

Weber State University  
Annual Assessment of Evidence of Learning

Cover Page

Department/Program: Radiologic Sciences Undergraduate  
Academic Year of Report: 2015/16  
Date Submitted: 12/8/2016  
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A. **Brief Introductory Statement:**

Please review the Introductory Statement and contact information for your department displayed on the assessment site:

<http://www.weber.edu/portfolio/departments.html> - if this information is current, please place an 'X' below. No further information is needed. We will indicate "Last Reviewed: [current date]" on the page.

**XX Information is current; no changes required.**

**Information is not current; updates below.**

Update:

## **B. Mission Statement**

Please review the Mission Statement for your department displayed on the assessment site: <http://www.weber.edu/portfolio/departments.html> - if it is current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed. If the information is not current, please provide an update:

**XX\_\_ Information is current; no changes required.**

**\_\_ Information is not current; updates below.**

### C. Student Learning Outcomes

Please review the Student Learning Outcomes for your department displayed on the assessment site:

<http://www.weber.edu/portfolio/departments.html> - if they are current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed.

If they are not current, please provide an update:

\_\_\_ **Information is current; no changes required.**

\_\_\_ **Information is not current; updates below.**

Additionally all courses of study will be evaluated using the following grid which is appropriate for benchmarking with other programs in the Radiologic Sciences.

#### Radiography Program

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Radiography Program the student will be able to;			
Identify the biological effects of radiation.	<u>Successful Completion of:</u> Radtec 1303; 3403	1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation & Personal & Professional Growth Assessment	1. Annually 2. Annually 3. Every semester
Demonstrate proper radiation protection procedures during diagnostic procedures.	<u>Successful Completion of:</u> Radtec 1022; 3403; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865	1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation & Personal & Professional Growth Assessment	1. Annually 2. Annually 3. Every semester

<p>Demonstrate proper use and understanding of radiation exposure monitors and diagnostic radiation equipment.</p>	<p><u>Successful Completion of:</u> Radtec 1303, 2403, 3443; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>
<p>Demonstrate, select, accurately explain and produce diagnostic quality radiographs.</p>	<p><u>Successful Completion of:</u> Radtec 1303; 2403; 3443; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Employer Surveys 4. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every semester</p>
<p>Demonstrate repeated competency in accurately explaining the proper radiographic film processing technique.</p>	<p><u>Successful Completion of:</u> Radtec 1303; 2403; 3443; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Job placement rates 4. Employer Surveys 5. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Annually 4. Every 3 years (next 2018) 5. Every semester</p>
<p>Demonstrate and accurately interpret quality assurance testing.</p>	<p><u>Successful Completion of:</u> Radtec 1303; 2403; 3443; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>

<p>Demonstrate proper evaluation and critique of radiographic positioning, technical factors, anatomy, physiology and pathology.</p>	<p><u>Successful Completion of:</u> Radtec 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681; <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>
<p>Demonstrate legal and professional responsibility.</p>	<p><u>Successful Completion of:</u> Radtec 3003; 3403; 2043; 3423; 1022 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>
<p>Demonstrate appropriate patient education, safety and comfort skills.</p>	<p><u>Successful Completion of:</u> Radtec 1022; 2043; 3003; 2263; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681; <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>
<p>Demonstrate acceptable methods of infection control and prevention.</p>	<p><u>Successful Completion of:</u> Radtec 1022; 2043; 3003; 2263; 1502/1601; 1512/1621; 1522/1641; 1532/1661; 1542/1681 <u>Clinical Evaluations:</u> Radtec 2861-2865</p>	<p>1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation &amp; Personal &amp; Professional Growth Assessment</p>	<p>1. Annually 2. Annually 3. Every semester</p>
<p>Demonstrate proper patient monitoring during radiographic procedures.</p>	<p><u>Successful Completion of:</u> Radtec 2043; 3003; 2263</p>	<p>1. Utah State Practical Technician results Examination</p>	<p>1. Annually 2. Annually</p>

