: Weekly Assignments, Class Discussions, Case Studies
	Summative: Anatomic Region Examinations	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, Comprehensive Final exam, Realize we could do better in measuring this	Summative: Professional Portfolio Development, Board Examinations
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students will demonstrate 80% or better on Anatomic Region Examinations	Average exam score of 80% or higher	Average exam score of 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Scores from Thorax Examination (largest and most difficult) 2021: 98.5% 2022: 90.9% 2023: 90.4% 2024: 93.5% 2025: 92.1%	Chapter 12 exam - Kidneys 2025 - 89% 2024 - 86% 2023 - 94% 2022 -	Chapter 33 exam 2025 - 83% 2024 - 88% 2023 - Format change
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Scores show that students are meeting the threshold for evidence of learning.	Scores show that students are meeting the threshold for evidence of learning.
Instrumentation & Quality Control	**DMS 4100 Intro to SPI**	**DMS 4110 SPI**	**DMS 4120 Quality Assurance**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Discussions	Formative: Weekly Workbook Assignments, Weekly Quizzes	Formative: Quality Assurance Infographic, Class Discussions
	Summative: Exams	Summative: Comprehensive Examination	Summative: Comprehensive Examinations
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average exam score of 80% or higher	Average exam score of 80% or higher	Average exam score of 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Chapter 2 Exam Scores 2023 - 85% 2024 - 86% 2025 - 87%	2021 - 83.4% 2022 - 88.9% 2023 - 93.6% 2024 - 93.6% 2025 - 93.6%	Comprehensive exam scores (implemented in 2024) 2024 - 87.4% 2025 - 96.%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	This class did not begin until 2023. Scores indicate that students are meeting the	Scores indicate that students are meeting the threshold for demonstrating learning.	Comprehensive exams implemented in 2024. Scores indicate that students are meeting the threshold for demonstrating learning.

	threshold for demonstrating learning.		

Overall, students can take the SPI board examination after completing DMS 4110. Once passed with a minimum weighted score of 555, these students can choose between Abdomen and OB/GYN specialty exams to become fully certified through the ARDMS. Our data is limited, as Dr. Kawamura fully retired from teaching Sonography SPI in 2023. The following are comprehensive examination scores at the end of the students' program.

Years	DMS 4350 Abdominal Comprehensive Review - Average Exam Score	DMS 4360 OB/GYN Comprehensive Review - Average Exam Score	SPI Average Comprehensive Exam Score
2020	79.90%	83.80%	Taught by Dr Kawamura
2021	84.40%	80.40%	Taught by Dr Kawamura
2022	86.60%	91.40%	Taught by Dr Kawamura
2023	85.50%	84.20%	Taught by Dr Kawamura
2024	88.20%	88.70%	87.4%%
2025	86%	85.80%	96.00%

We have tracked certification rates, but this data is also limited because it reflects only students who have officially obtained an ARDMS credential. Some students may have opted for the ARRT credential. Additionally, several sonography graduates do not take the sonography certification because their state of practice does not require licensure. Some students may have graduated but have not yet scheduled or attempted their certification exam. Additionally, many female students change their names before or after graduation, making it more challenging to track them. Therefore, we have evaluated the number of known identifiable successes and the total number of graduates. However, the remaining students are not confirmed to be failures, as they may still be attempting to pass or have not yet scheduled their exams. Based on our tracking, it appears that approximately 74% of all students complete their certification post-graduation over the last five years. The highest percentage was in 2023, wherein 82% of all students documented certification post-graduation.

Diagnostic Medical Sonography – Cardiac Emphasis

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education Students will...	**RADT 3563 Managing Clinical Information**	**DMS 4610 Cardiac Sonography - Clinical Simulation I**	**RADT 3263 Diagnostic Services Pharmacology - Laurie**
Method of Measure (Direct & Indirect)	Formative: Objectives Assignments, in-class discussions	Formative: Laboratory Scanning Sessions and Sonosim	Formative: Weekly Assignments, Class Discussions, In-class Interactive activities- Allows students to test strategies in a safe space, receive immediate feedback, and adjust their approach in real time.
	Summative: Section exams 1-4. Average for all for 4 exams to evaluate summative knowledge retention.	Summative: Practicum Examination	Summative: End of semester Reflective Essay- Promotes deep self-reflection and metacognition, encouraging lifelong learning and advocacy.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for all 4 exams 80% or higher	Completion of the Scanning Examinations (1) Identification of Parasternal Anatomy (2) Identify Apical Anatomy (3) Identify Subcostal and Suprasternal Anatomy appropriately scanning in lab with the correct technical factors.	Through case study and discussion, students will demonstrate the ability to classify drugs according to their major actions and classifications, understanding the characteristics that define broad drug categories 90% of the time.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2021: 93% 2022: 95% 2023: 94% 2024: 95% 2025: 96%	Students were able to identify a minimum of 80% of structures sonographically with appropriate techniques	Students were able to perform the task at a higher than 90% accuracy.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students possess a basic understanding of scanning anatomy and technical settings.	Students met or exceeded the threshold of evidence for student learning
Research & Professional Development Students will...	**DMS 4820 Orientation to Clinical Education**	**RADT 4933 Research Methods**	**RADT 4943 BS Thesis**
Method of Measure (Direct & Indirect)	Formative: Assignments, Clinical Instructor evaluation and completion of clinical hours	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis, Laboratory Involvement, and Documentation of Mentoring
	Summative: Documentation of completed clinical hours, CI evaluation	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students will demonstrate completion of 80 clinical hours at their assigned clinical site	Average scores 80% or higher on the final project.	Students will work in small teams and/or alone on a research mentoring project. Each team is responsible for mentoring students within the lab, maintaining both qualitative and quantitative data, and compiling the data into a final thesis. Rubric: Topic (5) Abstract (5) Intro/Lit Review (30) Methods/Procedure (20) Results/Disc/Conclusions (30) References (10)
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Clinical Hours Documentation 2025 - 99% 2024 - 100% 2023 - 100%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Thesis topics completed by classes: 2021: Improving Sonographer and Patient Care 2022: Lessons Learned through Sonography Peer-Mentoring 2023: The Benefits and Challenges of Peer Mentoring 2024: The Effect of Learning Styles on Peer Mentoring 2025: Enhancing Student Confidence and Competence Through Peer-Mentoring in Sonography
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	This class began in 2023	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Through their writing, students demonstrate their ability to critically assess data, refine their mentoring skills, and identify areas for improvement. This is key for the next generation of clinical instructors.
Clinical Competency & Medical Ethics Students will...	**DMS 4811 Cardiac Clinical I**	**DMS 4812 Cardiac Clinical II**	**DMS 4813 Cardiac Clinical III**
Method of Measure (Direct & Indirect)	Formative: Mid-term and end-of-semester student evaluations to assess progress,	Formative: Mid-term and end-of-semester student evaluations to assess progress,	Formative: Mid-term and end-of-semester student evaluations to assess progress,
	Summative: Semester End Competencies, and documentation of completed hours	Summative: Semester End Competencies, and documentation of completed hours	Summative: Semester End Competencies, and documentation of completed hours, CV form
Threshold for Evidence of Student Learning (Ex. 85% of students will score	Average Score of 80% or higher on clinical hour documentation assignment	Average Score of 80% or higher on scanning competencies assignment	80% or higher on CV form assignment

80% or better on 10 questions)			
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2025 - 98% 2024 - 100% 2023 - 100% 2022 - 100%	2025 - 96% 2024 - 100% 2023 - 100% 2022 - 100%	2025 - 100% 2024 - 100% 2023 - 100% 2022 - 100% 2021 - 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology Students will...	**DMS 4210 Cardiac Sonography I**	**DMS 4220 Cardiac Sonography II**	**DMS 4230 Cardiac Sonography III**
Method of Measure (Direct & Indirect)	Formative: Class Discussions, Case Studies	Formative: Class Discussions, Presentations	Formative: Class Discussions, Case Studies
	Summative: Comprehensive Examination	Summative: Section Quizzes	Summative: Comprehensive Examination
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Examination Scores of 80% or higher	Average Examination Scores of 80% or higher	Average Examination Scores of 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Because of changes in Adjunct Professors, there is limited information that can be provided through Canvas. However, the average scores have been 90% over the last 5 years.	Because of changes in Adjunct Professors, there is limited information available to us through Canvas. The following scores come from Quiz 4, a key area of understanding. 2024 - 96% 2025 - 92%	Because of changes in Adjunct Professors, there is limited information that can be provided through Canvas. However, the average scores have been 90% over the last 5 years.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Instrumentation & Quality Control Students will...	**DMS 4100 Intro to SPI**	**DMS 4110 SPI**	**DMS 4120 Quality Assurance**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Discussions	Formative: Weekly Workbook Assignments, Weekly Quizzes, Exams.	Formative: Quality Assurance Infographic, Class Discussions
	Summative: Exams	Summative: Comprehensive Examination	Summative: Comprehensive Examinations

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average exam score of 80% or higher	Average exam score of 80% or higher	Average exam score of 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Chapter 2 Exam Scores 2023 - 85% 2024 - 86% 2025 - 87%	2021 - 83.4% 2022 - 88.9% 2023 - 93.6% 2024 - 93.6% 2025 - 93.6%	Comprehensive exam scores (implemented in 2024) 2024 - 87.4% 2025 - 96.%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	This class did not begin until 2023. Scores indicate that students are meeting the threshold for demonstrating learning.	Scores indicate that students are meeting the threshold for demonstrating learning.	Comprehensive exams implemented in 2024. Scores indicate that students are meeting the threshold for demonstrating learning.

Overall, students can take the ARDMS SPI board examination after completing DMS 4110. Once they have passed with a minimum weighted score of 555, these students can choose to take the ARDMS or wait and take the Physics portion with specialty scanning through CCI Adult Echo. Both ARDMS and CCI certifications are acknowledged and approved. Our data is limited, as Dr. Kawamura fully retired from teaching Sonography SPI in 2023, and Stephen Ishihara, Adjunct Instructor, taught most of the curriculum until 2022. The following are comprehensive examination scores at the end of the students' program with Adjunct Professor, Ashley Hall.

Years	DMS 4240 Adult Echo Comprehensive Review	SPI Average Comprehensive Exam Score
2020	Adjunct: Steven Ishihara	Taught by Diane Kawamura
2021	Adjunct: Steven Ishihara	Taught by Diane Kawamura
2022	95.20%	Taught by Diane Kawamura
2023	93.60%	Taught by Diane Kawamura
2024	97.80%	87.4%%
2025	81%	96.00%

We have tracked certification rates, but this data is also limited because it reflects only students who have officially obtained an ARDMS or CCI credential. Several sonography graduates do not take the sonography certification because their state of practice does not require licensure. Some students may have graduated but have not yet scheduled or attempted their certification exam. Additionally, many female students change their names before or after graduation, making it more challenging to track them. Therefore, we have evaluated the number of known identifiable successes and the total number of graduates. However, the remaining students are not confirmed to be failures, as they may still be attempting to pass or have not yet scheduled their exams. Based on our tracking, it appears that approximately 78% of all

students completed their certification post-graduation over the last five years. The highest percentage was in 2022, wherein 89% of all students documented certification post-graduation.

Interventional Radiography

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RADT 3563 Managing Clinical Information**	**RADT 3253 Specialty Based Patient Care**	**RADT 3263 Diagnostic Services Pharmacology - Laurie**
Method of Measure (Direct & Indirect)	Formative: Objectives Assignments, in-class discussions	Formative: Weekly Assignments, Class Discussions,	Formative: Weekly Assignments, Class Discussions, In-class Interactive activities-Allows students to test strategies in a safe space, receive immediate feedback, and adjust their approach in real time.
	Summative: Section exams 1-4. Average for all for 4 exams to evaluate summative knowledge retention.	Summative: Weekly Examinations, Comprehensive Examination	Summative: End of semester Reflective Essay-Promotes deep self-reflection and metacognition, encouraging lifelong learning and advocacy.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for all 4 exams 80% or higher	Average Score for Comprehensive Examination 80% or higher	Through case study and discussion, students will demonstrate the ability to classify drugs according to their major actions and classifications, understanding the characteristics that define broad drug categories 90% of the time.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2021: 93% 2022: 95% 2023: 94% 2024: 95% 2025: 96%	90% of students scored 85% or better on all examinations	Students were able to perform the task at higher than 90% accuracy.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning
Research & Professional Development	**RADT 3043 Medical Ethics & Law**	**RADT 4933 Research Methods**	**RADT 4943 BS Thesis**

Method of Measure (Direct & Indirect)	Formative: Objective Assignments and in-Class Discussions. To complete objectives assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis, In class and individual discussions and feedback
	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of students will score 80% or better on the final project case study	Average scores 80% or higher on the final project.	100% Complete a Final Project
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	2021 - 2025 - All students have completed the final project
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Students have performed well since the class was divided among several faculty members. Also, changing to a research proposal has helped more students complete this course.
Clinical Competency & Medical Ethics	**RADT 4313 Extremity Angiography**	**RADT 4343 Thorax Angiography**	**RADT 4333 Head & Neck Angiography**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Weekly Assignments, Class Discussions, Case Study Presentations
	Summative: Semester End Competencies Reviewed with CIs	Summative: Semester End Competencies Reviewed with CIs	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	80% of Students will present and Critique 5 Original Case Studies in Class related to their clinical work on Extremity Angiography for Class Discussion 85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are	80% of Students will Present and Critique 5 Original Case Studies in Class related to their clinical work on Extremity Angiography for Class Discussion 85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are thoroughly	80% of Students will Present and Critique 5 Original Case Studies in Class related to their clinical work on Extremity Angiography for Class Discussion 85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are

	thoroughly discussed, demonstrating a deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and comprehensive selection of sterile tools is justified, accompanied by a clear explanation of how the Intervention Considerations influenced the setup. Intraprocedural Care - (20 Points): Patient management, monitoring, positioning, and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): Exceptional visual aids are used to illustrate relevant anatomy, justify the chosen catheter shape, and detail specialized interventional tools. Imaging and pathology -20 Points): Imaging parameters (rates, filming, injection) are customized to the Pathology and discussed clearly.	discussed, demonstrating a deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and complete selection of sterile tools is justified with a clear explanation of how the Intervention Considerations influenced the setup. Intraprocedural Care - (20 Points): Patient management, monitoring , positioning , and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): Exceptional visual aids are used to illustrate relevant anatomy , justify the chosen catheter shape , and detail specialized interventional tools. Imaging and pathology -20 Points): Imaging parameters (rates, filming, injection) are customized to the Pathology and discussed clearly."	thoroughly discussed, demonstrating a deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and complete selection of sterile tools is justified with a clear explanation of how the Intervention Considerations influenced the setup. Intraprocedural Care - (20 Points): Patient management, monitoring , positioning , and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): Exceptional visual aids are used to illustrate relevant anatomy , justify the chosen catheter shape , and detail specialized interventional tools. Imaging and pathology -20 Points): Imaging parameters (rates, filming, injection) are customized to the Pathology and discussed clearly."
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Outcome 2021: 100% 2022: 100% 2023: 100% 2024: 100% 2025: 100%	Average Outcome 2021: 100% 2022: 100% 2023: 100% 2024: 100% 2025: 100%	Average Outcome 2021: 100% 2022: 100% 2023: Student dropped due to unexpected family obligations 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Typically, we have small class sizes. Thus, I may need to add additional assessments. Students excel on case studies, which provide excellent opportunities to learn, although perhaps not as well as exams. Perhaps we need to replace some case study discussions with summative exams.	Typically, we have small class sizes. Thus, I may need to add additional assessments. Students excel on case studies, which provide excellent opportunities to learn, although perhaps not as well as exams. Perhaps we need to replace some case study discussions with summative exams.	Typically, we have small class sizes. Thus, I may need to add additional assessments. Students excel on case studies, which provide excellent opportunities to learn, although perhaps not as well as exams. Perhaps we need to replace some case study discussions with summative exams.
Clinical Competency & Medical Ethics	**RADT 3863 (Semester 1)**	**RADT 3863 (Semester 2)**	**RADT 4863 (Semester 3)**
Method of Measure (Direct & Indirect)	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site

			allow progress to be assessed throughout the program.
	Summative: Semester-end clinical PPGA forms, completed by clinical instructors overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.	Summative: Semester-end clinical PPGA forms, completed by clinical instructors overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.	Summative: Final clinical PPGA forms, completed by clinical instructors overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of Students will receive a score of 75% or better on clinical progress	85% of Students will receive a score of 75% or better on clinical progress	85% of Students will receive a score of 75% or better on clinical progress
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 - 100% received 75% or better 2022 - 100% received 75% or better 2023 - 100% received 75% or better 2024 - 100% received 75% or better 2025 - 100% received 75% or better	2021 - 100% received 75% or better 2022 - 100% received 75% or better 2023 - 100% received 75% or better 2024 - 100% received 75% or better 2025 - 100% received 75% or better	2021 - 100% received 75% or better 2022 - 100% received 75% or better 2023 - student dropped due to family obligations 2024 - 100% received 75% or better 2025 - 100% received 75% or better
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Probably, need to increase the threshold for evaluation of findings	Probably, need to increase the threshold for evaluation of findings	Probably, need to increase the threshold for evaluation of findings
Procedures, Anatomy, and Pathophysiology	**RADT 3143 Imaging Pathophysiology**	**RADT 3144 Imaging Pathophysiology II**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies
	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Professional Portfolio Development, Comprehensive Exam
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	80% of Students will score 85% or better on the Final Case Study Discussions	80% of Students will score 85% or better on the Final Case Study Discussions	90% of Students will score 75% or better on the Comprehensive Exam
Findings Linked to Learning Outcomes (Ex. 93% of students scored	Scores 2021: 98% 2022: 98%	Scores 2021: 98% 2022: 98%	Average Scores 2021 83% 2022 76%

