

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	110	RAD 110 08/06/2019- Clinical Education
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Erin Hammond
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

Yes

This course was last assessed in 2015.

2. Briefly describe the results of previous assessment report(s).

The previous assessment performed in 2015 revealed that students achieved the three learning outcomes and met the standards of success. From the data provided, it is evident that the tools used and the established benchmarks are effective and relevant measures for student success in this course.

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

There were no actions plans suggested because students achieved the learning outcomes, and the standards of success were met.

II. Assessment Results per Student Learning Outcome

Outcome 1: Perform radiographic positioning of the chest, abdomen and upper extremities.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Simulation exams.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26

- How the assessment will be scored: Analysis of the Mid- and Final-Semester Simulation exam. Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #11 of the Radiographic Procedure Evaluation concerning bucky tray/tube alignment and detent.
- Standard of success to be used for this assessment: 85% of students will score an average of 90% or better on Simulation Exam, 95% of students enrolled in RAD 110 will earn the 3 required competencies for the semester, and 95% of students will have received a "Yes" from their evaluator to Question #11 of the Radiographic Procedure Evaluation which reads: "Align bucky tray and x-ray tube; tube placed in detent."
- Who will score and analyze the data: Radiography program faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
28	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew before the end of the semester.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

RAD 110 is a clinical education course offered only face-to-face for day students enrolled in Fall of their first year of the two-year Radiography program. All enrolled students were included in the assessment.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Radiographic Procedure Evaluations, also known as Competencies, are a skills-based checklist by which clinical instructors measure a student's proficiency or competency in performing radiographic procedures. Students earn competencies only after performing a procedure a minimum of five times without assistance.

The student must successfully complete all items on the checklist in order to earn a competency. (Form attached.) These procedures are prescribed by the American Registry of Radiologic Technologists, and each student must complete a total of 52 competencies, including 37 mandatory procedures and 15 electives, in order to be eligible to take the ARRT examination. Each student is required to earn three competencies including an abdomen, chest and one upper extremity in RAD 110.

The simulation exercises evaluate the student by using a checklist to measure a student's psychomotor skills in the areas of patient care and communication, equipment operation, and quality of positioning. (Mid-semester and Final Simulation Exercises attached.)

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

100% of students successfully earned all three competencies. The benchmark was set at 95% of students enrolled earning three competencies during the course of the semester.

The standard of success stated that 95% of students will have received a "Yes" from their evaluator to question #11 of the Radiographic Procedure Evaluation which reads "Align bucky tray and x-ray tube; tube placed in detent." This standard of success lacks meaning because students must perform all items correctly in order to earn a competency. It was determined that the other two standards of success were sufficient.

The standard of success for the simulation exams stated that 85% of students would score an average of 90% or higher on the mid-semester and final simulations. This outcome is unrealistic due to the steep learning curve in the clinical setting, and this course is a student's introduction to the clinical setting. A more meaningful standard of success would be "90% of students will score an average of 85% or higher on the two simulations". In this case, 93% of students scored 80% or higher on the mid-semester simulation, and 100% scored higher than 80% on the final simulation. The benchmark was met. See attachment.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students are able to manipulate the radiographic equipment and position their patients at a level commensurate with their training in order to successfully perform the three radiographic required exams.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The students met the standard of success, so no changes are planned at this time.

Outcome 2: Demonstrate operating knowledge of radiographic equipment.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Simulation exams.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26
 - How the assessment will be scored: Analysis of the Mid- and Final-Semester Simulation exam. Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #11 of the Radiographic Procedure Evaluation concerning bucky tray/tube alignment and detent.
 - Standard of success to be used for this assessment: 85% of students will score an average of 90% or better on Simulation Exam, 95% of students enrolled in RAD 110 will earn the 3 required competencies for the semester, and 95% of students will have received a "Yes" from their evaluator to Question #11 of the Radiographic Procedure Evaluation which reads: "Align bucky tray and x-ray tube; tube placed in detent."
 - Who will score and analyze the data: Radiography program faculty
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
28	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew prior to the end of the semester.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

RAD 110 is a clinical education course offered only face-to-face for day students enrolled in Fall of their first year of the two-year Radiography program. All enrolled students were included in the assessment.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Radiographic Procedure Evaluations, also known as Competencies, are a skills-based checklist by which clinical instructors measure a student's proficiency or competency in performing radiographic procedures. Students earn competencies only after performing a procedure a minimum of five times without assistance. The student must successfully complete all items on the checklist in order to earn a competency. These procedures are prescribed by the American Registry of Radiologic Technologists, and each student must complete a total of 52 competencies, including 37 mandatory procedures and 15 electives, in order to be eligible to take the ARRT examination. Each student is required to earn three competencies including an abdomen, chest and one upper extremity in RAD 110.