	<u>Clinical Evaluations:</u> Radtec 2861-2865	2. ARRT Examination results 3. Clinical Evaluation & Personal & Professional Growth Assessment	3. Every semester
Demonstrate appropriate responses to diverse patient populations.	<u>Successful Completion of:</u> Radtec 3003; 3023 <u>Clinical Evaluations:</u> Radtec 2861-2865	1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Clinical Evaluation & Personal & Professional Growth Assessment 4. Employer Surveys 5. Graduate Surveys	1. Annually 2. Annually 3. Annually 4. Every 3 years (next 2018) 5. Every 3 years (next 2018)
Demonstrate a sense of professionalism and desire to learn.	<u>Successful Completion of:</u> Radtec 1022; 3003; 2866 Student acceptance into specialty programs	1. Utah State Practical Technician results Examination 2. ARRT Examination results 3. Employer Surveys 4. Graduate Surveys 5. Exit interviews 6. Clinical Evaluation & Personal & Professional Growth Assessment	1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018) 5. Annually 6. Every semester
Demonstrate continued competency through lifelong learning.	Student acceptance into specialty programs	1. Employer Surveys 2. Graduate Surveys 3. Exit Interviews 4. Clinical Evaluation & Personal & Professional Growth Assessment	1. Every 3 years (next 2018) 2. Every 3 years (next 2018) 3. Annually

			4. Every semester
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#### Advanced Radiography, Imaging Specialties and Radiation Therapy

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Advanced Radiography, Imaging Specialties & Radiation Therapy Program, the student will be able to;			
Identify the biologic effects of ionizing radiation.	<u>Successful Completion of:</u> RT 3403, 3443	Certification examination results	Annually
Demonstrate proper radiation protection procedures during diagnostic procedures.	<u>Successful completion of:</u> RT 4863 – CT; RT 4861&4862 – Mammo RT 5861, 5862, 5863, 5864 & 5865 – RPA NM 4861, 4862, 4863 RTH 4861, 4862, 4863	1. Certification examination results 2. Employer Surveys	1. Annually 2. Every 3 Years (next 2018)
Demonstrate patient assessment, monitoring and management skills.	<u>Successful completion of:</u> RT 3243 & RT 3253 RT 3263, RT 4303 RT 5363 & 4423 -- RPA RTH 4425– Rad Therapy <u>Clinical evaluations</u>	1. Certification examination results 2. Employer Surveys	1. Annually 2. Every 3 Years (next 2018)
Demonstrate appropriate patient education, safety and comfort skills.	<u>Successful completion of:</u> RT 3003, RT 3043 RT 4203, RT 4223 RT 4572-- Mammography RTH 4425– Rad Therapy <u>Clinical evaluations</u>	1. Certification examination results 2. Employer Surveys	1. Annually 2. Every 3 Years (next 2018)



Demonstrate legal, professional and ethical responsibility.	<u>Successful completion of:</u> RT 3003, RT 3043 RT 4253, RT 4233 <u>Clinical evaluations</u>	Certification examination results	Annually
Demonstrate knowledge of anatomy, physiology and pathophysiology	<u>Successful completion of:</u> RT 3023, RT 3123	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 years (next 2018)
Demonstrate appropriate responses to diverse patient populations	<u>Successful completion of:</u> RT 3003, RT 4203, RT 3243 RT 3253, RT 5363 <u>Clinical evaluations</u>	1. Certification examination results 2. Employer surveys 3. Graduate surveys	1. Annually 2. Every 3 years (next 2008) 3. Every 3 years (next 2018)
Demonstrate knowledge and application of federal regulations	<u>Successful completion of:</u> RT 3043, RT 3423 RT 4243, RT 4253 RT 4213 Clinical evaluations	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 years (next 2018)
Demonstrate a sense of professionalism and desire to learn	<u>Successful completion of:</u> RT 4803, RT 4933 RT 4943, RT 4922, RT 4942, RT 4992 Active participation in professional organizations; acceptance into graduate programs	1. Exit interviews 2. Graduate surveys 3. Employer surveys	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018)
Demonstrate continued competency through lifelong learning	Active participation in professional organizations Acceptance into graduate school	1. Maintenance of active certification status 2. Employer surveys 3. Employment rate 4. Graduate surveys	1. Every 3 years (next 2018) 2. Every 3 years (next 2018) 3. Every 3 years

			(next 2018) 4. Every 3 years (next 2018)
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Computerized Tomography/Magnetic Resonance Imaging (CT/MRI)