80% or better on 10 questions)	2023: 98% - New Textbook 2024: 98% - New Textbook 2025: Not available yet - but likely around 98%	2023: 98% - New Textbook 2024: 98% - New Textbook 2025: Not available yet - but likely around 98%	2023 Only one student dropped due to family obligations 2024 90% 2025 75%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	It is difficult to determine due to the very small class sizes. Combining cardiac students will increase class size, and make it easier to measure in the future.
Instrumentation & Quality Control	**RADT4313 Extremity Angiography**	**RADT 4343 Thorax Angiography**	**RADT 4333 Head & Neck Angiography**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Weekly Assignments, Class Discussions, Case Study Presentations
	Summative: Semester End Competencies Reviewed with CIs, realize we could do better in measuring this	Summative: Semester End Competencies Reviewed with CIs, realize we could do better in measuring this	Summative: Semester End Competencies Reviewed with CIs, Employment, realize we could do better in measuring this
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	As above	As above	As above
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	As above	As above	As above
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	As above	As above	As above

Women's Imaging – Mammography

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RADT 3242 Community-Based Patient Care**	**RADT 4203 Patient Education in Radiology**	**RADT 4863 - Clinical Internship**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions	Formative: Weekly Assignments, Class Discussions,	Formative: Mid-term Personal and Professional Growth Assessments

			(PPGAs) and monthly student evaluations to assess progress,
	Summative: Weekly Examinations, Comprehensive Examination	Summative: Weekly Examinations, Comprehensive Examination	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Average Score for Comprehensive Examination 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	90% of students scored 85% or better on all examinations	90% of students scored 85% or better on all examinations	Average PPGA Scores by year (did not have access to courses prior to 2024) 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning
Research & Professional Development	**RADT 4933: Research Methods**	**RADT 4943: Baccalaureate Thesis - Taylor**	**RADT 4942 Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis	Formative: Weekly Assignments, Class Discussions
	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric	Summative: Completion of discussion posts with classmates about contributing to the profession
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average scores 80% or higher on the final project.	Average scores 80% or higher on the final thesis. Rubric: **Introduction and Background -** Presents relevant background material, Provides context and explains as if the reader does not understand the specific content area, Presents relevance to practice. **Statement of the Problem -** States the problem or need, Support statement of the problem with sources, Significance of the **Problem-** Clearly states the significance and backs it up with sources, Explains why the problem needs to be addressed. **Review of Literature Intro -** Provides definition of terms, Introduces the areas/topics that were	Average scores 80% or higher on final discussion post.

		explored in the review of literature, Introduces the themes and subtopics that relate to the research problem. **Review of Literature Body -** Incorporates previously published work to address key points of the manuscript, Provides a historical perspective of the topic, Includes key aspects of the topic, Discusses specific literature to provide background on what studies have already been done on the topic, what results were found, etc., Is organized into Subtopics/themes **Review of Literature Summary -** Summarizes the themes and results found from previous literature, States assumptions. **Discussion -** Discuss and summarize patterns/trends identified in the review of literature, Discusses how the findings in the review of literature relate to the problem statement, Identify gaps in the literature that were not found. **Conclusion -** Discuss conclusions that can be derived from the literature reviewed, Address how gaps in the literature are important to be addressed **Future Research -** Suggest how future research could be conducted to address the identified gaps in the literature **References -** Minimum of 5 references required, All references in the reference section must be discussed in the thesis, References are timely (must be within 10 years) or historically significant, Appropriately support the material presented, References are correctly cited in both the text and reference list. **Grammar/Spelling -** Uses appropriate and current terminology, Uses appropriate headings, Free of redundancy, APA Formatting (7th Edition)	
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores 2021: 92% 2022: 93% 2023: 88%	Average Scores by year 2021: 95% 2022: 93% 2023: 91%	Average Scores (did not have access to data prior to 2024)

	2024: 98% 2025: 98%	2024: 96% 2025: 95%	2024 - 100% 2025 - 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students have done well. The switch from an annotated bibliography (2024) for final project to a concept map has increased students scores and overall summative understanding.	Students met or exceeded threshold of evidence for student learning	Student reflections demonstrate an increased and overall understanding of the profession and their upcoming career through this final discussion activity.
Clinical Competency & Medical Ethics	**RADT 3043: Medical Ethics and Law**	**RADT 4563: Mammographic Positioning Techniques**	**RADT 4863: Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of students will score 80% or better on the final project case study	85% of students will score 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	Currently, students average 85% or above on comprehensive examinations.	Average PPGA Scores by year (did not have access to courses prior to 2024) 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 4553: Breast Anatomy, Physiology, and Pathology**	**RADT 4563: Mammographic Positioning Techniques**	**RADT 4863: Clinical Internship**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,

	Summative: Final Exam	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of students will score 80% or higher	85% of students will score 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Exam average scores: 2025 - 92% 2024 - 90% Did not have access to prior information	Exam average scores: 2025 - 85% Did not have access to prior information	Average PPGA Scores by year (did not have access to courses prior to 2024) 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Instrumentation & Quality Control	**RADT 3563 Managing Clinical Information**	**RADT 4583: Mammographic Equipment and Quality Assurance**	**RADT 4863: Clinical Internship**
Method of Measure (Direct & Indirect)	Formative: Objectives Assignments, in-class discussions	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Section exams 1-4. Average for all for 4 exams to evaluate summative knowledge retention.	Summative: Clinical logbook signed by CI's, documentation of completion of QA/QC requirements	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for all 4 exams 80% or higher	85% of students will score 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2021: 93% 2022: 95% 2023: 94% 2024: 95% 2025: 96%	Exam average scores: 2025 - 87% Did not have access to prior information	Average PPGA Scores by year (did not have access to courses prior to 2024) 2024: 100% 2025: 100%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning

Magnetic Resonance Imaging

Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RADT 3253 Community-Based Patient Care - Laurie**	**RADT 3863 Clinical Education**	**RADT 4603 MRI Physics, Instrumentation & Safety**
Method of Measure (Direct & Indirect)	Formative: Weekly reading,	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress	Formative: Objectives Assignments, Video Quizzes
	Summative: Semester End Competencies, Case Study Analysis	Summative: Summative: Semester End Competencies Reviewed with CIs, Board Exams Pass Rates, final semester PPGA scores	Summative: Section 1 & 2 Exams covers patient care and safety
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are thoroughly discussed, demonstrating a deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and complete selection and use of sterile tools is outlined . Intraprocedural Care - (20 Points): Patient management, monitoring, positioning, and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): students identified relevant anatomy on imaging studies Exceptional visual aids are used to illustrate relevant anatomy, justify the chosen catheter shape, and detail specialized interventional tools. Imaging and pathology - (20 Points): Imaging parameters are customized to the Pathology and discussed clearly.	Average Score for PPGA 80% or higher	Section 1 & 2 Exam Score of 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2025: First year of this new assessment, 100% of students met the criteria. Seemed to correlate to clinical performance grades - further analysis needed.	2025: 98% 2024: 98% 2023: unknown 2022: 86% 2021: unknown	Average Exam 1 & 2 scores by year 2021: 92%, 82.5% 2022: 84%, 79% 2023: 87% 95% 2024: 84%, 84% 2025: 97%, 96%

Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students all did great with their case study assessments. Continue to assess and evaluate new assessment simulations	Not all PPGAs were found to determine overall average scores; however, it was ascertained that an average of 90% or more of students enrolled were clinically competent. This would include the PPGA score.	Students met or exceeded threshold of evidence for student learning for all years except 2022, which was close at 79%
Research & Professional Development	**RADT 3043 Medical Ethics & Law**	**RADT 4933: Research Methods**	**RADT 4943: Baccalaureate Thesis**
Method of Measure (Direct & Indirect)	Formative: Objective Assignments and in-Class Discussions. To complete objective assignments, students are required to write out answers to a series of questions and explain the critical aspects of medical ethical concerns and laws pertaining to healthcare delivery.	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis
	Summative: Final Project Case Study and Research Paper. Students research and discuss medical ethical dilemmas, malpractice cases, and other ethical issues.	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% of students will score 80% or better on the final project case study	Average scores 80% or higher on the final project.	Average scores 80% or higher on the final thesis. Rubric: Introduction and Background • Presents relevant background material. • Provides context and explains as if the reader does not understand the specific content area. • Presents relevance to practice. Statement of the Problem • States the problem or need. • Support statement of the problem with sources. Significance of the Problem • Clearly states the significance and backs it up with sources. • Explains why the problem needs to be addressed. Review of Literature Intro • Provides definition of terms. • Introduces the areas/topics that were explored in the review of literature. • Introduces the themes and subtopics that relate to the research problem.

			Review of Literature Body • Incorporates previously published work to address key points of the manuscript. • Provides historical perspective of the topic. • Includes key aspects of the topic. • Discusses specific literature to provide background on what studies have already been done on the topic, what results were found, etc. • Is organized into Subtopics/themes Review of Literature Summary • Summarizes the themes and results found from previous literature. • States assumptions. Discussion Discuss and summarize patterns/trends identified in the review of literature. • Discusses how the findings in the review of literature relate to the problem statement. • Identify gaps in the literature that were not found. Conclusion Discuss conclusions that can be derived from the literature reviewed. • Address how gaps in the literature are important to be addressed Future Research Suggest how future research could be conducted to address the identified gaps in the literature References • Minimum of 5 references required. • All references in the reference section must be discussed in the thesis. • References are timely (must be within 10 years) or historically significant. • Appropriately support the material presented.

			• References are correctly cited in both the text and reference list. Grammar/Spelling • Uses appropriate and current terminology. • Uses appropriate headings. • Free of redundancy. APA Formatting (7th Edition) • Follows APA 7th Edition formatting. (Will be changed to AMA if submitted to the ASRT Journal for publication). Page Numbers 7 pages of content minimum (not including title page or references)
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021 - 98% 2022 - 98% 2023 - 98% 2024 - 98% 2025 - 98%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Average Scores by year 2021: 95% 2022: 93% 2023: 91% 2024: 96% 2025: 95%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Students met or exceeded the threshold of evidence for student learning
Clinical Competency & Medical Ethics	**RADT 3563 Managing Clinical Information**	**RADT 3863: Clinical Education**	**RADT 4863 Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Objectives, Assignments, in-class discussions	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.
	Summative: Section exams 1-4. Average for all 4 exams to evaluate summative knowledge retention.	Summative: Semester End Competencies Reviewed with CIs	Summative: Final clinical PPGA forms, completed by clinical instructors overseeing students at the clinical site, facilitate summative assessment. Clinical Logbook – documentation of repetitions through the ARRT account is used to provide a summative assessment of progress towards and attainment of board eligibility.

Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for all 4 exams 80% or higher	Average Score for PPGA 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2021: 93% 2022: 95% 2023: 94% 2024: 95% 2025: 96%	2025: 98% 2024: 98% 2023: unknown 2022: 86% 2021: unknown	2025: 98% 2024: 98% 2023: unknown 2022: 86% 2021: unknown
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Not all PPGAs were found to determine the overall average of scores; however, it was determined that an average of 90% or more of the enrolled students were clinically competent. This would include the PPGA score.	Not all PPGAs were found to determine the overall average of scores; however, it was determined that an average of 90% or more of the enrolled students were clinically competent. This would include the PPGA score.
Procedures, Anatomy, and Pathophysiology	**RADT 3143: Imaging Pathophysiology**	**RADT 4643: MRI Imaging of the Torso and Limbs**	**RADT 4633: MRI Imaging of the Central Nervous System**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Quizzes, Case Studies	Formative: Weekly Assignments, Quizzes, Case Studies
	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Exams	Summative: Exams
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	80% of Students will score 85% or better on Final Case Study Discussions	Average Score for Exams 80% or higher	Average Score for Exams 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Scores 2021: 98% 2022: 98% 2023: 98% - New Textbook 2024: 98% - New Textbook 2025: Not available yet - but likely around 98%	Average Scores by year 2021: 83.76% 2022: 80.88% 2023: 80.90% 2024: 86.89% 2025: 97.27%	Average Scores by year 2020: 80.9% 2021: 84.84% 2022: 84.5% 2023: 86.53% 2024: 86.53% 2025:
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Students exceeded threshold of evidence for student learning	Students exceeded threshold of evidence for student learning

Instrumentation & Quality Control	RADT 4630: MRI Simulation	RADT 4603: MRI Physics, Instrumentation, & Safety	RADT 4942 Transition to Specialty Practice
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Quizzes, Case Studie	Formative: Objectives Assignments, Video Quizzes	Formative: Class Discussion and in-class review activities
	Summative: Exams utilizing the simulation software.	Summative: Exams #3, & #4	Summative: Exams #3 & #4 are focused on MRI physics, instrumentation, image processing, and QA. Board Exam Pass Rates
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Students will pass each simulation with an accuracy of 60% or higher. This simulator is distinctly difficult, even for seasoned technologists.	Exam Scores of 80% or higher (Exam 3 & 4)	Average Score for Exam #3 & #4 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Most students passed each simulation with a score of 70% or higher.	Average Exam 3 & 4 Scores by year 2021: 90%, 92% 2022: 82.5%, 80.5% 2023: 90%, 93% 2024: 92%, 95% 2025: 92%, 89%	Average Scores by year (Exam #3, Exam #4) 2021: 95%, 96% 2022: 94%, 91% 2023: 86%, 85% 2024: 91%, 93% 2025: 89%, 93%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning	Students exceeded the threshold of evidence for student learning

ARRT data for pass rates on the MRI certification exam are flawed, as it appears that many students are not accounted for in the statistical evidence. For example, it appears no student took the examination in 2022, which is inaccurate. Between 2024 and 2025, 17 students took the exam, and 59% passed. Keep in mind, the national average is 66.5%. Due to this statistical decline, the program director is reevaluating the selection criteria and simulation models.