The simulation exercises evaluate the student using a skills-based checklist to measure a student's psychomotor skills in the areas of patient care and communication, equipment operation, and quality of positioning.

An analysis of the number of students who received the three competencies and their scores on the corresponding simulations was performed. (Data attached)

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

100% of students completed all three competencies. The benchmark was that 95% of students enrolled in RAD 110 would earn the three required competencies for the semester.

The standard of success for the simulation exams stated that 85% of students would score an average of 90% or higher on the mid-semester and final simulations. This outcome was unrealistic due to the steep learning curve in the clinical setting and as this course is a student's introduction to the clinical setting. A more meaningful standard of success would be that 90% of students score a combined score of 85% or higher. In this case, 93% of students scored 80% or higher on the mid-semester simulation, and 100% scored higher than 80% on the final simulation.

The standard of success stated that 95% of students will have received a "Yes" from their evaluator to question #11 of the Radiographic Procedure Evaluation which reads "Align bucky tray and x-ray tube; tube placed in detent." This standard of success lacks meaning because students must perform all items correctly in order to earn a competency. However, because this is a foundational and vital part of equipment operation, this skill will be evaluated using the mid-semester and final simulations. I have determined that the students' level of success be measured by a new standard. A more meaningful standard of success would be "75% of students will appropriately align the central ray to the image receptor for every procedure in the simulations".

The benchmark was not met. Only 67% of students met the standard. Data Attached.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students are able to manipulate the radiographic equipment properly at a level commensurate with their training in order to successfully perform the three required radiographic exams.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The students did not meet the standard of success, revealing that the proper alignment of the central ray and the image receptor is an area of weakness for students. In an effort to strengthen the understanding of this concept and improve and reinforce the necessary psychomotor skills, we will provide an equipment skills assessment for each student prior to the graded simulations.

Outcome 3: Provide the appropriate patient care during the radiographic procedure.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Final Performance Evaluation.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26
 - How the assessment will be scored: Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #4 of the Radiographic Procedure Evaluation concerning correct patient identification. Item analysis of question #2 of the RAD 110 Final Performance Evaluation concerning Patient Safety.
 - Standard of success to be used for this assessment: For Outcome 3, 95% percent of students will have received a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will have received an "Effective Performance" rating from their evaluator to Question #2 of the RAD 110 Final Performance Evaluation concerning Patient Safety.
 - Who will score and analyze the data: Radiography program faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
28	27

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew prior to the end of the semester.
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4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

RAD 110 is a clinical education course offered only face-to-face for day students enrolled in Fall of their first year of the two-year Radiography program. All enrolled students were included in the assessment.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The Radiographic Procedure Evaluation is a checklist used by clinical instructors to determine if a student has reached the minimum level of competency required for each procedure. The student must successfully complete all items on the checklist in order to earn a competency.

The RAD 110 Final Performance Evaluation is a tool used by clinical instructors to assess the procedural knowledge, skills and behaviors demonstrated by students during their clinical experience. It has been updated and modified to capture more meaningful data in a digital format. It is based on a simple 4-point Likert scale: 1) Unsatisfactory, 2) Needs Improvement, #3) Satisfactory, 4) Exceeds. The new tool has a section on Patient Communication and a section on Patient Safety which more clearly reflects the learning outcome. (Clinical Performance Evaluation attached).

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The standard of success stated that 95% percent of students will have received a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will have received an "Effective Performance" rating from their evaluator to Question #2 of the RAD 110 Final Performance Evaluation concerning Patient.

I have determined that no meaningful data could be gleaned from Question #4 of the Radiographic Procedure Evaluation because a positive response is required, or students do not earn the competency, so this tool will no longer be used to measure the standard of success for this outcome.

