Department/Program: Radiologic Sciences Graduate program
Academic Year of Report: 2015/16
Date Submitted: 12-6-16
Report author: Robert Walker

Contact Information:
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Email:rwalker2@weber.edu
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](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.

___ 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](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:

**Information is current; no changes required.**  
**Information is not current; updates below.**

In support of the Weber State University five core values, the Master of Science in Radiologic Sciences has established the following:

1. Learning through personalized experiences and shared inquiry, the MSRS program will:
   - provide learning opportunities for students through a variety of instructional methodologies in multiple settings;
   - identify essential knowledge and skills for imaging graduate students;
   - engage students through a variety of strategies to ensure growth in knowledge, learning processes and research skills;

2. Engaged in the community, the MSRS program will:
   - provide appropriate technologies in order for graduate students to access, gather, organize, and present information related to clinical, educational and professional research.

3. Providing access and opportunity for all, the MSRS program will:
   - assist and support graduate students in professional development and research to improve clinical based research and foundational professional research;
   - provide student orientation to community/campus support services.

4. Respect for people and ideas, the MSRS program will:
   - promote the recruitment and support of students from diverse backgrounds;
   - promote the recruitment and support of faculty from diverse backgrounds;
   - promote appropriate professional behavior, ethics, diversity, and respect for self and others.

5. Nurturing the potential within every individual, the MSRS program will:
   - assist and encourage faculty and graduate students to develop collaborative relationships with other professionals;
   - support and assist with scholarship and grant writing;
   - provide appropriate, accurate, and timely advisement for students within the program.
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.
___XX__ Information is not current; updates below.
D. Curriculum
Please review the Curriculum Grid for your department displayed on the assessment site: [http://www.weber.edu/portfolio/departments.html](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:

___ Information is current; no changes required.
XX___ Information is not current; updates below

### Curriculum Grid

<table>
<thead>
<tr>
<th>SIX departmental competencies used for direct measurements of learning in ALL programs in the Department</th>
<th>Patient Care and Education</th>
<th>Professional Development and Research</th>
<th>Biologic Effects and Safety</th>
<th>Clinical Competency and Medical Ethics</th>
<th>Procedures, Anatomy and Pathophysiology</th>
<th>Instrumentation and Quality Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters of Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSRS</td>
<td>MSRS 6443</td>
<td>MSRS 6100</td>
<td>MSRS 6900</td>
<td>MSRS 6130</td>
<td>MSRS 6450</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSRS 6463</td>
<td>MSRS 6120</td>
<td></td>
<td>MSRS 6140</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSRS 6130</td>
<td>MSRS 6200</td>
<td></td>
<td>MSRS 6473</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSRS 6120</td>
<td>MSRS 6999</td>
<td></td>
<td>MSRS 6863</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The above grid is utilized for all direct measures of learning. All courses are step lock curriculum and are pre and post tested utilizing multiple choice questions, case studies, simulated clinical scenarios, and radiographic reconstructed and segmented images in each of the six measures as appropriate. All students will complete the pre and post testing each semester in each of the 6 categories. The comprehensive posttest each semester will become the pretest for the next semester.

E. Assessment Plan
Please review the Assessment Plan for your department displayed on the assessment site: [http://www.weber.edu/portfolio/departments.html](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

<table>
<thead>
<tr>
<th>Objective</th>
<th>Internal Measurement</th>
<th>External Measurement</th>
<th>Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biologic effects of ionizing radiation.</td>
<td>Undergraduate education</td>
<td>Undergraduate education certification category scores 100 were 75% or higher</td>
<td>Certification required for admission into the MSRS program</td>
</tr>
<tr>
<td>Radiation protection procedures during diagnostic procedures.</td>
<td>Undergraduate education</td>
<td>Undergraduate education certification category scores 100 were 75% or higher</td>
<td>Certification required for admission into the MSRS program</td>
</tr>
<tr>
<td>Patient assessment, monitoring and management skills.</td>
<td>Successful completion of MSRS courses 6443, 6120 6230 and 6463</td>
<td>Graduate surveys and employer survey</td>
<td>Student course evaluations, graduate evaluations and employer evaluation</td>
</tr>
<tr>
<td>Patient education, safety and comfort skills.</td>
<td>Successful completion of MSRS courses 6443, 6120 6230 and 6463</td>
<td>Graduate surveys and employer survey</td>
<td>Student course evaluations, graduate evaluations and employer evaluation</td>
</tr>
<tr>
<td>Legal, professional and ethical responsibility.</td>
<td>Successful completion of MSRS Courses 6100, 6120,6200 and 6999</td>
<td>Completion of CITI, WSU IRB and Clinical institutional IRB if required. Data collection and research skills</td>
<td>Course papers and Master’s Thesis and student professional publications</td>
</tr>
<tr>
<td>Knowledge of anatomy, physiology and pathophysiology</td>
<td>Successful completion of MSRS 6130, 6140, 6473 and 6863</td>
<td>Graduate surveys and employer survey</td>
<td>Student course evaluations, graduate evaluations and employer evaluation</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Responses to diverse patient populations</td>
<td>Completion of MSRS 6200</td>
<td>Graduate surveys and employer survey. Student best practice radiology based research</td>
<td>Epidemiologic health management paper and research</td>
</tr>
<tr>
<td>Knowledge and application of federal regulations</td>
<td>Successful completion of MSRS Courses 6100, 6120,6200 and 6999</td>
<td>Completion of CITI, WSU IRB and Clinical institutional IRB if required. Data collection and research skills</td>
<td>Course papers and Master’s Thesis and student professional publications</td>
</tr>
<tr>
<td>Professionalism and desire to learn</td>
<td>Completion of MSRS 6900</td>
<td>Graduate surveys and employer survey</td>
<td>Number of poster, presentations and publication that result from the student research. Professional and clinical changes that occur from the research</td>
</tr>
<tr>
<td>Continued competency through lifelong learning</td>
<td>Completion of MSRS 6900</td>
<td>Graduate surveys and employer survey</td>
<td>Number of students that enter Doctoral programs.</td>
</tr>
</tbody>
</table>