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Computerized Tomography/Magnetic Resonance Imaging Program, the student will be able to;			
Demonstrate proper use of imaging equipment.	<u>Successful Completion of:</u> RT 4603, RT 4623, RT 4663, RT 3463 <u>Clinical evaluations:</u> RT 4863	1. Certification examination results 2. Employer surveys 3. Graduate surveys	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2008)
Demonstrate proper selection of technical factors to produce diagnostic imaging.	<u>Successful completion of:</u> RT 4633, RT 4643 RT 4613, RT 4653 RT 4911, RT 4912 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employment rate 3. Graduate surveys	1. Annually 2. Annually 3. Every 3 Years (next 2018)
Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u> RT 3443, RT 4603 RT 4663 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 Years (next 2018)
Demonstrate proper evaluation and critique of diagnostic images for accuracy of technical factors, patient positioning, anatomy, contrast injection and pathology.	<u>Successful completion of:</u> RT 4633, RT 4643	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 Years (next 2018)

	RT 4613, RT 4653 RT 4623, RT 4911 and RT4912	3. Employment rate 4. Graduate surveys	3. Annually 4. Every 3 Years (next 2018)
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Cardiovascular-Interventional Technology (CVIT)

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Cardiovascular-Interventional Technology Program, the student will be able to;			
Demonstrate proper use of imaging equipment.	<u>Successful Completion of:</u> RT 3463, RT 4913, ARRT certification <u>Clinical evaluations:</u> RT 4863	1. Certification examination results 2. Employment rates	1. Annually 2. Annually
Demonstrate proper use of technical factors to produce diagnostic images.	<u>Successful completion of:</u> RT 4313, RT 4333, RT 4343 <u>Clinical evaluations:</u>	Certification examination results	Annually
Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u> RT 3443, RT 3463 ARRT certification	Certification examination results	Annually

	<u>Clinical evaluations:</u>		
Demonstrate proper evaluation and critique of diagnostic images for accuracy of technical factors, patient positioning, anatomy, contrast injection and pathology.	<u>Successful completion of:</u> RT 4313, RT 4333 and RT4343	1. Certification examination results 2. Employment rate 3. Employer surveys	1. Annually 2. Annually 3. Every 3 Years (next 2018)

### Mammography

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Mammography Program, the student will be able to;			
Demonstrate proper use of imaging equipment	<u>Successful Completion of:</u> RT 4563 <u>Clinical evaluations:</u> RT 4861, RT 4862	1. Certification examination results 2. Employment rate 3. Employer surveys	1. Annually 2. Annually 3. Every 3 Years (next 2018)
Demonstrate proper selection of technical factors to produce diagnostic images	<u>Successful Completion of:</u> RT 4553, RT 4563 <u>Clinical evaluations:</u> RT 4861, RT 4862	1. Certification examination results 2. Employment rate 3. Employer surveys	1. Annually 2. Annually 3. Every 3 Years (next 2018)
Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u> RT 4583 <u>Clinical</u>	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 Years (next 2018)

	<u>evaluations:</u> RT 4861, RT 4862		
Demonstrate proper evaluation and critique of diagnostic images for accuracy of technical factors, patient positioning, anatomy, contrast injection and pathology.	<u>Successful completion of:</u> RT 4553, RT 4563 and RT4572  <u>Clinical evaluations:</u> RT 4861, RT 4862	1. Certification examination results 2. Employer surveys 3. Employment rate	1. Annually 2. Every 3 Years (next 2018) 3. Annually

### Diagnostic Medical Sonography

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Diagnostic Medical Sonography Program, the student will be able to;			
Demonstrate proper use of imaging equipment	<u>Successful Completion of:</u> DMS 4103, 4641, 4642, 4643, 4644, 4645 <u>Clinical evaluations:</u> DMS 4861, 4862, 4863, 4864, 4865, 4866, 4867	1. Certification examination results 2. Employer surveys 3. Exit interviews 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Annually 4. Annually
Demonstrate proper selection of technical factors to produce diagnostic images	<u>Successful Completion of:</u> DMS 4103, 4303, 4323, 4343, 4403, 4503, 4523 <u>Clinical evaluations:</u>	1. Certification examination results 2. Exit Interviews 3. Employer surveys 4. Employment rate	1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Annually

Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u> DMS 4103, 4143 <u>Clinical evaluations:</u>	Certification examination results	Annually
Demonstrate proper evaluation and critique of diagnostic images for accuracy of technical factors, patient positioning, anatomy, contrast injection and pathology.	<u>Successful completion of:</u> DMS 4303, 4323, 4343, 4403, 4503, 4523 <u>Clinical evaluations:</u>	1. Certification examination results 2. Exit Interviews 3. Employer surveys 4. Graduate surveys 5. Employment rate	1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018) 5. Annually