Nuclear Medicine

Learning Objectives	Foundational Class	Foundational Class	Advanced Class
Patient Care & Education	**NUCM 4861: Clinical Education**	**RADT 3253 Specialty-Based Care**	**RADT 4942: Transition to Specialty Practice**
Method of Measure (Direct & Indirect)	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Weekly Assignments, Class Discussions, Quizzes

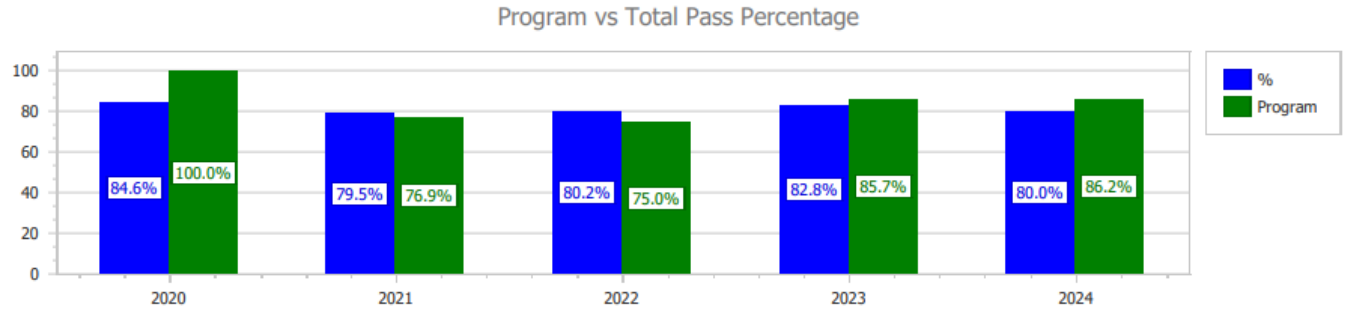
	Summative: Semester End Competencies, Professional Performance and Growth (PPG) assessment, and clinical hours .	Summative: Semester End Competencies, Case Study Analysis	Summative: Exams
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)		85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are thoroughly discussed, demonstrating a deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and comprehensive selection of sterile tools is justified, accompanied by a clear explanation of how the Intervention Considerations influenced the setup. Intraprocedural Care - (20 Points): Patient management, monitoring, positioning, and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): Exceptional visual aids are used to illustrate relevant anatomy, justify the chosen catheter shape, and detail specialized interventional tools. Imaging and pathology -20 Points): Imaging parameters are customized to the Pathology and discussed clearly.	The scores were from two mock board exams.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores 2021: 96.75 2022: 98.5% 2023: 98.61% 2024: 97.65% 2025: 99.47%	2021: 2022: 2023: 2024: 2025: First year of this new assessment 100% of students met criteria	Average Scores by year 2021: 2022: 2023: 2024: 65.62% 2025: 71.65%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students all did great with their case study assessments. Continue to assess and evaluate new assessment simulations	Students met or exceeded threshold of evidence for student learning

Research & Professional Development	**RADT 3423: Federal Regulations**	**RADT 4933: Research Methods**	**RADT 4943: Baccalaureate Thesis**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis
	Summative: N/A	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average overall assignment scores at 80% or higher	Completion of a Project Map (please insert rubric)	Students will work in small teams and/or alone on a research mentoring project. Each team is responsible for mentoring students within the lab, maintaining both qualitative and quantitative data, and compiling the data into a final thesis. Rubric: Topic (5) Abstract (5) Intro/Lit Review (30) Methods/Procedure (20) Results/Disc/Conclusions (30) References (10)
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores by year 2023: 89.50% 2024: 98.54% 2025: 99.64%	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Average Scores by year 2021: 97.07% 2023: 93.44% 2024: 90.85% 2025: 96.21%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	All students completed the project map according to the professional rubric at 80% or higher	All students completed the BS Thesis according to the professional rubric at 80% or higher
Clinical Competency & Medical Ethics	**NUCM 4861: Clinical Education**	**NUCM 4862: Clinical Education**	**NUCM 4863: Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,
	Summative: Semester End Competencies Reviewed with CIs	Summative: Semester End Competencies Reviewed with CIs	Summative: Semester End Competencies Reviewed with CIs
Threshold for Evidence of Student Learning (Ex. 85% of students	Clinical education, including competencies, PPGA, and hours completed at or above 80%	Clinical education, including competencies, PPGA, and hours completed at or above 80%	Clinical education, including competencies, PPGA, and hours completed at or above 80%

will score 80% or better on 10 questions)			
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Average Scores 2021: 96.75 2022: 98.5% 2023: 98.61% 2024: 97.65% 2025: 99.47%	Average Scores 2021: 2022: 80.66% 2023: 99.31% 2024: 97.64% 2025: 97.26%	Average Scores 2021: 100% 2022: 99.95% 2023: 99.97% 2024: 99.27% 2025: 99.7%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning	Students met or exceeded threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 3143: Imaging Pathophysiology**	**RADT 3144 Imaging Pathophysiology II**	**NUCM 4223: Nuclear Cardiology**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies
	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: 2 Exams
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	80% of Students will score 85% or better on Final Case Study Discussions	80% of Students will score 85% or better on Final Case Study Discussions	Students will complete the examinations at 80% or above.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Scores 2021: 98% 2022: 98% 2023: 98% - New Textbook 2024: 98% - New Textbook 2025: Not available yet - but likely around 98%	Scores 2021: 98% 2022: 98% 2023: 98% - New Textbook 2024: 98% - New Textbook 2025: Not available yet - but likely around 98%	Average Scores by year 2021: 2022: 2023: 2024: 85.17%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Students met or exceeded the threshold of evidence for student learning

Instrumentation & Quality Control	NUCM 4103: Radiopharmaceuticals and Dosages	NUCM 4213: Scanning and Imaging I	NUCM 4333: Quality Assurance
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Discussion, Quizzes.	Formative: Weekly Assignments, Class Discussions, Case Study Presentations	Formative: Weekly Assignments, Class Discussions, Case Study Presentations
	Summative: Final Comprehensive Exam	Summative: Semester End Competencies Reviewed with CIs, realize we could do better in measuring this	Summative: Semester End Competencies Reviewed with CIs, Employment, realize we could do better in measuring this
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Complete the final comprehensive examination at 80% or higher.	Complete the final comprehensive examination at 80% or higher.	Complete the final comprehensive examination at 80% or higher.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Due to changes in adjunct faculty (2023); limited data over the 5 years requested is provided. Average Scores by year 2021: n/a 2022: n/a 2023: 85.4%% 2024: 84.2% 2025: 78.7%	Due to changes in adjunct faculty (2023); limited data over the 5 years requested is provided. Average Scores by year 2021: n/a 2022: n/a 2023: n/a 2024: 93% 2025: 92%	Due to changes in adjunct faculty (2023); limited data over the 5 years requested is provided. By review of grades, students have scored between 86-88%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning

Over the past two years, WSU graduates from the Nuclear Medicine program have exceeded the ARRT national average for pass rates.



This is particularly impressive, as the program has expanded from 24 students in 2022 to a total of 33 students in 2024.

Radiation Therapy

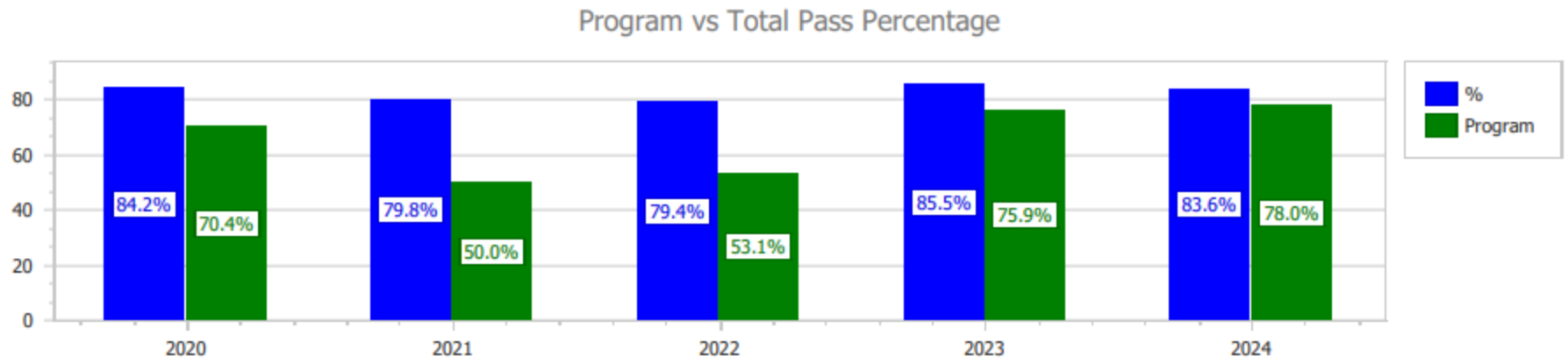
Learning Objectives	Foundational Class	Intermediate Class	Advanced Class
Patient Care & Education	**RATH 4410 Radiation Oncology 1**	**RATH 4412 Radiation Oncology 2**	**RATH 4414 Radiation Oncology 3**
Method of Measure (Direct & Indirect)	Formative: Class discussions, appropriate demonstration of skills for entry-level patient treatment planning	Formative: Class discussions, appropriate demonstration of skills for intermediate patient treatment planning	Formative: Class discussions, appropriate demonstration of skills for advanced patient treatment planning
	Summative: Comprehensive Examination	Summative: Comprehensive Examination	Summative: Comprehensive Examination
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Over the last 5 years, 80% of students have achieved 75% or higher on the certification exam	Over the last 5 years, 80% of students have achieved 75% or higher on the certification exam	Over the last 5 years, 80% of students have achieved 75% or higher on the certification exam
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2023: Board Exam Average score: 75.9 2024: Board Exam Average score: 80.4 *ARRT published statistics, Utah	Over the last 5 years, 80% of students have achieved 75% or higher on the certification exam. 2023: Board Exam Average score: 75.9 2024: Board Exam Average score: 80.4 *ARRT published statistics, Utah	Over the last 5 years, 80% of students have achieved 75% or higher on the certification exam. 2023: Board Exam Average score: 75.9 2024: Board Exam Average score: 80.4 *ARRT published statistics, Utah
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Research & Professional Development	**RADT 3253 Specialty-Based Patient Care**	**RADT 4933: Research Methods**	**RADT 4943 Baccalaureate Thesis**
Method of Measure (Direct & Indirect)	Formative: Mid-term Personal and Professional Growth Assessments (PPGAs) and monthly student evaluations to assess progress,	Formative: Module Assignments, Quizzes, and in-Class Discussions/Activities	Formative: Weekly Writings Sections of Thesis, Laboratory Involvement and Documentation of Mentoring
	Summative: Semester End Competencies, Case Study Analysis.	Summative: Completion of Final Project Concept Map. Rubric	Summative: Final Thesis - Rubric
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	85% meet standards of case study analysis using the rubric below Safety & Preparation - (20 Points): All safety and preparation steps are thoroughly discussed, demonstrating a	Average scores 80% or higher on the final project.	Students will work in small teams and/or alone on a research mentoring project. Each team is responsible for mentoring students within the lab, maintaining both qualitative and

	deep understanding of patient and staff protection. Sterile and Technical setup - (20 Points): A logical and comprehensive selection of sterile tools is justified, accompanied by a clear explanation of how the Intervention Considerations influenced the setup. Intraprocedural Care - (20 Points): Patient management, monitoring, positioning, and communication are addressed with specific examples relevant to the case complexity. Case specifics & Anatomy - (20 Points): Exceptional visual aids are used to illustrate relevant anatomy, justify the chosen catheter shape, and detail specialized interventional tools. Imaging and pathology -20 Points): Imaging parameters are customized to Pathology and discussed clearly.		quantitative data, and compiling the data into a final thesis. Rubric: Topic (5) Abstract (5) Intro/Lit Review (30) Methods/Procedure (20) Results/Disc/Conclusions (30) References (10)
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	2021: 2022: 2023: 2024: 2025: First year of this new assessment 100% of students met criteria	Average Scores 2021: 92% 2022: 93% 2023: 88% 2024: 98% 2025: 98%	Average Scores by year 2021: 96% 2022: 94% 2023: 96% 2024: 96% 2025: 95%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students all did great with their case study assessments. Continue to assess and evaluate new assessment simulations	Students have done well. The switch from an annotated bibliography (2024) for the final project to a concept map has increased students' scores and overall summative understanding.	Through their writing, students demonstrate their ability to critically assess data, enhance their mentoring skills, and identify areas for improvement. This is key for the next generation of clinical professionals.
Clinical Competency & Medical Ethics	**RATH 4861: Clinical Education**	**RATH 4862: Clinical Education**	**RATH 4863: Clinical Education**
Method of Measure (Direct & Indirect)	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.	Formative: Clinical PPGA forms completed by clinical instructors overseeing students at the clinical site allow progress to be assessed throughout the program.
	Summative: Semester-end clinical PPGA forms, completed by clinical instructors	Summative: Semester-end clinical PPGA forms, completed by clinical instructors	Summative: Semester-end clinical PPGA forms, completed by clinical instructors

	overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.	overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.	overseeing students at the clinical site, facilitate summative assessment. The Clinical Logbook, which documents repetitions through the ARRT account, is used to provide a summative assessment of progress toward and attainment of board eligibility.
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for PPGA 80% or higher	Average Score for PPGA 80% or higher	Average Score for PPGA 80% or higher
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Over the past 5 years, students have averaged near 90% on their PPGA scores.	Over the past 5 years, students have averaged near 90% on their PPGA scores.	Over the past 5 years, students have averaged near 90% on their PPGA scores.
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning
Procedures, Anatomy, and Pathophysiology	**RADT 3143: Imaging Pathophysiology**	**RADT 3144: Imaging Pathophysiology II**	**RADT 4942 Advanced Seminar**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Weekly Assignments, Class Discussions, Case Studies	Formative: Class discussions
	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Final Case Studies (Rubric), Semester End Clinical Competencies, realize we could do better in measuring this	Summative: Comprehensive Examination
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	80% of Students will score 85% or better on the Final Case Study Discussions	80% of Students will score 85% or better on the Final Case Study Discussions	80% of students enrolled will perform 80% or better on final comprehensive examinations.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Rubric Complaint/Symptoms 75 Clinical Findings 75 Lab Tests 75 Medical Management 75 Desired Outcomes 75	Rubric Complaint/Symptoms 75 Clinical Findings 75 Lab Tests 75 Medical Management 75 Desired Outcomes 75	Over the last five years, 85% of students have achieved a score of 80% or higher on the comprehensive exam. Specific scores for the last 2 years recorded by the new instructor:

	Total 375 points	Total 375 points	2024: 88% 2025: 88.4%
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Scores are consistently good and also align with student scores on this section in the certification exam. However, it would be measured better by including a summative exam in addition to the case study, although the case study is a good measure of working through patient cases and problem-solving.	Students met or exceeded the threshold of evidence for student learning
Instrumentation & Quality Control	**RATH 4430 Radiation Therapy Physics**	**RATH 4342 Introduction to Treatment Planning**	**RATH 4446 Quality Assurance (SI)**
Method of Measure (Direct & Indirect)	Formative: Weekly Assignments, Class Discussions	Formative: Class Discussions and Student Assignments	Formative: Class Discussions and Student Assignments
	Summative: Quizzes/Simulation	Summative: Examination	Summative: Examination
Threshold for Evidence of Student Learning (Ex. 85% of students will score 80% or better on 10 questions)	Average Score for Comprehensive Examination 80% or higher	Over the last five years, 80% of students have achieved a score of 75% or higher on the certification exam.	Over the last five years, 80% of students have achieved a score of 75% or higher on the certification exam.
Findings Linked to Learning Outcomes (Ex. 93% of students scored 80% or better on 10 questions)	Students consistently achieved an average of above 85% over the last five years of Examinations.	2023: Board Exam Average score: 75.9 2024: Board Exam Average score: 80.4 *ARRT published statistics, Utah	2023: Board Exam Average score: 75.9 2024: Board Exam Average score: 80.4 *ARRT published statistics, Utah
Interpretation of Findings (Ex. Students successfully demonstrated interpretation skills)	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning	Students met or exceeded the threshold of evidence for student learning

The therapy program has doubled in size over the last two years, and the numbers have been encouraging because the WSU pass rate has improved toward the national average. There have been changes in the adjunct faculty, discussions on improved curricular delivery, and enhanced clinical site contact, with two faculty members assigned to the task. One of the critical differences in Radiation Therapy is that most students are employed and work outside of the state of Utah. Therefore, it requires persistent work to make connections that support success. Currently, the faculty are focused on improving radiation physics as this appears to be a major hurdle in successful testing and has been noted as an area of concern for the results coming in for 2025.