The new standard of success will be "90% of students will achieve a score a 3 or higher indicating a satisfactory rating in every line item included in both the patient communication and patient safety sections on the RAD 110 Final Clinical Performance Evaluation". The new standard of success was met with 93% of students achieving a rating of 3 or higher in the areas of patient care and patient communication on the Final Clinical Performance Evaluation.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students are able to demonstrate behaviors and skills related to patient communication and patient safety commensurate with their level of training.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The students met the standard of success. The analysis revealed those students who did not meet the standard of success may need some additional coaching in the area of face-to-face communication, and we have incorporated that in two of the prerequisite courses, RAD 101 and RAD 103, since that time.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

No changes intended.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

This assessment process only reinforced that our outcomes and curriculum are strong and follow the guidelines set by our accrediting body.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared with program faculty during departmental meetings and with clinical instructors during Advisory Committee meetings.

- 4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	We will no longer use individual line items on the Radiographic Procedure Evaluation Form as an assessment tool. The form as a whole is still relevant to earning the minimum 3 competencies.	Certain line items on the Radiographic Procedure Evaluation were being utilized as an assessment tool. This form is submitted only when students successfully perform all the line items on the form and are then awarded a competency as a result. In future assessments we will utilize items in the mid-semester and final simulations to assess particular skills a student should be learning.	2019
Assessment Tool	The standards of success used to evaluate the simulation exams will be adjusted as indicated in the report.	The revised standards of success provide more realistic and meaningful expectations of student success.	2019
Assessment Tool	We have changed the Clinical Performance	Patient communication and safety are crucial	2019

	Evaluation but will still be using it in its new format to evaluate students' level of proficiency in patient communication and safety.	skills that can be evaluated effectively by the Clinical Performance Evaluation tool.	
Objectives	Objectives related to patient care and safety will be added in the master syllabus update.	Objectives describing student achievement in patient care and safety are currently missing from the syllabus.	2019
Other: Extra lesson with skills practice	I have built in an extra lesson to review the basics of manual equipment operation and built in time for all students to practice the manual alignment of the X-ray tube and the image receptor or bucky.	This particular skills has been a weakness when performing simulations. Although equipment operation has become increasingly automated, students must still understand and demonstrate manual equipment operation because it is the foundation of the programmed automation and essential to the science of radiography. By incorporating this additional lesson, the goal is for students to have greater success early on with this basic concept.	2019

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

[Assessment Data 2018](#)

[RAD110 Final Clinical Performance Evaluation](#)

[RAD 110 Midsemester Simulation](#)

[RAd 110 Final Simulation](#)

[Radiographic Procedure Evaluation](#)

Faculty/Preparer: Erin Hammond **Date:** 08/16/2019

Department Chair: Kristina Sprague **Date:** 08/19/2019

Dean: Valerie Greaves **Date:** 08/23/2019

Assessment Committee Chair: Shawn Deron **Date:** 10/10/2019

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	110	RAD 110 12/15/2015- Clinical Education
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Jim Skufis
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Perform radiographic positioning of the chest, abdomen and upper extremities.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Simulation exams.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26
 - How the assessment will be scored: Analysis of the Mid- and Final-Semester Simulation exam. Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #11 of the Radiographic Procedure Evaluation concerning bucky tray/tube alignment and detent.
 - Standard of success to be used for this assessment: 85% of students will score an average of 90% or better on Simulation Exam, 95% of students enrolled in RAD 110 will earn the 3 required competencies for the semester, and 95% of students will have received a "Yes" from their evaluator to Question #11 of the Radiographic Procedure Evaluation which reads: "Align bucky tray and x-ray tube; tube placed in detent."
 - Who will score and analyze the data: Radiography program faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2015		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
25	24

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew before the end of the semester.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Only one section was offered and all students were included.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Radiographic Procedure Evaluations or "Comps" are what clinical instructors use to score a student's competency on radiographic procedures--they are granted when the student can competently do the exam. Simulation exercises are what program faculty use to assess a student's psychomotor skills for all aspects of doing a radiographic procedure. An analysis of the number of students who received their competency on a chest, abdomen, and extremity exam, and of simulation exercise scores covering these exams was done.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

100% of students completed all three competencies--the benchmark was that 95% of students enrolled in RAD 110 will earn the 3 required competencies for the semester.