### Nuclear Medicine

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Nuclear Medicine Program, the student will be able to;			
Demonstrate proper use of imaging equipment	<u>Successful Completion of:</u> RT 3463, NM 4303, 4333 <u>Clinical evaluations:</u> NM 4861, 4862, 4863	1. Certification examination results 2. Employer surveys 3. Graduate surveys 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018) 4. Annually
Demonstrate proper selection of radiopharmaceuticals and technical factors to produce diagnostic images	<u>Successful Completion of:</u> NM 4103, 4203, 4213, 4303, 4333, 4223 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employer surveys 3. Graduate surveys 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018) 4. Annually

Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u> NM 4303, 4333 ARRT certification in radiography	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 years (next 2018)
Demonstrate proper evaluation and critique of diagnostic images for accuracy of technical factors, patient positioning, anatomy, nuclide injection and pathology.	<u>Successful completion of:</u> NM 4103, 4203, 4213, 4223 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employer surveys	1. Annually 2. Every 3 years (next 2018)

### Radiation Therapy

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Radiation Therapy Program, the student will be able to;			
Demonstrate proper use of treatment equipment	<u>Successful Completion of:</u> RTH 4330, 4342, 4444 <u>Clinical evaluations:</u> RTH 4861, 4862, 4863	1. Certification examination results 2. Employer surveys 3. Graduate surveys 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018) 4. Annually
Demonstrate proper interpretation of treatment prescriptions, treatment fields and procedures	<u>Successful Completion of:</u> RTH 4410, 4412, 4414, 4444 <u>Clinical evaluations:</u> RTH 4861, 4862, 4863	1. Certification examination results 2. Employer surveys 3. Graduate surveys 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018) 4. Annually
Demonstrate and accurately interpret quality assurance testing.	<u>Successful completion of:</u>	1. Certification examination results	1. Annually 2. Every 3 years

	RTH 4330, 4446 ARRT certification in radiography	2. Employer surveys 3. Graduate surveys 4. Employment rate	(next 2018) 3. Every 3 years (next 2018) 4. Annually
Demonstrate proper evaluation and critique of treatment simulation and delivery, patient positioning and protection, anatomy, and pathology.	<u>Successful completion of:</u> RTH 4342, 4410, 4412, 4414, 4444 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employer surveys 3. Graduate surveys 4. Employment rate	1. Annually 2. Every 3 years (next 2018) 3. Every 3 years (next 2018) 4. Annually

### Radiology Practitioner Assistant

Objective	Internal Measurement	External Measurement	Data Collection
Upon completing the Radiology Practitioner Assistant Program, the student will be able to;			
Demonstrate proper use of imaging equipment.	<u>Successful Completion of:</u> RT 3443, 3463, 5403, 5413, 5423, 5433, 5453 <u>Clinical evaluations:</u> RT 5861, 5862, 5863, 5864, 5865, 5867	1. Certification examination results 2. Employment rate 3. Employer survey 4. Graduate Survey	1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018)
Demonstrate efficient use of imaging and fluoroscopic equipment to produce diagnostic images.	<u>Successful Completion of:</u> RT 5403, 5413, 5423, 5433, 5453 <u>Clinical evaluations:</u>	1. Certification examination results 2. Employment rate 3. Employer survey 4. Graduate Survey	1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018)



<p>Demonstrate and accurately interpret quality assurance testing.</p>	<p><u>Successful Completion of:</u> RT 3443 ARRT certification in radiography</p>	<p>1. Certification examination results 2. Employment rate 3. Employer survey 4. Graduate Survey</p>	<p>1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018)</p>
<p>Demonstrate proper evaluation and critique of diagnostic images for accuracy in technical factors, patient positioning, anatomy, contrast injection and pathology.</p>	<p><u>Successful Completion of:</u> RT 5403, 5413, 5423, 5433, 5453 <u>Clinical evaluations:</u></p>	<p>1. Certification examination results 2. Employment rate 3. Employer survey 4. Graduate Survey</p>	<p>1. Annually 2. Annually 3. Every 3 years (next 2018) 4. Every 3 years (next 2018)</p>

**D. Curriculum**

Please review the Curriculum Grid for your department displayed on the assessment site: <http://www.weber.edu/portfolio/departments.html> - if it is current, please indicate as much; we will mark the web page as “Last Reviewed: [current data]”. No further information is needed. If the curriculum grid is not current, please provide an update:

- XX** Information is current; no changes required.
- \_\_\_ Information is not current; updates below

Curriculum Map

	Department/Program Learning Outcomes							
	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4	Etc...			
Core Courses in Department/Program								

*Note<sup>a</sup>*: Define words, letters or symbols used and their interpretation; i.e. 1= introduced, 2 = emphasized, 3 = mastered or I = Introduced, E = Emphasized, U = Utilized, A = Assessed Comprehensively; these are examples, departmental choice of letters/numbers may differ  
*Note<sup>b</sup>*: Rows and columns should be transposed as required to meet the needs of each individual department

Additional Information (if needed)

## E. Assessment Plan

Please review the Assessment Plan for your department displayed on the assessment site: <http://www.weber.edu/portfolio/departments.html> - if the plan current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed.

The site should contain an up-to-date assessment plan with planning going out a minimum of three years beyond the current year. Please review the plan displayed for your department at the above site. The plan should include a list of courses from which data will be gathered and the schedule, as well as an overview of the assessment strategy the department is using (for example, portfolios, or a combination of Chi assessment data and student survey information, or industry certification exams, etc.).

*Please be sure to include your planned assessment of any general education courses taught within your department.* This information will be used to update the General Education Improvement and Assessment Committee’s planning documentation.

Assessment plan:

The assessment plan is current, up-to-date and meeting the departments undergraduate expectation

## **F. Report of assessment results for the most previous academic year:**

All courses in the Department of Radiologic Sciences are offered on a step lock semester basis. All courses listed under (as found in the curriculum grid) the above six competencies are evaluated every semester using pre and post testing while building on the knowledge from the previous semester. The final direct measurement of the six competencies is national certification score of all undergraduate programs.

Utilizing the pre and post testing model the following has occurred:

*Note--the bench mark was moved this year from 70% to 75% to be more consistent with national certification exams*

### **PATIENT CARE AND EDUCATION**

AAS (Radiography) 94% of all students in the Radiography program scored above 75% at the end of each course in the sequence.

#### **BS**

--Advance Radiography	95% of all students in the program scored above 75% at the end of each course in the sequence
--Cardio Interventional	100% of all students in the program scored above 75% at the
--CT	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS medical	96% of all students in the program scored above 75% at the end of each course in the sequence
--DMS cardiac	93% of all students in the program scored above 75% at the end of each course in the sequence
--DMS vascular	94% of all students in the program scored above 75% at the end of each course in the sequence
--MRI	93% of all students in the program scored above 75% at the end of each course in the sequence
--Nuclear Med.	89% of all students in the program scored above 75% at the end of each course in the sequence
--RA	no students currently enrolled in this program
--Rad. Therapy	100% of all students in the program scored above 75% at the end of each course in the sequence
--Women's Imaging	100% of all students in the program scored above 75% at the end of each course in the sequence

### **Outcomes, Changes and Planning**

1. Students overall appear to be retaining critical inform semester to semesters that is required for successful completion of the program of study and clinical practice. Additional skill sets were added by national certification standards this year. All new skills tested above the 70% bench mark.
2. The required courses are preparing students appropriately for clinical placement, success in gaining competencies and passing national certification and state licensing examinations.
3. Lab courses continue to evolve to reflect changes directly related to patient care skills that are required for certification and clinical practice. We have added closed circuit cameras to record and evaluate student's interaction with patients and verbal and non-verbal patient interactions.

4. Clinical education requirements for patient care and education reflect a competency and re-competency model to document continued competencies
5. Course and clinical competencies been added to reflect patient satisfactions scores as required by clinical education sites and compliance with federal and state healthcare laws.
6. Additional lab assistants have been employed to assist with more one on one instruction with students in mock clinical environments. This model is making a significant impact on simulation lab experiences.

## **PROFESSIONAL DEVELOPMENT AND RESEARCH**

AAS (Radiography)	96% of all students in the Radiography program scored above 75% at the end of each course in the sequence on the directed readings and research courses.
BS	
--Advance Radiography	96% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--Cardio Interventional	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--CT	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--DMS medical	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--DMS cardiac	94% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--DMS vascular	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--MRI	93% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.