B. How do the program faculty assess their instructional program offerings and outcomes? Do program faculty engage advisory groups such as local and state employers in assessment? If not, how do the program faculty ensure learning and content are relevant?

The School of Radiologic Sciences maintains a rigorous, data-driven quality assurance process to validate instructional efficacy and ensure workforce readiness. Assessment is conducted through a dual-pronged approach:

Outcomes-Based Assessment: Instructional quality is measured through a combination of formal formative and summative assessments, adherence to minimum programmatic standards, and an analysis of national board examination pass rates. These metrics serve as the primary indicators of student competency and curriculum success.

Stakeholder Engagement: To ensure content relevance, the program actively engages with local employers, professionals, and community partners. This collaboration establishes a feedback loop that directly integrates industry trends and workforce needs into the curriculum, ensuring graduates are well-prepared for current clinical realities.

Provide a brief summary of the program's contribution to supporting, improving, and/or revitalizing the General Education program at WSU:

Although we do not have direct involvement in General Education, we do assist in Health Sciences with their certificate paths. The Health Sciences associate's degree is designed with specialized emphases to accelerate workforce entry and professional credentialing. The **Radiography Emphasis** provides students with a foundational understanding of diagnostic imaging, qualifying them to obtain a limited radiography license in the State of Utah and serving as a gateway to further study in radiologic sciences. Concurrently, the **Cardiac Technician Emphasis** offers rigorous clinical training that prepares students for immediate certification, specifically targeting the

Intermountain EKG exam and the Cardiovascular Credentialing International (CCI) examination. These pathways ensure students graduate with employable, industry-recognized credentials.

Limited Radiography Certificate

RADT 1021 Limited Clinical Simulation	1
RADT 1022 Introduction to Radiologic Technology	2
RADT 1023 Limited Radiographic Anatomy & Positioning	2
RADT 1024 Limited Principles of Radiographic Exposure	3
RADT 1025 Limited Patient Care & Assessment	2
HTHS 1110 LS Integrated Human Anatomy and Physiology I	4

Cardiology Technician Certificate

RADT 1012 Cardiographic Technician	3
RADT 1013 Rhythm Analysis	3
RADT 1014 Basic Cardiac Imaging	3
RADT 1015 Patient Care in Cardiology	2
HTHS 1110 LS Integrated Human Anatomy and Physiology I	4
HTHS 1111 Integrated Human Anatomy and Physiology II	4

C. Five/Seven-year Assessment Summary

In this section, we have provided a summary of our assessment findings and the actions taken since our last program review.

Since the last program review in 2017/18, the School of Radiologic Sciences has engaged in a rigorous, continuous assessment process driven by a shift in strategic focus from aggressive growth to sustainable quality and program maintenance. Assessment findings over the past five years reflect a period of significant enrollment expansion, a 58.47% increase between 2021 and 2025, and the subsequent calibration of curriculum and admissions standards to ensure workforce readiness.

Response to Previous Program Review (2018) The 2018 review identified the curriculum as well-planned but noted two primary areas for improvement: the need for higher benchmarks and the limitations of physical classroom space

- **Benchmarks:** In response to the recommendation to establish benchmarks higher than 75%, the program raised the acceptable threshold for student achievement to 80% or above across all formative and summative assessments.
- **Space Limitations:** While acquiring new dedicated space remains unlikely, the program addressed this constraint by adding course sections, utilizing evening labs, hiring additional lab assistants, and implementing lecture capture technologies for off-campus delivery.

Assessment Methodology Over the assessment cycle, the School has standardized student learning outcomes across Certificate, Associate, and Bachelor degrees to focus on six core competencies: Patient Care and Education; Professional Development and Research; Biologic Effects and Safety; Clinical Competency and Medical Ethics; Procedures, Anatomy, and Pathophysiology; and Instrumentation and Quality Control. Assessment data is collected through direct measures (comprehensive exams, clinical competencies, simulation projects) and indirect measures (graduate surveys, advisory board evaluations, and certification pass rates),.

Summary of Assessment Findings (2019–2025)

• **Radiography (AAS):** The program maintained high ARRT pass rates between 2017 and 2020 (86.7%–90.7%). A decline was observed in 2023 (77.1%) and 2024 (74.6%), attributed to a surge in enrollment that included students with lower initial academic metrics and a high volume of independent study students seeking remediation. In response, the program tightened acceptance standards for remediation and strengthened

certificate coursework, resulting in a recovery to an 80% pass rate by 2025. Throughout this period, students consistently met or exceeded the 80% threshold in clinical competency and anatomy assessments.

• **Nuclear Medicine:** Assessment results indicate strong performance, with graduates exceeding the ARRT national average for pass rates in 2023 and 2024. The program successfully expanded from 18 to 41 students while maintaining high academic standards.

• **Radiation Therapy:** The program doubled in size over the last two years. Pass rates have improved toward the national average, though radiation physics remains a specific area identified for instructional improvement.

• **MRI:** Assessment of the MRI emphasis revealed challenges in certification outcomes, with a 59% pass rate for the 17 students testing between 2024 and 2025. Discrepancies in ARRT data reporting were also noted. Consequently, the program director is currently reevaluating selection criteria and simulation models to address these outcomes.

• **Diagnostic Medical Sonography:** Approximately 74% to 78% of graduates complete post-graduation certification. Assessment tracking in this area is complicated by state licensure laws that do not strictly require certification for practice, as well as name changes among graduates. Students meet or exceed all comprehensive examination benchmarks.

Actions Taken and Closing the Loop. Based on assessment data collected during this review period, the School implemented several targeted actions to improve student learning:

• **Curricular Adjustments:** To improve completion rates in the Bachelor's Thesis course, the final project format was switched from an annotated bibliography to a concept map/research proposal. This change resulted in increased student scores and better summative understanding.
• **Simulation Technology:** To address clinical constraints and enhance safety training, the program integrated high-fidelity simulation into the curriculum, including SonoSim for sonography and new simulators for Interventional Radiology and MRI,.
• **Standardization:** The program implemented a scaffolded competency metric to better document levels of learning (Introduced, Developed, Mastered) across the curriculum.

• **Adjunct Faculty and Clinical Instructor Training:** Most adjunct and clinical faculty have limited educational training, and the faculty has explored and continues to find ways to improve the knowledge and skills of experts who serve in these capacities.

Moving forward, the School focuses on "Accountability and Improvement" by systematically integrating feedback checkpoints to refine the assessment plan and ensure all graduates meet the elevated quality assurance benchmarks.

Assessment of Graduating Students

The School of Radiologic Sciences utilizes a comprehensive, data-driven assessment strategy to ensure that all graduating students, whether at the Associate or Bachelor level, are prepared for professional certification and workforce integration. This process integrates direct and indirect measures mapped to six standardized student learning outcomes: Patient Care and Education; Professional Development and Research; Biologic Effects and Safety; Clinical Competency and Medical Ethics; Procedures, Anatomy, and Pathophysiology; and Instrumentation and Quality Control.

Assessment Methodology and Benchmarks To ensure instructional efficacy and student competency, the program employs a combination of formative and summative assessments. Formative assessments, such as weekly assignments, simulations, and Personal and Professional Growth Assessments (PPGAs), are used to monitor student progress throughout the curriculum. Summative assessments, utilized to determine graduation readiness, include comprehensive final examinations, final clinical competency evaluations, and capstone research projects,.

In response to recommendations from the previous program review, the School has raised the threshold for evidence of student learning. The acceptable benchmark for student achievement across all graduating assessment measures has been established at 80% or higher, ensuring graduates meet rigorous internal quality standards before attempting national board examinations.

Associate of Applied Science (AAS) Assessment Graduating students in the AAS Radiography program are assessed on their ability to bridge "high-touch patient care and high-tech scientific application". Key assessment components for AAS graduates include:

• **Clinical Proficiency:** Graduates must successfully complete a rigorous clinical education component comprising 1,488 hours and mastering 51 distinct clinical competencies.

• **Comprehensive Review:** Students are required to complete *RADT 2913: Comprehensive Review*, where they must achieve a score of 80% or higher to demonstrate readiness for the ARRT certification exam,.
• **Case Studies:** All AAS students must complete a case study to demonstrate critical thinking and the application of theory to practice.

Bachelor of Science (BS) Assessment Graduating Bachelor's degree students focuses on advanced clinical specialization, leadership, and research.

• **Research and Synthesis:** A primary summative assessment for BS students is *RADT 4943: Baccalaureate Thesis*. To improve learning outcomes, the final project format was recently updated from an annotated bibliography to a concept map and research proposal/thesis. This change has resulted in increased student scores and a deeper summative understanding of research mentorship and data analysis,.
• **Transition to Practice:** Students in advanced emphases (such as CT, MRI, and Radiation Therapy) complete Comprehensive Review courses (e.g., *RADT 4942*). These courses utilize comprehensive exams focused on patient care, safety, ethics, and imaging procedures to assess board eligibility.
• **Advanced Clinical Competency:** Similar to the AAS level, BS students must complete 100% of certifying competencies required by their specific credentialing body (e.g., ARRT, ARDMS) to qualify for graduation and board examinations.

External Validation: The ultimate assessment of graduating students is their performance on national certification examinations. The program tracks pass rates for the ARRT (Radiography, Nuclear Medicine, Radiation Therapy, MRI, etc.) and ARDMS/CCI (Sonography) examinations as a critical external metric of instructional quality and workforce readiness.

Standard D - Academic Advising and Student Engagement

<u>Advising Strategy and Process</u>

Prior to acceptance into the AAS Radiography program, students receive advisement through the DCHP Advisement office, where additional questions regarding eligibility and the application process are answered by department staff. Upon acceptance of the AAS program, the faculty then serve as advisors. General education course advisement and support continue to be provided through the DCHP Advisement office.

Before acceptance into a bachelor's program, department staff answer questions about eligibility and the application process. Upon acceptance of a bachelor's program, the faculty serve as the advisors. General education course advisement and support continue to be provided through the DCHP Advisement office.

For all accepted students, department faculty and staff ensure that students are on track to graduate on time, address any concerns, and follow up with students to ensure they are meeting program requirements.

Effectiveness of Advising

Based on the program reviews and supporting documents, the School of Radiologic Sciences demonstrates a highly effective, well-organized advising strategy that is integral to student success and retention. The advising process is characterized by a "well-organized strategy" where all faculty and staff actively participate, ensuring that roles are clearly defined and continuously assessed for effectiveness.

Student Satisfaction and Support. Formal reviews of the program have highlighted that students express a high level of satisfaction with advising both prior to admission and throughout the duration of their program. Faculty and staff are described as an "effective team committed to student success," providing academic and personal support that students feel is readily available. The 2025 Self-Study reaffirms this commitment, citing "personalized academic advisement" as a core component of the program's dedication to fostering professional growth.

Structure and Career Mapping: The advising structure is designed to guide students through the program's "lock-step" curriculum, facilitating timely degree completion and providing clear career mapping. As students progress from basic skills training, advisement protocols are designed to direct them to appropriate specialty advisors specific to their chosen emphasis. This structure is evident in the clear assignment of primary and secondary faculty contacts for every certificate and degree emphasis, ranging from Cardiology Technician to Radiation Therapy, ensuring students have access to subject-matter experts for guidance.

Past Changes and Future Recommendations

We continually work to clarify our requirements. To reduce confusion and frustration, we have updated our webpages and added new videos and orientation materials.

What strengths/weaknesses do the programs have with recruiting and retaining students from a variety of backgrounds? How is student success supported within the program(s)?

Strengths

• **Hybrid and Virtual Delivery Models:** A significant strength in recruiting diverse populations is the program's unique hybrid and virtual delivery models. These formats enable the School to extend its reach beyond the immediate campus, serving students in rural communities, regional areas, and those with flexible schedules.

• **Military Partnerships:** The program is highly commended for its vision in developing relationships with the military community. This strategic implementation enables active-duty service members to pursue degrees and credentials that translate to the private sector, thereby diversifying the student body with individuals from diverse geographic and professional backgrounds.

• **Certificate Pathways as Gateways:** The inclusion of certificate programs (e.g., Limited Radiography, Cardiology Technician) supports recruitment by providing accelerated entry points into the workforce. These certificates serve as gateways for students to enter the field and potentially continue into higher-level degrees.

• **Increased Access:** In recent years, the program shifted to a strategy of "Access and Appropriate Growth." The 2023 Biennial Report noted that a rapid increase in student acceptance to meet national staffing shortages resulted in expanded diversity among the student population.

Faculty Outreach: Faculty travel to and teach in various locations including: Ogden, Provo, Outreach, and Regional campuses (AZ and MT). This willingness to meet students within their communities helps students maintain their connections to their roots and increases clinical site retention.

Weaknesses and Challenges

• **International Enrollment:** While the program curriculum includes "Global Competencies" and opportunities for international study, enrollment of international students remains limited due to the current climate regarding travel and immigration. However, the program maintains virtual delivery models that retain the potential to serve international students should the climate shift.

• **Academic Preparedness Variance:** The recent surge in enrollment (a 58.47% increase from 2021 to 2025) successfully recruited a larger number of students, but it also brought in students with "lower initial academic metrics" and less prior experience than previous cohorts. This created a challenge, as evidenced by a temporary dip in ARRT pass rates and an increase in independent study students seeking remediation.

Support for Student Success

To retain students and ensure their success, particularly given the wider range of academic backgrounds now entering the program, the School has implemented several robust support mechanisms:

1. Comprehensive Advising and Career Mapping

- The program utilizes a "well-organized strategy" for advising where faculty and staff are deeply committed to student success. Students report high satisfaction with the personalized academic advisement they receive.
- The curriculum follows a "lock-step" approach that provides clear career mapping, ensuring students understand their trajectory toward graduation and professional practice.
- Specific faculty are assigned as primary and secondary contacts for every emphasis (e.g., MRI, CT, Sonography), ensuring students have access to specialized guidance.

2. Mentoring and Peer Leadership

- Mentoring is embedded directly into the learning objectives. For example, in the Bachelor's programs, students are required to "act as mentors and leaders," and recent thesis topics in Sonography have focused specifically on the benefits of peer mentoring.
- This structure fosters a supportive peer-to-peer teaching model that helps retain students by building a community of learning.

3. Remediation and Standards

- In response to the challenges associated with the enrollment surge, the program acted to protect student success rates by "tightening" the standards for acceptance into remediation and making certificate coursework more robust. This ensures that students are truly prepared before advancing to higher-stakes testing.

4. Simulation and Technology

- To support students who may need additional practice in a safe environment, the program has integrated high-fidelity simulation (such as SonoSim and MRI simulators). These tools allow students to "test strategies in a safe space, receive immediate feedback, and adjust their approach in real time".
- The program also utilizes lecture capture and ZOOM technologies to maintain connection with students in hybrid tracks, ensuring they remain engaged with faculty despite being off-campus.

Standard E - Faculty
Programmatic/Departmental Teaching Standards

The School of Radiologic Sciences employs a comprehensive set of teaching standards designed to bridge the gap between "high-touch patient care and high-tech scientific application". These standards are structured around a hybrid pedagogical approach, rigorous curricular scaffolding, and a dual-pronged quality assurance strategy.

Scope of Instruction and Pedagogy The departmental teaching standards move beyond simple technical training to encompass the full spectrum of a healthcare provider's role. Instruction is divided into two primary domains:

- **Clinical and Technical Breadth:** Faculty deliver instruction on the "hard sciences" of medical imaging, including anatomy, pathophysiology, and the physics of image production.
- **Humanistic and Ethical Depth:** The curriculum emphasizes "soft skills," ensuring students are trained in patient education, responding to diverse populations, and navigating complex ethical and legal landscapes.

The pedagogy blends **didactic learning** (traditional lectures and seminars) with **experiential clinical application** (simulation labs and mentorship). Additionally, the program emphasizes **evidence-based practice**, requiring students to engage with professional literature and research to cultivate scientific literacy.

Academic Rigor and Scaffolding Teaching standards are defined by a scaffolded progression of learning objectives that gradually escalate cognitive load. The curriculum map classifies learning into three distinct levels:

- **Foundational (Introduced):** Students acquire essential facts and terminology (e.g., "Students know and use appropriate methods").
- **Application (Developed):** Students apply knowledge in dynamic scenarios (e.g., "administer contrast" or "respond to patient populations").
- **Mastery (Synthesis & Evaluation):** The highest level requires critical thinking, such as evaluating images for diagnostic quality or interpreting quality assurance tests.