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

The curriculum grid was utilized for all direct measures of learning. All courses are step lock curriculum and were pre and post tested utilizing multiple choice questions, case studies, simulated clinical scenarios, and radiographic reconstructed and segmented images in each of the six measures as appropriate. All students will complete the pre and post testing each semester in each of the 6 categories. The comprehensive posttest each semester will become the pretest for the next semester.

Each Student should score 75% or higher on the comprehensive posttest each semester.

**Patient Care and Education** 94% of all students in the program scored 75% or higher at the end of each course in the sequence

**Professional Development and Research** 92% of all students in the program scored 75% or higher at the end of each course in the sequence

**Biologic Effects and Safety** 95% of all students in the program scored 75% or higher at the end of each course in the sequence

**Clinical Competency and Medical Ethics** 100% of all students in the program scored 75% or higher at the end of each course in the sequence
Procedures, Anatomy and Pathophysiology

92% of all students in the program scored 75% or higher at the end of each course in the sequence.

Instrumentation and Quality Control

89% of all students in the program scored 75% or higher on the post test for this course.

Note--the Biological effects and Safety was obtained from previous certification scores.

In the MSRS 6900: Capstone: Clinical Fellowship & Portfolio, each of the five competencies listed above will be evaluated using course content from all courses in the program. These evaluations will consist of case studies that will evaluate a student’s critical thinking skills as it relates to research, problem patient management, appropriateness of imaging procedure, patient management and patient assessment. The student will complete a comprehensive examination in this course;

2014-15 was the first year that this was given and the 100 of students scored 75% or higher on the cases studies and examination.
2015-16 the test will be administered in early spring semester and will be reported next year.

We also collect the following measurements of student learning and program effectiveness:

• Graduates employment
• Employer surveys reporting on their impressions of Weber State graduates they employ
• Graduate surveys reporting on their experiences in the program
• Regular institutional program review
• Advisory board review
• Student course evaluations
• Student exit evaluations
• Collection of student artifacts of learning
Appendix

Please provide the following information about the full-time and adjunct faculty contracted by your department during the last academic year (summer through spring). Gathering this information each year will help with the headcount reporting that must be done for the final Five Year Program Review document that is shared with the State Board of Regents.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Headcount</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)</td>
<td></td>
</tr>
<tr>
<td>Full-time Tenured</td>
<td>4</td>
</tr>
<tr>
<td>Full-time Non-Tenured (includes tenure-track)</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>1</td>
</tr>
<tr>
<td>With Master's Degrees</td>
<td></td>
</tr>
<tr>
<td>Full-time Tenured</td>
<td>2</td>
</tr>
<tr>
<td>Full-time Non-Tenured</td>
<td>1</td>
</tr>
<tr>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>With Bachelor's Degrees</td>
<td></td>
</tr>
<tr>
<td>Full-time Tenured</td>
<td></td>
</tr>
<tr>
<td>Full-time Non-tenured</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Full-time Tenured</td>
<td></td>
</tr>
<tr>
<td>Full-time Non-tenured</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Total Headcount Faculty</td>
<td>7</td>
</tr>
<tr>
<td>Full-time Tenured</td>
<td></td>
</tr>
<tr>
<td>Full-time Non-tenured</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td></td>
</tr>
</tbody>
</table>
1) Based on your program’s assessment findings, what subsequent action will your program take? 

during the next year the program will add expand the course offerings as outlined in this report 

Strengths and Weaknesses 
Strengths 
- Clinical-based curriculum 
- Dedication of faculty and staff 
- Strong undergraduate programs at Associate and Bachelor levels 
- Strong support from community partners 
- Collaborative student working groups 
- Diverse student population 

Weaknesses 
- Current program is focused on cardiac imaging 

Ameliorating Weaknesses 2015-16 
Add course work in MSK ultrasound 
Add options for Osseous System and Chest 
Offer Osseous, Chest and MSK as Inter-professional education courses 
Add course work to for continued registration and publication assistance 
Add course work on grant writing 
Sponsor workshop on Radiology Coding 

- Need for additional faculty and resources 

Ameliorating Weaknesses 2015-16 
Hire adjunct faculty to develop and teach MSK courses 
Hire adjunct radiologist to teach the osseous and Chest course
- Non-focused research agenda

Ameliorating Weaknesses 2015-16
- Obtain grant funding to create 3D imaging research agenda
- Publish more faculty and student research
- Consider graduate research and publication assistants
- Better utilize the writing center on campus
- Sponsor a writing boot camp for the students
- Obtain a 75 thousand endowed graduate publication and research fund

Enhancing strengths 2015-16
- Expand the course offerings
- Hire new faculty as appropriate
- Continue to expand partnerships around the country
- Comprehensive national student recruitment plan
- Expand student recruitment for a diverse student population
- Work with WSU administration and the Dean of International students to recruit more international students

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?