--Nuclear Med.	98% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--RA	No students were enrolled in this program.
--Rad. Therapy	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.
--Women's Imaging	100% of all students in the program scored above 75% at the end of RADT 4933 (research methods course) and successfully completed a Bachelor's thesis project.

### **Outcomes, Changes and Planning**

1. Students overall appear to be retaining critical information from semester to semester on the pre and posttests related to how to complete design and execute an undergraduate research program.
2. Students have been required to join the appropriate professional organizations to stay current with national trend and develop lifelong learning skills.
3. Directed readings, research methods, and Bachelors thesis projects have become required in all programs.
4. Some students still struggle with conducting and writing at a publishable level with under graduate research. We are encouraging and in some cases requiring the student to utilize the WSU writing center for assistance. Peer review has also been implemented.

### **Biologic Effects and Safety**

AAS (Radiography)	91% of all students in the Radiography program scored above 70% at the end of each course in the sequence.
BS	
--Advance Radiography	93% of all students in the program scored above 75% at the end of each course in the sequence
--Cardio Interventional	94% of all students in the program scored above 75% at the end of each course in the sequence
--CT	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS medical	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS cardiac	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS vascular	92% of all students in the program scored above 75% at the end of each course in the sequence
--MRI	94% of all students in the program scored above 75% at the end of each course in the sequence
--Nuclear Med.	92% of all students in the program scored above 75% at the end of each course in the sequence
--RA	No students are currently enrolled

--Rad. Therapy	96% of all students in the program scored above 75% at the end of each course in the sequence
--Women's Imaging	91% of all students in the program scored above 75% at the end of each course in the sequence

### **Outcomes, Changes and Planning**

1. On the pre and post testing this section tested very well with the student retaining critical information from one semester to another in all courses of study.
2. The disconnection between theory and clinical practice appears to have improved this. We have implemented closed circuit cameras in the lab and student are evaluated on simulation scenarios related to patient safety and radiation protection.
3. Additional information has been added to this section in digital imaging, dose reduction methods and imaging wisely.
4. Labs have been improved to test students understanding of safety and quality improvement measures and clinical application.

### **Clinical Competency and Medical Ethics**

AAS (Radiography)	100% of all students in the Radiography program scored above 70% at the end of each course in the sequence.
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#### **BS**

--Advance Radiography	100% of all students in the program scored above 75% at the end of each course in the sequence
--Cardio Interventional	100% of all students in the program scored above 75% at the end of each course in the sequence
--CT	100% of all students in the program scored above 75% at the end of each course in the sequence
--DMS medical	100% of all students in the program scored above 75% at the end of each course in the sequence
--DMS cardiac	100% of all students in the program scored above 75% at the end of each course in the sequence
--DMS vascular	100% of all students in the program scored above 75% at the end of each course in the sequence
--MRI	100% of all students in the program scored above 75% at the end of each course in the sequence
--Nuclear Med.	100% of all students in the program scored above 75% at the end of each course in the sequence
--RA	no students are currently enrolled
--Rad. Therapy	100% of all students in the program scored above 75% at the end of each course in the sequence
--Women's Imaging	100% of all students in the program scored above 75% at the end of each course in the sequence

### **Outcomes, Changes and Planning**

1. Each student must complete required competencies and re-competencies each semester (100%). Several students were unable to complete the requirements and were placed on warning or dismissed from program for failing to meet the critical levels of professional competencies and/or professional ethics.

2. Test retest lab procedures were also established (where appropriate) to further evaluate students ability to perform at appropriate clinical skills at a professional level.
3. Critical thinking assessments assist the students with ethical and professional judgment.

### **Procedures, Anatomy and Pathophysiology**

AAS (Radiography)            93% of all students in the Radiography program scored above 70% at the end of each course in the sequence.

#### **BS**

--Advance Radiography	92% of all students in the program scored above 75% at the end of each course in the sequence
--Cardio Interventional	92% of all students in the program scored above 75% at the end of each course in the sequence
--CT	93% of all students in the program scored above 75% at the end of each course in the sequence
--DMS	94% of all students in the program scored above 75% at the end of each course in the sequence
--DMS cardiac	94% of all students in the program scored above 75% at the end of each course in the sequence
--DMS vascular	96% of all students in the program scored above 75% at the end of each course in the sequence
--MRI	94% of all students in the program scored above 75% at the end of each course in the sequence
--Nuclear Med.	93% of all students in the program scored above 75% at the end of each course in the sequence
--RA	No students are currently enrolled
--Rad. Therapy	96% of all students in the program scored above 75% at the end of each course in the sequence
--Women's Imaging	100% of all students in the program scored above 75% at the end of each course in the sequence

### **Outcomes, Changes and Planning**

1. The students overall were more successful with the pre and post testing than in prior years. With the direct correlation with these courses and clinical internships these finding were expected.
2. Competencies were implemented to test student's ability to evaluate pathology and its relationship to imaging and patient care.
3. An excellent correlation was also found with the student's final competency requirements in the clinical setting and Campus labs.