This "lock-step" curriculum approach ensures that students master reasoning behind procedures rather than simply memorizing steps.

Faculty Qualifications and Development

To maintain high educational standards, the program employs a diverse group of faculty with expertise in varied imaging specialties. Teaching standards are supported through:

- **Mentorship:** Senior faculty actively mentor newer faculty to ensure stability and quality.
- **Module Format:** Courses utilize a module format, though faculty retain the freedom to update coursework to reflect technological advancements.
- **Continuous Review:** There is a formal, ongoing student evaluation and annual review of faculty performance, including tenure-track, adjunct, and clinical instructors.

The faculty assesses the efficacy of their instructional program through formative assessments (assessments *for* learning, such as checklists during lab simulations) and summative assessments (assessments *of* learning, such as board exams) as listed in this document. To ensure teaching content remains relevant, the faculty engages with local employers, community partners, professional organizations, and publications. This feedback loop ensures that the curriculum reflects current industry trends and workforce needs.

Faculty Qualifications – Educational Backgrounds

Faculty	Highest Degree Earned	Qualifications
Rex Christensen	MHA	R.T. (R)(MR)(CT)(ARRT) CIIP, MRSO (MRSC™)
Victor Shane Clampitt	MSRS	R.T.(R)(MR)(ARRT) MRSO (MRSC)
Laurie Coburn	Ed.D.	RRA,RT(R)(CV)(ARRT), RPA (CBRPA)
Robert Ferguson	MSRS	R.T. (R) (ARRT)
Casey Neville	DHSc	R.T.(R)(ARRT)
Tanya Nolan	Ed.D.	RT(R)(ARRT), RDMS, FSDMS
Kim Parkinson	DHSc	R.T.(R)(MR)(ARRT)(MRSO)
Ambree Penrod	EdD	RT(R)(ARRT), RDMS
Taylor Ward	Ph.D.	R.T.(R)(CT)(MR)(ARRT)

Adjunct Faculty	Highest Degree Earned	Qualifications
Daryn Ashby	MSRS	R.T.(R)(T)(ARRT)
Ashley Hall	BS	RDCS
Jeffery Jensen	MBA	ACS, RDCS
Brandon Kemp	B.S	R.T.(R)(N)(ARRT)
Christopher Marston	B.S.	CMD R.T.(R)(T)(ARRT)
Michael Martin	B.S	CNMT, NMTCB (CT), R.T.(R)(ARRT)
Shawna Noyes	B.S	CNMT, R.T.(R)(CT)(ARRT)
Jennifer Santiago	B.S.	R.T.(R)(M)
Heather Sproul	B.S.	R.T.(R)(T)(ARRT)
Chase Watson	B.S.	RDCS, RVT

The departmental teaching standards can be likened to the construction of a skyscraper: the **Foundational** teaching provides the bedrock (terminology and safety), the **Application** phase builds the steel framework (technical skills and procedures), and the **Mastery** phase installs the complex operating systems (critical thinking and ethics), ensuring the final structure is not only stable but fully functional and adaptable to its environment.

Faculty Qualifications – Professional Engagement

Faculty	Professional & Community Organization	Positions Held
Rex Christensen	ABII ABII ASRT ASRT ASRT ASRT Utah Honor Flight Willard City	Vice Chair Committee Chair for Continuing Education International Speaker Corporate Program Review Committee Mentor Committee MR Delegate Board Member Council Member

Victor Shane Clampitt	Utah DOPL Radiologic Technology Utah DOPL Radiologic Technology Utah DOPL Geology American Board of Magnetic Resonance Safety ASAHP Clinical Education Committee Weber State University Radiation Safety Committee	Chairman of the Board/2018-2025 Board Member/2017-2025 Board Member 2023-Present Member 2019-Present Member 2022-Present Member 2021-Present
Laurie Coburn	ASRT ASRT ASRT ASRT USRT USRT USRT	Editorial Review Board/2024-Current Practice Standards Council CI/VI/2025 - Current RRA Curriculum Revision Workgroup 2025-Current Vice Chair/Delegate CI/VI 2021-2024 Chair of the Board/2020-2021 President 2019-2020 President Elect 2018-2019
Robert Ferguson	USRT USRT ASRT	Advocacy Representative – 2024-2025 President-Elect - Present Chapter Delegate 2025-2026
Casey Neville	USRT USRT USRT USRT ASRT ASRT ASRT ACERT ACERT MSRT	Member: 2007- present Chairman of the Board 2024-25 President 2023-24 President Elect 2022-23 Chapter Delegate 2022 Chapter Delegate 2023 Chapter Delegate 2024 Poster Committee Member 2014-2022 Poster Committee Chair 2016-2022 Education Committee 2021- present

	ISRRT	2016- present
Tanya Nolan	SDMS SDMS SDMS SDMS SDMS ASRT ASRT USRT USRT ACERT	Member 2008 – Present Fellow 2025 – Present Director at Large 2023-2025 Events Management Chair 2021-2023 Job Analysis Task Force Chair - Present Member 2011 – present Editorial Review Board 2019-2025 Member 2012-present Advocacy Representative 2019-2021 ACERT Board of Directors 2016-2021
Kim Parkinson	ACERT USRT	Secretary/Treasurer (present) President (president)
Ambree Penrod	USRT USRT SDMS SDMS ASRT ACERT DOPL	Member: 2022-present Treasurer: 2025-2027 Member: 2015-present CME Reviewer: 2023-present Member: 2022-present Essay Review Committee: 2025 Current Board Member
Taylor Ward	ASRT ASRT ASRT USRT USRT USRT	Education Chapter Delegate/2026 CT Chapter Delegate Chair/2025 CT Chapter Delegate/2023 Chairman of the Board/2023-24 President/2022-23 President-elect/2021-22

Faculty Scholarship (5 years)

Faculty	Publications	Presentations
Rex Christensen		Rex has made several presentations at ACERT, USRT, and ASRT. Unfortunately, he has been out of the office on medical leave and will complete this section upon return.
Victor Shane Clampitt	Clampitt, V.S. (2025). Patient Shielding in Radiography. Radiologic Technology 96(3) 233-240	Clampitt, V.S "AI's Double-Edged Sword: How to Design Assignments to be AI Proof." Presented at the Association of Schools Advancing Health Professions (ASAHP) conference in Indianapolis, IN. October, 2024. Clampitt, V.S., O'Sullivan-Maillet, J. "Clinical Education in Transition: Recommendations and Strategies 2025 Update: Preparing Professionals for Practice" Presented at the Association of Schools Advancing Health Professions (ASAHP) conference in Atlanta, GA, October 2024. Clampitt, V.S. Johnson, K. "Health Promotion and Disease Prevention in Health Professions Coursework" Presented at the Association of Schools Advancing Health Professions

		(ASAHP) conference in Long Beach, CA, October 2022. Clampitt, V.S. "The Future of Radiation Protection and Shielding," presented to Oak Point University in Chicago, IL, September 2022 and presented to Oak Point University in Chicago, IL, September 2022. Clampitt, V.S. " A Photon Walks into a Bar" Presented at the Association of Collegiate Educators in Radiologic Technology (ACERT), February 2021.
Laurie Coburn	Textbook: Invasive Cardiology Author Chapter 31 Renal Artery Interventions Published March 2022 Biliary Atresia: Understanding the Condition that Threatens Liver Function and Survival in Pediatric Patients – Radiologic Technology July 31, 2023 Choosing and Narrowing a Research Topic -Radiologic Technology 2024 Understanding the Complexities Associated with the Diagnosis & Treatment of Heart Failure - Radiologic Technology – 2025	WSU I&I Workshop Presentation - Designing Case Studies for Deeper Learning using Canvas

Robert Ferguson		X-Ray interpretation, More than meets the eye. Presented at the WSRT conference X-Ray interpretation, More than meets the eye. Presented at the USRT Conference X-Ray interpretation, More than meets the eye. Presented at the ACERT conference in Las Vegas Ferguson, Robert, Parkinson, Kimberly. "Interprofessional Education Competency among Healthcare Workers." Presented at the ACERT conference, Las Vegas, NV, February 2019.
Casey Neville	Neville, C. W. (2023). Quality of Life after Obstetric Fistula among Women in Developed Countries. International Journal of Endocrinology Research and Reviews. doi:10.33140/IJERR https://dx.doi.org/10.33140/IJERR.03.02.02Links to an external site. Neville, C. W. (2023). Improving a Radiology Program and Student Satisfaction. Radiologic Technology. Sage Medical	Neville, C. W. (2022). Leading with Compassion: Medical Professionals as Mentors. Mountain States Imaging Conference . Fairmont, MT. Keynote Speaker Neville, C. W. (2022). Education Panel, Weber State University Program. Mountain States Imaging Conference . Fairmont, MT.

	Neville, C. W. (2022, June/July). Connecting with Patients. (L. Ross, Ed.) ASRT Scanner, 54(5), 31.	Neville, C. W. (2022). Compassionate Leadership as a Healthcare Professional. Association of Collegiate Educators in Radiologic Technology (ACERT). Las Vegas, NV Neville, C. W. (2019). Impact of Global Health. Radiologic Society of North America (RSNA). Chicago, IL
Tanya Nolan	Kawamura, D. M. & Nolan, T. (2022). Diagnostic medical sonography: Abdomen and superficial structures, 5 th ed. Baltimore, MA: Lippincott, William, & Wilkins. Nolan, T (2022). Embracing Diverse Students through Mentoring Relationships. Journal of Diagnostic Medical Sonography. 38(2): 199-201. Nolan, T. (2022) Fetal Neural Axis. In Hagen-Ansert, S. (Ed), Texbook of Diagnositc Sonography, 9 th Ed. St. Louis, MO: Elsevier	Nolan, T., Scalise, T. (2025) Medical Imaging Labor Shortage – Health Care Systems and Academic Institutions Partnering for Solutions (RSNA) Chicago, IL Nolan T.. (2025) Thyroid Insights: A Sound Approach to Health (SDMS) Denver, CO Nolan, T, Fawcett L, Gardner S, James G, Remington G. (2025) A Passion to be Seen: Our Journey from Students to Imaging Professionals. (USRT) Salt Lake City, UT Nolan, T. (2025) Making Educational Leadership a Sweeping Success (ACERT) Las Vegas, NV

		Nolan, T. (2024) Mentoring: Empowering Progress. (ACERT) Las Vegas, NV Nolan T. (2023) Leading by Example: Becoming a Motivational Mentor (USRT) Las Vegas, Nevada Nolan T. (2023) Thriving Post-Pandemic: Keys to Resilience (ACERT Keynote) Las Vegas, Nevada Nolan T. (2022) United in Diversity (ACERT) Las Vegas, NV Nolan, T. (2022) A Beginner's Guide to the Standard Second Trimester Fetal Anatomy Scan (SDMS) National Harbor, MD
Kim Parkinson	Parkinson, K., Matthews, E. (2024). Female-To-Male Transgender Patients' Perceived Disparities in Cancer Screening Adherence: A Phenomenological Study. *Int J Endo Res & Rev, 4* (1), 01-08. ISSN: 2993-656X	Parkinson, Kimberly. "Cultural Competency in the Radiology Profession". Presented at the ACERT conference for 1 ASRT CE credit, Las Vegas, NV, February 2025. Competency in Medical Imaging". Presented at the USRT conference for 1 ASRT CE credit, Salt Lake City, UT, March 29, 2025.

Ambree Penrod	Kawamura, D. M., Nolan, T. D. (2022). Chapter 17: The thyroid gland, parathyroid glands, and neck. In Abdomen and superficial structures. essay, Wolters Kluwer. Kawamura, D., Nolan, T. D., & Penrod, A. (2022). Diagnostic medical sonography abdominal and superficial structures. Wolters Kluwer.	Penrod, Ambree. "Back to the basics of breast sonography." Presented to the Utah Society of Radiologic Technologists (USRT) Salt Lake City, UT, March, 2022 Penrod, Ambree. "CI expertise to student success." Presented at the Association of Collegiate Educators in Radiologic Technology (ACERT) Las Vegas, NV, February, 2023 Penrod, Ambree, "Appendix Ultrasound" Presented at the Utah Society of Radiologic Technologists (USRT) Ogden, UT, April 2024
Taylor Ward	A RadTech's Guide to Clinical CT (Textbook) – June 2026 Ward, T.C. , Skinner, L.B., Springer, C.A., Wohleb, E.C. (2023). Virtual Technology in Radiologic Technology Classrooms: The Educational Impact of the COVID-19 Pandemic. Radiologic Technology, 94(4) 269-286. Ward, T.C., Skinner, L.B., Wohleb, E.C., Springer, C.A. (2023). Using a combined model of the theory of planned behavior and the technology acceptance model to assess	Ward, T. (Dec. 2, 2024) A Profession Fit for the Future: How Educators Can Respond to the Evolving Workforce Demands. Presented at RSNA 2024. Chicago, IL. ASRT Live Panel: CT AI Image Reconstruction Q&A with Dr. Euclid Seeram. (ASRT) Future of Medical Imaging Summit 2024.

	radiologic technology educator's intentions toward virtual technology use as a result of the COVID-19 pandemic. Radiologic Science & Education, 28(1), 3-16.	

Mentoring Activities

Mentoring and Professional Development Beyond traditional course selection, the advising process is deeply intertwined with mentoring. Senior faculty members are noted for mentoring newer faculty, thereby creating a stable educational environment. Furthermore, the curriculum is designed to cultivate leadership, with learning objectives that require students to act as mentors and leaders and value strategic planning. This approach ensures that advising extends beyond graduation requirements to include preparation for professional conduct and leadership in clinical settings. Some noteworthy projects are included below.

Faculty	Activity	Year
Casey Neville	OYE! (Ogden Youth Empowerment) Program Co-Director A program funded by multiple grants and donations. Worked in conjunction with community sponsors for advertising and referrals of targeted underprivileged youth. This project spanned six months of preparation, nine weeks of camp activities (five days a week), and two months of post-camp follow-up, totaling 17 months.	2012-2014
Tanya Nolan	BS Thesis – Research/Mentoring Project: Students are tasked to investigate the best practice in mentoring their 1st year peers and write their results.	2022 – Present

	Department Honors Advisor/Supporter	2011 - Present
Kim Parkinson	Departmental Honors-mentor, coach, and recruit students; work with students to perform community service, including an annual service/food drive; help students promote the profession by providing opportunities for them to teach undergrad and high school students about our profession.	2017 - Present
Ambree Penrod	Sonography student mentoring project Weber State Student Mentor	2022-present 2025-present
Taylor Ward	BS Thesis Committee Chair for CT, Mammography, and Advanced Radiologic Sciences Majors	2020-Present

Ongoing Review and Professional Development

The School of Radiologic Sciences maintains a rigorous framework for faculty review and development. This process ensures that faculty members not only maintain clinical currency but also meet the high standards required for tenure and promotion through specific pillars of engagement.

Here is the breakdown of the ongoing review, professional development, and tenure alignment processes:

1. Annual Faculty Performance Review
The department utilizes a structured review process to ensure all faculty members (tenure-track, adjunct, and clinical) meet departmental and institutional standards.

- **Formal Annual Review:** A formal, ongoing annual review of faculty performance is used to prevent stagnation and ensure that teaching methods align with the department's pedagogical model. Furthermore, faculty performance reviews clearly align faculty activities with tenure expectations (Teaching, Scholarship, and Service). These expectations can be reviewed within the College of Health Professions tenure documents.

Several faculty members are currently in the tenure process, and those who are fully tenured are still subject to post-tenure review (PTR).

2. Professional Development & Continuing Education (CE)
To bridge the gap between "high-touch patient care and high-tech scientific application," faculty are required to engage in continuous learning.

- **Active Conference Participation:** The faculty credentials list demonstrates aggressive pursuit of CE through attendance and presentation at major conferences (ACERT, ASRT, USRT, RSNA, SDMS).
- **Scientific Literacy:** The program mandates "evidence-based practice," requiring faculty to stay current with professional literature and research.