### **Instrumentation and Quality Control**

AAS (Radiography)            89% of all students in the Radiography program scored above 75% at the end of each course in the sequence.



## BS

--Advance Radiography	80% of all students in the program scored above 75% at the end of each course in the sequence
--Cardio Interventional	86% of all students in the program scored above 75% at the end of each course in the sequence
--CT	83% of all students in the program scored above 75% at the end of each course in the sequence
--DMS	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS cardiac	92% of all students in the program scored above 75% at the end of each course in the sequence
--DMS vascular	92% of all students in the program scored above 75% at the end of each course in the sequence
--MRI	86% of all students in the program scored above 75% at the end of each course in the sequence
--Nuclear Med.	84% of all students in the program scored above 75% at the end of each course in the sequence
--RA	No students are currently in this program
--Rad. Therapy	91% of all students in the program scored above 75% at the end of each course in the sequence
--Women's Imaging	93% of all students in the program scored above 75% at the end of each course in the sequence

## Outcomes, Changes and Planning

1. This is the most difficult section of the programs and is more difficult to make a direct connection to clinical practice. We have reviewed the course content at both the AAS and BS levels. We have added additional clinical, classroom and lab activities to increase the scores in this area. Although this section met the criteria the score are still lower than the department would like. We have seen significant improvement in this section with the use of new textbooks and changes in the required task analysis for certification.

## National Certification Scores:

National Certification scores will also be used as a direct measure of learning at the end of course of study. The six departmental competencies used for direct measurements of learning in ALL programs in the Department of Radiologic Sciences.

Radiography	100% pass rate with an averages score of 89%
CT	100% pass rate with an average score of 88%
MRI	100% pass rate with an average score of 84%
DMS medical	100% pass rate with an average score of 88%
DMS cardiac	100% pass rate with an average score of 91 %
Radiation therapy	100% pass rate with an average score of 87%
Nuclear medicine	96% pass rate with an average score of 86%
Mammography	100% pass rate with an average score of 94%

All national certification scores for the department are at or above national standards as reported by certification agencies.

**Indirect Measurements:**

**In addition to the direct measurements the department collects, analyses and makes programmatic changes based on the following list of indirect assessment measures:**

1. Clinical competency evaluations
2. Personal and Professional growth evaluations
3. Student program exit evaluations
4. Clinical site evaluations
5. Employer surveys
6. Employment rates
7. Graduate surveys
8. Final competency evaluations

**The data collected is reviewed regularly in the following manner:**

1. All assessment information is discussed at regularly Department faculty meetings.
2. Twice annually, the Department holds an all-day planning meeting to discuss changes and improvements to the programs within the Department.
3. Advisory Committee meetings are held each semester.
4. Individual clinical site issues are discussed regularly with clinical faculty.
5. Appropriate information is shared with students annually during student orientation, during the semester as warranted and/or with student organization leadership.

Faculty	
Headcount	7
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)	3

Full-time Tenured	2
Full-time Non-Tenured (includes tenure-track)	0
Part-time	0
With Master's Degrees	3
Full-time Tenured	3
Full-time Non-Tenured	2
Part-time	
With Bachelor's Degrees	0
Full-time Tenured	0
Full-time Non-tenured	0
Part-time	0
Other	0
Full-time Tenured	0
Full-time Non-tenured	0
Part-time	0
Total Headcount Faculty	7
Full-time Tenured	5
Full-time Non-tenured	2
Part-time	0

**Note: The Department will be replacing one retiring faculty in the spring of 2017 and adding a new soft money instructor line at the same time.**

**Please respond to the following questions.**

**1) BASED ON YOUR PROGRAM'S ASSESSMENT FINDINGS, WHAT SUBSEQUENT ACTION WILL YOUR PROGRAM TAKE?**

The department maintains a strategic plan that takes annual review into consideration as we develop new programs, purchase educational material, hire new staff and faculty and position the department and our graduates for future success.