Use and impact of high impact educational experiences

High-Impact Educational Practices (HIEs) are the primary engine used to bridge the gap between theoretical "hard sciences" and "high-touch patient care."

The programs in the School of Radiologic Sciences leverage these experiences through a structured, scaffolded approach that moves students from the safety of the classroom into the high-stakes environment of clinical reality.

1. Hands-On Experiential Simulation & Labs
The "Application" phase of the curriculum is where HIEs are first introduced. This stage functions as the "Steel Framework" of the student's education, moving beyond the "Bedrock" of terminology.

- **Dynamic Scenarios:** Rather than passive learning, students engage in simulation labs where they must apply knowledge in real-time. The standards cite examples such as "administering contrast" or "responding to patient populations."
- **Formative Evaluations:** In this controlled environment, the program utilizes **assessments for learning**. Faculty use specific checklists during lab simulations to ensure that students are developing the necessary psychomotor skills before interacting with actual patients.
- **Safe Failure:** This setting allows students to navigate "complex ethical and legal landscapes" and practice "patient education" without risk to actual human subjects.

2. Clinical Competencies & On-Site Experience
The program's pedagogy establishes a direct connection between the classroom and the hospital setting, emphasizing principles of patient care and technical competence. This aligns with the "Mastery" level of the curriculum map.

- **Real-World Application:** Students transition from simulation to clinical environments where they must demonstrate synthesis and evaluation. This includes critical thinking tasks such as "evaluating images for diagnostic quality" and "interpreting quality assurance tests" on live equipment.
- **Mentorship & Hours:** A rigorous accrual of clinical time is spent under the guidance of clinical mentors and senior faculty.
- **Industry-Standard Competencies:** Students must complete clinical competencies that reflect current industry trends and workforce needs and are tied to national standards.

3. The Impact of HIEs on Student Outcomes
The strategic use of these high-impact experiences delivers three distinct outcomes:

1. Improved Cognitive Reasoning
2. Professional Practice
3. Empathetic, Ethical, and Compassionate Care

Describe faculty engagement in department governance, in academic planning, and in maintaining a positive learning environment for its students.

1. Faculty Engagement in Department Governance
Governance within the department is collaborative and quality-focused, relying on a system of continuous feedback and peer support to maintain stability.

- **Stakeholder Integration:** Faculty actively participate in the Advisory Boards, engaging with local employers and community partners. This governance mechanism ensures that the department's direction remains aligned with workforce needs and industry trends.
- **Peer Mentorship & Stability:** Governance is strengthened by a formal mentorship model where "senior faculty actively mentor newer faculty." This creates a stable educational environment and ensures that departmental standards are consistently applied.
- **Outcomes-Based Review:** Faculty participate in a "formal, ongoing annual review" process.

2. Engagement in Academic Planning
Academic planning is dynamic and faculty-led, designed to be responsive to the rapidly changing medical imaging landscape.

- **Modular Curriculum Design:** Faculty are empowered with the freedom to update coursework. By utilizing a module format, instructors can swiftly integrate new technological advancements (e.g., AI in imaging, new MRI protocols) without disrupting the broader curriculum map.
- **Curriculum Scaffolding:** Faculty collaborate to maintain the "lockstep" curriculum approach. They carefully plan the progression of learning objectives from *Foundational* (terminology) to *Application* (procedures) to *Mastery* (critical thinking), ensuring that cognitive load is managed effectively for students.

3. Maintaining a Positive Learning Environment
The faculty fosters an environment that values "humanistic depth" alongside technical rigor, ensuring students feel supported both academically and personally.

- **Holistic Mentorship:** Faculty engagement extends well beyond the classroom. Specific examples include Casey Neville's leadership in the *OYE! (Ogden Youth Empowerment)* program and Tanya Nolan's role as a *Department Honors Advisor*. These roles demonstrate a commitment to student growth outside of standard coursework.
- **Teaching "Soft Skills":** By emphasizing patient education, empathy, and ethics, faculty create a learning space that prioritizes the patient care aspects of the profession. This prepares students to navigate diverse populations with sensitivity.
- **Student Success Coaching:** Faculty like Kim Parkinson actively coach and recruit students, coordinating community service drives and helping students promote the profession. This builds a culture of community and service within the student body.
-

4. University-Level Governance & Service
All faculty are involved in committees and governance, extending their influence beyond the department to the university level and the broader professional community.

- **University Committee Representation:** Faculty serve on critical university-wide bodies. For example, Victor Shane Clampitt serves on the *Weber State University Radiation Safety Committee*, directly influencing institutional safety policies.
- **Program Leadership:** Faculty engage in university-affiliated programs, such as the *Departmental Honors Program* (Nolan, Parkinson) and university student mentorship initiatives (Penrod).

- **Professional Leadership reflecting on the University:** Faculty hold high-level governance roles in national and state organizations (e.g., Chairman of the Board for USRT, Committee Chairs for ASRT). This external governance informs university academic planning by incorporating national best practices into the institution.

Standard F – Program Support
Support Staff, Administration, Facilities, Equipment, and Library

Adequacy of Administrative Support
The administration has provided the School of Radiologic Sciences with the necessary resources and support to deliver an impactful curriculum and maintain high enrollments in relevant programs. With legislative changes related to HB 265, the relationship between faculty and administration may appear strained due to the complexity of the policy. However, the burden and heavy workloads placed on faculty may be reduced with the hiring of new faculty in 2026.

Adequacy of Staff
The program maintains adequate support for staff to meet its mission and educational goals. The department's stability is anchored by two senior staff members who bring critical experience, expert supervision, and advanced training to the team. All staff members maintain a rigorous training schedule, as tracked through the training tracker, to enhance and develop their skills in their respective areas of expertise.

Adequacy of Facilities and Equipment
A noted challenge regarding administrative resources is the limitation of large classroom and laboratory space, which has become a priority concern due to program growth. To serve the needs of all students in the lab, a new sonography lab will be constructed in the Summer of 2026. We will relocate the C-arm and Portable equipment into the vacant space and plan to expand the current radiography lab, updating the equipment accordingly. This is now the top priority. Regarding the limited large classrooms, we have adopted a hybrid delivery model and established teaching centers in Ogden, Salt Lake, and Provo with the help of Intermountain as a collaborator and support.

Adequacy of Library Resources
Library resources are adequate and are utilized most frequently for research, where students access databases of academic, peer-reviewed journals.

Standard G - Relationships with External Communities

Description of Role in External Communities

The School of Radiologic Sciences maintains a dynamic and reciprocal relationship with external communities, functioning not merely as an academic silo but as a vital pipeline for workforce development and healthcare quality. The program's engagement is characterized by formal clinical affiliations, strategic military partnerships, and active industry advisory feedback. Each faculty member has a genuine relationship with their assigned clinical sites, and these relationships are the backbone of the school's success.

Clinical Partnerships and Affiliations A cornerstone of the School's external engagement is its extensive network of formal affiliation agreements. The program maintains over 200 affiliation agreements with healthcare facilities nationwide. These partnerships are essential for the program's focus on clinical competency, which relies on securing new clinical partners to support student training.

- **Clinical Training:** These external sites provide the real-world environment where students bridge the gap between patient care and high-tech scientific application.
- **Workforce Supply:** The School views its role as vital in addressing the critical, nationwide shortage of medical imaging professionals, aligning its strategic focus to support the workforce needs of clinical partners.

Advisory Boards and Industry Feedback To ensure the curriculum remains relevant to current industry standards, the faculty actively engages with External Advisory Boards, Clinical Instructor Meetings, and Clinical Visits. Although not as formal as an advisory board, the faculty meet regularly with clinical instructors and partners via clinical instructor meetings and on-site visits. These contact points with local employers, professionals, and community partners occur regularly throughout the year.

- **Feedback Loop:** This collaboration establishes a critical feedback loop, allowing the program to integrate "industry trends and workforce needs" directly into the curriculum. This ensures that graduates are prepared for the specific realities of the modern clinical workforce.

Outreach: The School is highly commended for its visionary leadership in developing relationships with "at need" populations, including military personnel and rural communities.

• **Service Member Support:** The METC program has collaborated with military national training programs to provide degrees to active-duty personnel. This strategic implementation allows service men and women to pursue credentials that translate to employment in the private sector. Although the number of military personnel participating in this program has decreased due to the introduction of additional credentialing pathways, we continue to provide services to several veterans and active-duty military personnel.

• **Community Health and Access:** Through hybrid and virtual delivery models, the School extends its reach beyond the local campus to serve rural communities, regional areas, and international students, ensuring that geographic barriers do not hinder access to radiologic education. Currently, the School is working with American Samoa and assisting their technologists in becoming fully certified.

• **Career Pathways:** The School supports certificate pathways designed to accelerate workforce entry and serve as gateways for students to obtain state licensure and enter the healthcare community quickly. Currently, the Arizona PTR program supports over 50 students who will enter the workforce in a limited capacity, primarily in clinics and urgent care centers. By gaining employment and healthcare experience, these students begin to acquire advanced skills that position them for more advanced career opportunities.

The School's relationship with external communities functions like a **permeable membrane** in a biological system: it allows essential resources (trained graduates and research) to flow outward to nourish the healthcare ecosystem, while simultaneously allowing vital signals (industry trends and workforce demands) to flow inward, triggering necessary internal adjustments to keep the program healthy and relevant.

Summary of External Advisory Committee Minutes

Based on advisement from Advisory Board, Clinical Instructor, and On-site Clinical Meetings, several updates and changes have been made to meet the demands of the profession and the current healthcare environment.

Arizona PTR – Due to advisement of Advisory council from corporate partners, including Banner and Honor Health, the School of Radiologic Sciences is partnering with Elsevier to utilize their standardized testing (HESI) for basic English and Math skills as recommended for acceptance requirements and college readiness.

Radiography – Community partners have been concerned on two fronts: (1) workforce shortages, (2) retention. As a means of working to address workforce shortages, community partners worked with the School of Radiologic Sciences to create professional career ladders with certificate options, expand clinic, urgent care, and stand-alone imaging center placements, and to increase students through cohorts who meet in evenings and off-track of our regular acceptance (i.e., Spring Cohorts). To address retention, clinical partners sought classroom time for students close to their communities, reducing commutes and increasing personalized, smaller group sessions. In response, the School of Radiologic Sciences collaborated with Intermountain Healthcare and secured classrooms in Ogden, Salt Lake City, and Provo, enabling hybrid delivery. Although this change has received some mixed reviews, the majority of comments are positive, especially from community partners who feel that the students are more engaged and willing to work within their facilities.

Computed Tomography - Community partners have been primarily concerned with workforce shortages. Regular communication with clinical instructors, community partners, and corporate teams allows us to meet the evolving needs in Computed Tomography. Dr. Taylor Ward developed a CT fast-track in 2023 and has recently received approval for a CT Certificate that will accomplish CT certification eligibility requirements in one semester.

Diagnostic Medical Sonography (Medical & Cardiac Emphases) The Diagnostic Medical Sonography program community partners have requested additional "hands-on" time for students preparing for clinical education. Dr. Nolan and Dr. Penrod have established community partnerships and been gifted several pieces of equipment, as well as acquired grants, to increase the number of working sonographic machines to 8-10 per lab. Although this is a significant improvement, students still require additional support. To bridge this gap, faculty negotiated a contract with Sonosim, and students completed simulated scanning and modules through this at-home system, whereby all hardware was purchased by the department and checked out to the students.

Interventional Radiography (IR) An example of a formal IR Advisory Committee includes the IR Advisory Committee - R. Walker, L. Coburn, C. Steelman, G. P. Feola, MD, C. Walczak, MD, 2021 Minutes from CI Meeting - The Committee discussed effective strategies for student recruitment into Vascular and Interventional (VI) and Cardiac Interventional (CI) specializations. The value of attending various Angiography Club meetings and leveraging presentations from community clinical sites was emphasized as a key recruitment approach. A critical topic addressed was the significant staffing challenges at clinical facilities, which necessitate the internal training of technologists and indicate a strong demand for increased student placement.

Magnetic Resonance Imaging (MRI) - Community partners were keen on increasing the number of MRI students, and Rex Christensen, Program Director, introduced an MRI primary pathway, wherein students without an RT(R) background could complete a leveling course as a prerequisite to the program.

Mammography - Community partners have valued Sonography students. Jennifer Santiago, Solis Mammography Department Manager, utilizes her knowledge and expertise to expand access to preventive care. The curriculum has expanded to include specialty views, tomography, and AI assistance.

Nuclear Medicine – Due to advisory comments, directors have expanded the number of adjunct instructors to three with varied sub-specialties. They have also included on-campus face-to-face certification reviews that have boosted pass rates and student satisfaction.

Radiation Therapy – Community partners have sought creative ways to ensure all students understand equipment and processes at every level of practice. The Huntsman Cancer Institute opens its doors to all students each year to tour and learn about its high-end equipment and photon accelerator. This is a unique experience for WSU students and is one of the enhancements made due to community collaboration.

Community and graduate Success ***

The School of Radiologic Sciences has experienced significant achievements in producing workforce-ready graduates and fostering robust community partnerships. The School of Radiologic Sciences successfully bridges academic rigor with practical applications to address critical nationwide shortages of medical imaging professionals through creative delivery, robust relationship-building, and consistent student outcomes. We have also met international needs in partnership with our American Samoa counterparts, and we are well-respected within the community and abroad within Professional societies and credentialing agencies. Over the last five years, the School of Radiologic Sciences has expanded student enrollment and the number of clinical affiliates.

Program Completions

Undergraduate Certificates

Two institutions in Utah awarded undergraduate certificates in Radiologic Technology/Science – Radiographer (51.0911). Weber State awarded 28 and Mountainland Technical College awarded 10. The first year for completions were in 2022.

In the Mountain Division, seven institutions awarded 84 certificates. Weber State led the Mountain Division, followed by GateWay Community College (19), Community College of Denver (18), Mountainland Technical College (10), Yavapai College (5), Boise State University (3), and Colorado Mesa University.

Associate's Degrees (51.0911: Radiologic Technology/Science – Radiographer)

In Utah, three institutions awarded 167 Associate's degrees in 2023. Weber State led with 129 completions, followed by Salt Lake Community College with 27, and Utah Tech University with 11. The number of completions has steadily increased since 2015.

Bachelor's Degrees

Weber State University is the only institution in Utah to offer Bachelor's Degrees in the following programs:

- 51.0911: Radiologic Technology/Science – Radiographer
- 51.0999: Allied Health Diagnostic, Intervention, and Treatment Professions, Other (CT and Women's Imaging emphases)
- 51.0920: Magnetic Resonance Imaging (MRI) Technology/Technician
- 51.0901: Cardiovascular Technology/Technician
- 51.0814: Radiologist Assistant
- 51.0910: Diagnostic Medical Sonography/Sonographer and Ultrasound Technician
- 51.0905: Nuclear Medical Technology/Technologist
- 51.0907: Medical Radiologic Technology/Science – Radiation Therapist

In 2023, Weber State awarded 139 Bachelor's degrees across these programs. This represented 37% of Bachelor's degrees awarded in these programs in the Mountain Division. An additional 8 public institutions awarded 236 Bachelor's degrees. The highest number of completions were from Boise State University (94), University of

Nevada-Las Vegas (37), Lewis-Clark State College (31), and Colorado Mesa University (25). The number of program completions has increased since 2003.

Master's Degrees
In the Mountain Division, only 2 institutions awarded Master's Degrees in Radiologic Technology/Science – Radiographer in 2023. Weber State awarded 22 and Colorado State University-Fort Collins awarded 7. Nationally, Weber State awarded the most Master's degrees for all public institutions. The only institution to award more degrees in 2023 was the private for-profit John Patrick University of Health and Applied Sciences.

The School of Radiologic Sciences distinguishes itself through student excellence in national board performance, clinical proficiency, and professional research, with many students earning national recognition and leadership roles. By maintaining over 200 clinical affiliations and offering accelerated certificate pathways, the school directly addresses workforce shortages and speeds up entry into the healthcare field. Furthermore, its innovative hybrid and virtual delivery models expand educational access to rural and underserved areas, ensuring geographic barriers do not prevent these communities from obtaining qualified imaging professionals.

Standard H – Program Summary
Results of Previous Program Reviews

Date of Previous Program Review: 2017/18		
Text of Recommendation	Intended Action	Progress (be specific)
Recommendation 1: Consider options, as there is limited large classroom and lab space. With the growth of the Radiologic Sciences program, acquiring more dedicated space must be a priority.	We have worked with our administration to secure a newly renovated space (Summer 2026) for the Sonography lab, which allows us to utilize the vacant area for new equipment acquired (C-arm and Portable X-ray Unit) For classroom space, we have transitioned to a full hybrid model and	The new lab is expected to be completed in the Summer of 2025. We are currently teaching students at the Ogden campus and Intermountain Employment facilities in Salt Lake and Provo.

	are teaching cohorts in satellite locations including Provo, Salt Lake, and Ogden.	
Recommendation 2: Establish benchmarks higher than 75%.	The program raised the acceptable threshold for student achievement to 80% or above for all formative and summative assessments.	We are now assessing all curriculum at foundational, intermediate, and mastery levels. All comprehensive exams are benchmarked at 80% or above, and formative and summative assessments are recorded and monitored.

Standard I – Career Outcomes; Ongoing Program Demand and Career Advising

Using the Lightcast data provided for the program, briefly describe the ongoing demand for the degrees in the program as well as the demand for jobs for which the program is preparing students.

Radiologic Sciences Occupations

Labor Market data links Radiologic Sciences programs of study to 19 occupations, several of which require study in other medical fields. Eight of the occupations are specific to radiology and are included in this summary.

Radiology Occupations	Additional Medical Occupations
Medical Dosimetrists	Surgical Technologists
Health Technologists and Technicians, All Other	Medical Assistants
Cardiovascular Technologists and Technicians	Healthcare Support Workers, All Other
Diagnostic Medical Sonographers	Medical and Health Services Managers
Nuclear Medicine Technologists	Physician Assistants
Radiation Therapists	Respiratory Therapists
Radiologic Technologists and Technicians	Registered Nurses
Magnetic Resonance Imaging Technologists	Emergency Medical Technicians
	Paramedics
	Athletic Trainers

	Nursing Assistants

Radiology Occupations

These 8 occupations combined for 4,992 jobs in Utah with a median salary of $74,971. The national average number of jobs for areas of similar size is 7,114, with a median salary of $71,523. Over the next five years, Utah expects to add 766 new jobs across these occupations. This represents a projected growth rate that is 2% higher than the national average. In the Mountain Division, there were 43,062 jobs with a median salary of $76,508. Both Utah and the Mountain Division have below-average numbers of jobs, but a higher-than-average median salary. Weber State University is the number one public institution talent provider in Utah and the Mountain Division. The typical entry-level education for Medical Dosimetrists and Health Technologists and Technicians, All Other, is a Postsecondary non-degree award. The other six occupations typically require an associate's degree as the entry-level education. The table below displays the data points for each occupation. The higher percentile salaries show potential salary estimates for workers with higher education levels.

Utah:

Occupation	2024 Jobs	2024 Hires	10th percentile	25th percentile	Median	75th percentile	90th percentile
Radiologic Technologists and Technicians	1,677	476	$49,379	$61,318	$73,154	$83,034	$99,507
Health Technologists and Technicians, All Other	1,385	494	$35,110	$38,251	$44,075	$61,693	$79,206
Cardiovascular Technologists and Technicians	704	190	$38,979	$55,744	$85,717	$103,147	$113,901

Diagnostic Medical Sonographers	554	160	$75,556	$80,350	$93,600	$102,939	$112,965
Magnetic Resonance Imaging Technologists	339	88	$73,882	$78,874	$82,722	$97,053	$100,318
Radiation Therapists	169	60	$80,309	$86,091	$99,528	$108,160	$146,390
Nuclear Medicine Technologists	139	35	$78,000	$85,530	$93,704	$103,834	$109,034
Medical Dosimetrists	26	<10	$79,941	$104,964	$122,691	$141,647	$157,355

Mountain Division:

Occupation	2024 Jobs	2024 Hires	10th percentile	25th percentile	Median	75th percentile	90th percentile
Radiologic Technologists and Technicians	16,484	5,734	$53,983	$63,000	$75,713	$91,238	$102,316
Health Technologists and Technicians, All Other	11,301	1,504	$36,750	$40,837	$48,860	$63,673	$81,906
Cardiovascular Technologists	4,147	1,342	$38,766	$48,118	$72,645	$97,607	$112,995

and Technicians							
Diagnostic Medical Sonographers	5,583	2,019	$74,071	$82,021	$94,459	$107,907	$112,937
Magnetic Resonance Imaging Technologists	2,772	981	$77,149	$81,290	$91,874	$100,940	$106,879
Radiation Therapists	1,444	686	$80,277	$90,368	$100,042	$111,075	$133,608
Nuclear Medicine Technologists	1,085	390	$80,403	$87,340	$97,102	$105,446	$113,621
Medical Dosimetrists	247	95	$96,413	$126,198	$138,547	$156,648	$166,198

Job Listings

Between February 2024 and February 2025, there were 3,355 unique job postings in Utah for the eight radiology occupations. The median advertised salary was $90,000. Almost three-fourths of the listings did not indicate a required or preferred education level. The table below displays the education level preferences of the 909 listings that provided this information.

Education	Number of Listings	Median Advertised Salary
High school or GED	550	$42,400
Associate's degree	80	$73,000
Bachelor's degree	263	$99,100
Master's degree	15	Not enough data
Ph.D. or professional degree	1	Not enough data

For workers with an Associate's or Bachelor's degree, most job listings were for the occupation Health Technologists and Technicians, All Other. For workers with a minimum education level of a Bachelor's degree, the most common occupation was Magnetic Resonance Imaging Technologists.

Because many of the listings did not include education level information, the remaining information utilizes all available job listings. The most posted job titles were Lead CT Technologists, Patient Services Representatives, Radiology Technologists, Computed Tomography Technologists, and Travel Ultrasound Technologists. Intermountain Health had the most job postings by a large margin, accounting for approximately 40% of all listings.

Provide information about the type of career advising available to students in the program.

The advising model involves the entire faculty and is characterized by the following key elements:
1. Specialty-Specific Faculty Advising: Advising is not centralized in a single office but is distributed among subject-matter experts. As students' progress from basic skills to advanced modalities, they are directed to specific specialty advisors relevant to their chosen career path. The faculty and staff function as an effective team committed to student success, ensuring that students have access to mentorship from professionals with direct expertise in their field of study.
2. Curriculum-Integrated Career Preparation Career advising is embedded directly into the coursework through a "lockstep" curriculum design that provides clear career mapping. This ensures students understand the trajectory from education to workforce entry. The curriculum includes specific courses such as *RADT 2942: Transition to Practice* (and similar specialty courses like *RADT 4942*), which focus explicitly on career readiness. Students are required to create a "Professional Portfolio." This summative assignment includes the creation of a resume, cover letter, networking contact list, and the articulation of short-term and long-term career goals.
3. **Clear Career Ladders:** Certificate pathways (e.g., Limited Radiography, Cardiology Technician) are specifically designed to accelerate workforce entry and provide immediate career ladders for students.

Please respond to this prompt:

What career data does the department have about its graduates? What methods does the department use to gather information from completing students, employers, and others and how does the department use this information to improve the program offerings?

The School of Radiologic Sciences maintains robust career data, including annual national certification pass rates, graduation, and retention metrics, to validate workforce readiness and instructional efficacy. To gather this information, the department employs a comprehensive strategy that utilizes graduate surveys, student exit evaluations, and clinical performance data, while actively engaging with community partners to ensure appropriate selection processes, curricular relevance, efficient delivery, and effective career transitions. Programmatic improvements, such as tightening remediation standards, following enrollment surges, and refining assessment methods to ensure all graduates meet the highest standards of professional competency, are evident and discussed throughout this report.

APPENDICES

Appendix A: Student and Faculty Statistical Summary

(*Note*: Data provided by Institutional Effectiveness. This is an extract from the Program Review Dashboard and shows what will be sent to the Boards of Trustees and Regents)

Master of Radiologic Sciences	2020-21	2021-22	2022-23	2023-24	2024-25*
Department Student Credit Hours Total [1]	**16,212**	**16,999**	**21,513**	**24,216**	**26,050**
Undergrad SCH	15,269	15,800	20,174	22,629	24,740
Graduate SCH	943	1,199	1,339	1,587	1,310
Department Student FTE Total [2]	**556**	**587**	**739**	**833**	**890**
Undergrad FTE	509	527	672	754	825
Graduate FTE	47	60	67	79	65
Graduate Rad Sci Student Majors [3]					
Student Majors	35	42	47	59	44
Graduate Rad Sci Program Graduates [4]					
Masters Degree	18	21	22	28	31
Graduate Student Demographic Profile [5]					
Female	20	24	31	36	23
Male	15	18	16	23	21
Department Faculty FTE Total [6]	**9.7**	**13.2**	**24.7**	**24.0**	N/A
Adjunct FTE	0.0	0.6	12.0	11.4	N/A
Contract FTE	9.7	12.6	12.7	12.6	N/A
Department Student/Faculty Ratio [7]	**57.6**	**44.5**	**29.9**	**34.7**	**N/A**

Notes

Due to college restructuring and departmental changes, these data are our best reflection of actual departmental/program counts.

Student Credit Hours Total represents the total department-related credit hours for all students per academic year. Includes only students reported in Banner system as registered for credit at the time of data downloads.

Student FTE Total is the Student Credit Hours Total divided by 30 for undergraduate and by 20 for graduate.

Student Majors is a snapshot taken from self-report data by students in their Banner profile as of the third week of the Fall term for the academic year. Only 1st majors count for official reporting for student majors and all priorities are counted for the second metric. Minors are all minor counts of the program from the third week of fall.

Program Graduates includes only those students who completed all graduation requirements by end of Spring semester for the academic year of interest. Students who do not meet this requirement are included in the academic year in which all requirements are met. Summer is the first term in each academic year.

Student Demographic Profile is data retrieved from the Banner system.

Faculty FTE is the aggregate of contract and adjunct instructors during the fiscal year. **Contract FTE** includes instructional-related services done by "salaried" employees as part of their contractual commitments. **Adjunct FTE** includes instructional-related wages that are considered temporary or part-time basis. Adjunct wages include services provided at the Davis campus, along with on-line and Continuing Education courses.

Student/Faculty Ratio is the Student FTE Total divided by the Faculty FTE Total.

Appendix B:

Faculty (note: we need to report the previous 5 years – if this has not been included in your biennial assessment report, please provide that information here – one table for each of the 5 previous years)

2025	Tenured	Tenure-Track	Other Contract	Adjunct
Number of faculty with Doctoral degrees	4	2		
Number of faculty with Master's degrees	2	1		2
Number of faculty with Bachelor's degrees				10
Other Faculty				
Total	6	3		12

2024	Tenured	Tenure-Track	Other Contract	Adjunct
Number of faculty with Doctoral degrees	5	1		
Number of faculty with Master's degrees	2	3		2
Number of faculty with Bachelor's degrees				10
Other Faculty				
Total	7	4		12

2023	Tenured	Tenure-Track	Other Contract	Adjunct
Number of faculty with Doctoral degrees	3	3		
Number of faculty with Master's degrees	1	4		2
Number of faculty with Bachelor's degrees				10
Other Faculty				
Total	4	7		12

2022	Tenured	Tenure-Track	Other Contract	Adjunct
Number of faculty with Doctoral degrees	3	3		
Number of faculty with Master's degrees	1	4		2
Number of faculty with Bachelor's degrees				8
Other Faculty				
Total	4	7		10

2021	Tenured	Tenure-Track	Other Contract	Adjunct
Number of faculty with Doctoral degrees	3	2		
Number of faculty with Master's degrees	1	5		2
Number of faculty with Bachelor's degrees				8
Other Faculty				
Total	4	7		10

Most recent completed year; contract/Adjunct Faculty Profile

Name	Rank	Tenure Status	Highest Degree	Years of Teaching	Areas of Expertise
Faculty					
Rex Christensen MHA, R.T. (R)(MR)(CT)(ARRT) CIIP, MRSO (MRSC™)	Associate Professor	Tenured	MHA	18	Radiography MRI CT PACS
Victor Clampitt, MSRS R.T.(R)(MR)(ARRT), MRSO (MRSC)	Associate Professor	Tenured	MSRS	110	Radiology MRI Management Nuclear Medicine
Laurie Coburn EdD, RRA,RT(R)(CV)(ARRT), RPA (CBRPA)	Associate Professor	Tenured	EdD	8	RA IR Radiography

Robert Ferguson MSRS, R.T. (R) (ARRT)	Assistant Professor	Tenure-Track 3rd Year	MSRS	7	Radiography
Casey Neville DHSc, R.T.(R)(ARRT)	Professor	Tenured	DHSc	16	Radiography Radiation Therapy
Tanya Nolan EdD, RT(R)(ARRT), RDMS, FSDMS	Professor	Tenured	EdD	19	Sonography Radiography
Kim Parkinson, DHSc, RT (R)(MR)(ARRT), MRSO (MRSC)	Assistant Professor	Tenure Track-4th year	DHSc	7	Radiography, MRI, Nuclear Medicine, Practical Limited Technologist
Ambree Penrod EdD, RT(R)(ARRT), RDMS	Assistant Professor	Tenure Track - 4th year	EdD	4	Radiography Sonography
Adjunct					
Daryn Ashby	Adjunct		MSRS	10	R.T.(R)(T)(ARRT)
Ashley Hall	Adjunct		BS	6	RDCS
Jeffery Jensen	Adjunct		MBA	8	ACS, RDCS
Brandon Kemp	Adjunct		B.S	10	R.T.(R)(N)(ARRT)
Christopher Marston	Adjunct		B.S.	5	CMD R.T.(R)(T)(ARRT)
Michael Martin	Adjunct		B.S	5	CNMT, NMTCB (CT), R.T.(R)(ARRT)
Shawna Noyes	Adjunct		B.S	5	CNMT, R.T.(R)(CT)(ARRT)
Jennifer Santiago	Adjunct		B.S.	5	R.T.(R)(M)

Appendix C: Staff Profile

Name	Job Title	Years of Employment	Areas of Expertise
Pamela Berg	Director of Independent Study	8	Independent Study / METC
Sarah Hicken	Administrative Assistant II	.5	Associate's Programs
Eliza Hill	Administrative Assistant II	.5	Bachelor's Programs
Kierah McKinnie	Clinical Coordinator	.5	Clinical Affiliations
Cathy Wells	Graduate Enrollment Director	10	Master's Programs

Appendix D: Financial Analysis Summary

Department of Radiologic Sciences					
Funding	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25***
Appropriated Fund	774,333	1,088,019	1,308,437	1,361,528	1,365,268
Other: IW Funding from CE	0	0	165,355	228,074	227,138
Special Legislative Appropriation					
Grants or Contracts					
Special Fees/Differential Tuition	18,714	10,689	23,154	13,421	23,223
Total	793,047	1,098,708	1,496,946	1,603,023	1,615,629

Student FTE Total [1]	556.00	587.00	739.00	833.00	890.00
Cost per FTE [2]	1,426.34	1,871.73	2,025.64	1,924.40	1,815.31

Notes

Student FTE Total is from the first tab

(Total / Student FTE) = Cost per FTE

Appendix E: External Community Involvement Names and Organizations

Clinical and Professional Affiliations The School of Radiologic Sciences maintains relationships with a vast network of external organizations to support clinical education and workforce development within the state of Utah and nationally across the United States. We are affiliated with all major organizations in the state of Utah, including, but not limited to, HCA, Intermountain Health, CommonSpirit, and the University of Utah.