**BASED ON THE 2015/16 UNDERGRADUATE PROGRAM ASSESSMENT THE FOLLOW ACTIONS OR EVENT WERE PUT INTO PLACE**

1. The Sonography program continues to upgrade and facilitate better clinical, lab and didactic time frames for the students and learning outcomes. Additional new sonography equipment has been purchased this past year that will allow for the development and instruction of MSK (musculoskeletal Ultrasound). We hired additional lab assistants to help with the load and time commitment of the DMS simulation labs. These changes in the program have made it easier and more efficient for student sonographers to enter clinical in the second semester of the program provide for better quality and patient safety.
2. In 2015-16, the department employs 9 adjuncts and 7 lab assistants that have helped with faculty load and student simulated clinical scenarios.
3. The clinical competency evaluation system requiring the verification of clinical competency by the radiologist or the supervising technologist is reviewed and revised annually to meet certification agencies requirements and programmatic requirements. This assessment now connects didactic course with clinical lab simulation and direct patient care in a clinical environment.
4. New 3D lab construction has been completed. Perkins, ARCC, and private donor funds were obtained to upgrade the 3D lab, RIS/PAC software and ShaderWare radiographic simulation programs.
5. Inter-professional education course work in Cone Beam CT, reconstruction, segmentation and modeling has been developed in conjunction with the Department of Dental Hygiene.
6. The Website has been to more users friendly and provides current and up to date information.
7. Student evaluations of clinical education sites have been reviewed with each of the clinical sites and changes made to better facilitate the clinical education for students and provide appropriate clinical education that is required for ARRT clinical competencies.
8. The independent study program in 2015/16 has graduated an addition 28 Bachelors of Science degree students. A new landing page was created by CE to assist with recruiting students for the independent study program. Additional work continues with cooperate contracts and potential programs with the military.

9. The curricula for the programs were reviewed and appropriate changes made. All 5000 number course were eliminated or moved to 6000 level course to be consistent with University policy. Other small changes in course content and delivery have also been completed.
10. The computer lab and clinical energized labs have been update with new technology and software.
11. Additional combination or add on skills need to be added such as MRI, CT, PET Scanning, SPECT Scanning, MSK ultrasound, and more inter-professional education opportunities. Additional opportunities should be provide to student to obtain and understand the needs for global health competencies.

**2) ARE THERE ASSESSMENT STRATEGIES WITHIN YOUR DEPARTMENT OR PROGRAM THAT YOU FEEL ARE PARTICULARLY EFFECTIVE AND/OR INNOVATIVE? IF SO, WHAT ARE THOSE STRATEGIES AND WHAT DO YOU LEARN ABOUT YOUR STUDENTS BY USING THEM?**

1. The Department has worked hard to create an assessment plan that evaluates student performance in didactic course, to simulated labs, to direct patient care competencies and ultimately to a national certification score.

**3) We are interested in better understanding how departments/programs assess their graduating seniors. Please provide a short narrative describing the practices/curriculum in place for your department/program. Please include both direct and indirect measures employed.**

The graduating seniors from thirteen options in The Bachelors of Sciences, Department of Radiologic Sciences are evaluated in a variety of ways:

1. Twelve of the thirteen options take national certification examination we average 94% pass rates and are 5 to 8 percentage points higher than national average.
2. Each course of study has a Registry review/prep course embedded in the curriculum. These course are 49—numbered courses.
3. The student in the nonclinical track (Advanced Radiology) are usually student who want to get to PA programs or position themselves for more rapid advancement in the profession. Each year 3 to 5 student are accepted into physician assistant programs.
4. Each student does an exit interview with their respect faculty advisor. The student also may request to have an exit evaluation with the department chair. During this interview the program of study is reviewed to including such things as textbooks, program delivery, testing, time and course content, application to clinical practice, the clinical site is evaluated, availability and helpfulness from faculty and staff and employment at the time of graduation is also reviewed.

5. We do follow up graduate surveys and employer surveys every three years.

The information obtained is reviewed by the faculty assigned to the specific course of study, the department chair and our advisory committees. Any trends are discussed by the entire faculty and staff and, if appropriate, our clinical community partners. If there are issues that need to be addressed with other students in the department then the department chair will discuss these issues with students to assure that any issue they might have can be addressed before graduation.