Appendix F: Site Visit Team (both internal and external members)

Name	Position	Affiliation
Heather Merkley, DHSc, RHIA	Associate Professor	Health Administration Systems (HAS) Director
Mary Doucette, Ed.D, RT(R)(M)(MR)(CT)(QM)	Dean of Arts and Sciences	Great Basin College, Ely, NV
David Hardwick, MSRS, RRA, RT (ARRT), RPA(CBRPA)	President	Society of Radiology Physician Extenders
Martin Farmer, MSRS, RT(R)(CT)(ARRT), RDMS	Clinical Site Instructor	Director of Radiology, Bear Lake Memorial Hospital

Appendix G: Grad Maps

Arizona Practical Technologist in Radiology (PTR)

☑	Course	Credit Hour	S
	Arizona PTR Radiography (Semester 1) – If/When Admitted		
	RADT 1022 Intro to Radiologic Technology	2	Fall
	RADT 1303 Principles of Radiographic Exposure I	3	Fall
	RADT 1502 Radiographic Anatomy and Positioning I	2	Fall
	RADT 1601 Clinical Simulation I	1	Fall
	RADT 2042 Community Based Patient Care I	2	Fall
	RADT 2861 Clinical Education	3	Fall
	Total Semester Credits	**13**	
	Arizona PTR Radiography (Semester 2) – If/When Admitted		
	RADT 1512 Radiographic Anatomy and Positioning II	2	Spring
	RADT 1621 Clinical Simulation II	1	Spring
	RADT 2043 Specialty Based Patient Care I	2	Spring
	RADT 2866 Final Competency Evaluation	2	Spring
	RADT 2862 Clinical Education	3	Spring
	Total Semester Credits	**10**	
	Total Program Credits	**23**	

AAS Radiography

	1st Year of AAS Radiography (Semester 1) – **If/When Admitted**		
	RADT 1022 Intro to Radiologic Technology	2	Fall
	RADT 1303 Principles of Radiographic Exposure I	3	Fall
	RADT 1502 Radiographic Anatomy and Positioning I	2	Fall
	RADT 1601 Clinical Simulation I	1	Fall
	RADT 2042 Community Based Patient Care I	2	Fall
	RADT 2821 Directed Readings and Research I	2	Fall
	RADT 2861 Clinical Education	3	Fall
	Total Semester Credits	**15**	
	1st Year of AAS Radiography (Semester 2) – **If/When Admitted**		
	RADT 1512 Radiographic Anatomy and Positioning II	2	Spring
	RADT 1621 Clinical Simulation II	1	Spring
	RADT 2043 Specialty Based Patient Care	2	Spring
	RADT 2403 Principles of Radiographic Exposure II	3	Spring
	RADT 2822 Directed Readings and Research II	2	Spring
	RADT 2862 Clinical Education	3	Spring
	RADT 3443 Quality Assurance in Radiology	3	Spring
	Total Semester Credits	**16**	
	2nd Year of AAS Radiography (Semester 3) – **If/When Admitted**		
	RADT 1522 Radiographic Anatomy and Positioning III	2	Summer
	RADT 1641 Clinical Simulation III	1	Summer
	RADT 2803 Independent Research	1	Summer
	RADT 2823 Directed Readings and Research III	2	Summer
	RADT 2863 Clinical Education	3	Summer
	RADT 3003 Psycho-Social Medicine	3	Summer
	RADT 3043 Medical Ethics and Law	3	Summer
	Total Semester Credits	**15**	
	2nd Year of AAS Radiography (Semester 4) – **If/When Admitted**		
	RADT 1532 Radiographic Anatomy and Positioning IV	2	Fall
	RADT 1661 Clinical Simulation IV	1	Fall
	RADT 2824 Directed Readings and Research IV	2	Fall
	RADT 2864 Clinical Education	3	Fall
	RADT 3403 Radiobiology and Health Physics	3	Fall
	RADT 3463 Computerized Imaging	3	Fall
	Total Semester Credits	**14**	
	2nd Year of AAS Radiography (Semester 5) – **If/When Admitted**		
	RADT 1542 Radiographic Anatomy & Positioning V	2	Spring
	RADT 1681 Clinical Simulation V	1	Spring
	RADT 2272 Basic Sectional Anatomy	2	Spring
	RADT 2825 Directed Readings and Research V	2	Spring
	RADT 2865 Clinical Education	2	Spring
	RADT 2913 Comprehensive Review	2	Spring
	RADT 2942 Transition to Clinical Practice	2	Spring
	Total Semester Credits	**13**	
	Total Associate of Applied Science Credits	**96-97**	

BS Degrees
Computed Tomography (CT)

Semester 1	
RADT 3043 Medical Ethics and Law	3
RADT 3123 Sectional Anatomy	2
RADT 3143 Imaging Pathophysiology I	2
RADT 3563 Managing Clinical Information	3
RADT 3863 Clinical Internship	3
RADT 4663 CT Physics, Instrumentation & Safety	3
Total Semester Credits	**16**
Semester 2	
RADT 3003 Psycho-Social Medicine	3
RADT 3144 Imaging Pathophysiology II	2
RADT 3253 Specialty-Based Patient Care II	2
RADT 3403 Radiobiology and Health Physics	3
RADT 3863 Clinical Internship	3
RADT 4613 CT Imaging of the Torso and Limbs	3
RADT 4933 Research Methods	2
Total Semester Credits	**18**
Semester 3	
RADT 4203 Patient Education in Radiology	2
RADT 4303 Cardiology	3
RADT 4653 CT Imaging of the Central Nervous System	3
RADT 4863 Clinical Internship	3
RADT 4942 Transition to Specialty Practice	2
RADT 4943 Baccalaureate Thesis (**SI**)	2
Total Semester Credits	**15**
Total Bachelor of Science Credits	**49**

Diagnostic Medical Sonography
(Medical Emphasis)

Semester 1		
RADT 3123 Sectional Anatomy	2	Fall
RADT 3143 Imaging Pathophysiology I	2	Fall
RADT 3243 Community-Based Patient Care II	2	Fall
DMS 4100 Introduction to Sonography Principles and Instrumentation	1	Fall
DMS 4310 Abdominal Sonography	3	Fall
DMS 4620 Medical Sonography – Clinical Simulation I	2	Fall
DMS 4820 Orientation to Clinical Education	1	Fall
Total Semester Credits	**13**	
Semester 2		
RADT 3144 Imaging Pathophysiology II	2	Spring
RADT 3253 Specialty-Based Patient Care II	2	Spring
DMS 4110 Sonography Principles and Instrumentation	3	Spring
DMS 4330 Gynecologic Sonography	1	Spring
DMS 4340 Obstetric Sonography	3	Spring
DMS 4410 Vascular Sonography I	2	Spring
DMS 4621 Medical Sonography – Clinical Simulation II	1	Spring
DMS 4821 Medical Clinical I	3	Spring
Total Semester Credits	**17**	
Semester 3		
RADT 3003 Psycho-Social Medicine	3	Summer
RADT 4933 Research Methods	2	Summer
DMS 4120 Quality Assurance (**SI**)	1	Summer
DMS 4320 Superficial Structure and Special Study Sonography	3	Summer
DMS 4420 Vascular Sonography II	2	Summer
DMS 4622 Medical Sonography – Clinical Simulation III	1	Summer
DMS 4822 Medical Clinical II	3	Summer
Total Semester Credits	**15**	
Semester 4		
RADT 3563 Managing Clinical Information	3	Fall
RADT 4942 Transition to Specialty Practice	2	Fall
RADT 4943 Baccalaureate Thesis (**SI**)	2	Fall
DMS 4350 Fundamentals for Abdominal Sonography Certification	2	
DMS 4360 Fundamentals for OB/GYN Sonography Certification	2	
DMS 4823 Medical Clinical III	3	Fall
Total Semester Credits	**14**	

Diagnostic Medical Sonography – Cardiac Emphasis

Semester 1		
RADT 3123 Sectional Anatomy	2	Fall
RADT 3143 Imaging Pathophysiology I	2	Fall
RADT 3243 Community-Based Patient Care II	2	Fall
RADT 3263 Diagnostic Services Pharmacology	2	Fall
DMS 4100 Introduction to Sonography Principles and Instrumentation	1	Fall
DMS 4210 Cardiac Sonography I	3	Fall
DMS 4610 Cardiac Sonography – Clinical Simulation I	2	Fall
DMS 4820 Orientation to Clinical Education	1	Fall
Total Semester Credits	**15**	
Semester 2		
RADT 3144 Imaging Pathophysiology II	2	Spring
RADT 3253 Specialty-Based Patient Care II	2	Spring
DMS 4110 Sonography Principles and Instrumentation	3	Spring
DMS 4220 Cardiac Sonography II	3	Spring
DMS 4410 Vascular Sonography I	2	Spring
DMS 4811 Cardiac Clinical I	3	Spring
Total Semester Credits	**15**	
Semester 3		
RADT 3003 Psycho-Social Medicine	3	Summer
RADT 4933 Research Methods	2	Summer
DMS 4120 Quality Assurance (**SI**)	1	Summer
DMS 4230 Cardiac Sonography III	3	Summer
DMS 4420 Vascular Sonography II	2	Summer
DMS 4812 Cardiac Clinical II	3	Summer
Total Semester Credits	**14**	
Semester 4		
DMS 4240 Fundamentals for Cardiac Sonography Certification	2	Fall
RADT 4943 Baccalaureate Thesis (**SI**)	2	Fall
DMS 4813 Cardiac Clinical III	3	Fall
RADT 4942 Transition to Specialty Practice	2	Fall
RADT 3563 Managing Clinical Information	3	Fall
Total Semester Credits	**12**	
Total Bachelor of Science Credits	**56**	

Interventional Radiography

Semester 1		
RADT 3043 Medical Ethics and Law	3	Fall
RADT 3123 Sectional Anatomy	2	Fall
RADT 3143 Imaging Pathophysiology I	2	Fall
RADT 3563 Managing Clinical Information	3	Fall
RADT 3863 Clinical Internship	3	Fall
RADT 4313 Visceral, Pelvic, and Extremity Angiography	3	Fall
Total Semester Credits	**16**	
Semester 2		
RADT 3003 Psycho-Social Medicine	3	Spring
RADT 3144 Imaging Pathophysiology II	2	Spring
RADT 3253 Specialty-Based Patient Care II	2	Spring
RADT 3263 Diagnostic Services Pharmacology	2	Spring
RADT 3863 Clinical Internship	3	Spring
RADT 4343 Thoracic and Venous Procedures	3	Spring
RADT 4933 Research Methods	2	Spring
Total Semester Credits	**17**	
Semester 3		
RADT 4203 Patient Education in Radiology	2	Summer
RADT 4303 Cardiology	3	Summer
RADT 4333 Head and Neck Angiography	3	Summer
RADT 4863 Clinical Internship	3	Summer
RADT 4942 Transition to Specialty Practice	2	Summer
RADT 4943 Baccalaureate Thesis (**SI**)	2	Summer
Total Semester Credits	**15**	
Total Bachelor of Science Credits	**48**	

Magnetic Resonance Imaging

Semester 1		
RADT 3123 Sectional Anatomy	2	Fall
RADT 3143 Imaging Pathophysiology I	2	Fall
RADT 3043 Medical Ethics and Law	3	Fall
RADT 3563 Managing Clinical Information	3	Fall
RADT 3863 Clinical Internship	3	Fall
RADT 4601 MRI Entry Level Patient Care and Safety ***Primary MRI only (elective) ***	2	Fall 1st Block
RADT 4603 MRI Physics, Instrumentation & Safety	3	Fall
RADT 4630 MRI Simulation 1	1	Fall
Total Semester Credits	**17-19**	
Semester 2		
RADT 3003 Psycho-Social Medicine	3	Spring
RADT 3144 Imaging Pathophysiology II	2	Spring
RADT 3253 Specialty-Based Patient Care II	2	Spring
RADT 3863 Clinical Internship	3	Spring
RADT 4623 Advanced MRI Procedures	3	Spring
RADT 4631 MRI Simulation 2	1	Spring
RADT 4643 MRI Imaging of the Torso and Limbs	3	Spring
RADT 4933 Research Methods	2	Spring
Total Semester Credits	**19**	
Semester 3		
RADT 4203 Patient Education in Radiology	2	Summer
RADT 4303 Cardiology	3	Summer
RADT 4632 MRI Simulation 3	1	Summer
RADT 4633 MRI Imaging of the Central Nervous System	3	Summer
RADT 4863 Clinical Internship	3	Summer
RADT 4943 Baccalaureate Thesis **(SI)**	2	Summer
RADT 4945 Fundamentals in MRI Certification	2	Summer
Total Semester Credits	**16**	
Total Credits	**52-54**	

Mammography

Semester 1		
RADT 3243 Community-Based Patient Care II	2	Summer
RADT 4553 Breast Anatomy, Physiology, and Pathology	3	Summer
RADT 4563 Mammographic Positioning Imaging Techniques	3	Summer
RADT 4583 Mammographic Equipment and Quality Assurance	3	Summer
RADT 4863 Clinical Internship	3	Summer
RADT 4942 Transition to Specialty Practice	2	Summer
RADT 4933 Research Methods	2	Summer
Total Semester Credits	**18**	
Semester 2 and Semester 3		
RADT 3003 Psycho-Social Medicine (**DV**)	3	Fall, Spring, Summer
RADT 3043 Medical Ethics and Law	3	Fall, Spring, Summer
RADT 3423 Federal Regulations	2	Fall, Spring, Summer
RADT 3563 Managing Clinical Information	3	Fall
RADT 4203 Patient Education in Radiology	2	Fall, Summer
RADT 4943 Baccalaureate Thesis	2	Fall, Spring, Summer
Total Semester Credits	**15**	
Required Electives Course (Credits up to 13 hours upper division to graduate) *Recommended for WSU AAS Radiography Graduates:* *RADT 4572 Advanced Breast Imaging (3)* *RADT 3143 Imaging Pathophysiology I (2)*	**13**	
Total Bachelor of Science Credits	**46**	

Nuclear Medicine

Semester 1		
RADT 3143 Imaging Pathophysiology I	2	Fall
RADT 3253 Specialty-Based Patient Care II	2	Fall
RADT 3263 Diagnostic Services Pharmacology	2	Fall
NUCM 4103 Radiopharmaceuticals and Dosages	3	Fall
NUCM 4203 Scanning and Imaging I	3	Fall
NUCM 4303 Radionuclide Physics and Instrumentation	3	Fall
NUCM 4861 Clinical Education	3	Fall
Total Semester Credits	**18**	
Semester 2		
RADT 3144 Imaging Pathophysiology II	2	Spring
RADT 3423 Federal Regulations	2	Spring
RADT 4303 Cardiology	3	Spring
RADT 4933 Research Methods	2	Spring
NUCM 4213 Scanning and Imaging II	3	Spring
NUCM 4223 Nuclear Cardiology	3	Spring
NUCM 4862 Clinical Education	3	Spring
Total Semester Credits	**18**	
Semester 3		
RADT 3003 Psycho-Social Medicine (**DV**)	3	Summer
RADT 3563 Managing Clinical Information	3	Summer
RADT 4942 Transition to Specialty Practice	2	Summer
RADT 4943 Baccalaureate Thesis (**SI**)	2	Summer
NUCM 4333 Quality Assurance (**SI**)	3	Summer
NUCM 4863 Clinical Education	3	Summer
Total Semester Credits	**16**	
Total Bachelor of Science Credits	**52**	

Radiation Therapy

Semester 1		
RADT 3563 Managing Clinical Information	3	Fall
RADT 4933 Research Methods	2	Fall
RATH 4330 Radiation Therapy Physics	3	Fall
RATH 4410 Radiation Oncology I	3	Fall
RATH 4446 Quality Assurance (**SI**)	3	Fall
RATH 4861 Clinical Education I	3	Fall
Total Semester Credits	**17**	
Semester 2		
RADT 3253 Specialty-Based Patient Care II	2	Spring
RADT 4943 Baccalaureate Thesis	2	Spring
RATH 4342 Introduction to Treatment Planning	3	Spring
RATH 4412 Radiation Oncology II	3	Spring
RATH 4448 New Technology in Radiation Therapy	3	Spring
RATH 4862 Clinical Education	3	Spring
Total Semester Credits	**16**	
Semester 3		
RADT 4942 Transition to Specialty Practice	2	Summer
RADT 4992 Seminar	2	Summer
RATH 4414 Radiation Oncology III	3	Summer
RATH 4444 Advanced Treatment Planning/ Brachytherapy	3	Summer
RATH 4863 Clinical Education III	3	Summer
Total Semester Credits	**13**	
Total Bachelor of Science Credits	**46**	