92% of students scored above an 85% for Simulation #1 and 96% of students score above an 85% for Simulation #2--the benchmark was that 85% of students will score an average of 90% or better on Simulation Exams.

Students did achieve this learning outcome by these standards of success.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students are able to perform radiographic positioning for these exams as independently verified by their clinical instructors and by the program faculty.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Because all students achieved the outcome and this is the standard used for our program's accreditation, no changes are planned.

Outcome 2: Demonstrate operating knowledge of radiographic equipment.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Simulation exams.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26
 - How the assessment will be scored: Analysis of the Mid- and Final-Semester Simulation exam. Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #11 of the Radiographic Procedure Evaluation concerning bucky tray/tube alignment and detent.
 - Standard of success to be used for this assessment: 85% of students will score an average of 90% or better on Simulation Exam, 95% of students enrolled in RAD 110 will earn the 3 required competencies for the semester, and 95% of students will have received a "Yes" from their evaluator to Question #11 of the Radiographic Procedure Evaluation which reads: "Align bucky tray and x-ray tube; tube placed in detent."
 - Who will score and analyze the data: Radiography program faculty
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2015		

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
25	24

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew before the end of the semester.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Only one section was offered and all students were included in the assessment.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Radiographic Procedure Evaluations or "Comps" are what clinical instructors use to score a student's competency on radiographic procedures and contain questions concerning equipment competency. Simulation exercises are what program faculty use to assess a student's psychomotor skills for all aspects of doing a radiographic procedure, including equipment use. Analysis of simulation exercise scores covering these exams and item analysis of question 11 "Align bucky tray and x-ray tube; tube placed in detent" from the students' Radiographic Procedure Evaluations was done.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

92% of students scored above an 85% for Simulation #1 and 96% of students scored above an 85% for Simulation #2--the benchmark was that 85% of students will score an average of 90% or better on Simulation Exams

100% received a "Yes" for Q11 "Align bucky tray and x-ray tube; tube placed in detent" on Radiographic Procedure Evaluations--the benchmark was that 95% of students will have received a "Yes" from their evaluator to Question #11 of the Radiographic Procedure Evaluation. Students did achieve this learning outcome by these standards of success.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students are able to manipulate the radiographic equipment in order to perform these exams as independently verified by their clinical instructors and by the program faculty.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Because all students achieved the outcome and this is the standard used for our program's accreditation, no changes are planned.

Outcome 3: Provide the appropriate patient care during the radiographic procedure.

- Assessment Plan
 - Assessment Tool: Radiographic Procedure Evaluations and RAD 110 Final Performance Evaluation.
 - Assessment Date: Fall 2010
 - Course section(s)/other population: Only one section per year
 - Number students to be assessed: Approximately 26
 - How the assessment will be scored: Completion of the 3 required Radiographic Procedure Evaluations for the RAD 110 semester. Item analysis of question #4 of the Radiographic Procedure Evaluation concerning correct patient identification. Item analysis of question #2 of the RAD 110 Final Performance Evaluation concerning Patient Safety.
 - Standard of success to be used for this assessment: For Outcome 3, 95% percent of students will have received a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will have received an "Effective Performance" rating from their evaluator to Question #2 of the RAD 110 Final Performance Evaluation concerning Patient Safety.
 - Who will score and analyze the data: Radiography program faculty
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
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2015		
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
25	24

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student withdrew before the end of the semester.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Only one section of this course is offered, and all students were included in the assessment.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Radiographic Procedure Evaluations or "Comps" are what clinical instructors use to score a student's competency on radiographic procedures and contain questions concerning patient care and safety. The RAD 110 Final Performance Evaluation is what clinical instructors use to evaluate student performance and include questions specific to patient care. Analysis of question 4 "Identify correct patient according to requisition and departmental policy" from the students' Radiographic Procedure Evaluations and question 2 "Patient Safety and Welfare - The ability to comfort and protect the patient from harm" from the RAD 110 Final Performance Evaluation was done.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

100% received a "Yes" for Q4 "Identify correct patient according to requisition and departmental policy" on Radiographic Procedure Evaluations--the benchmark was that 95% of students will have received a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation.

96% received an "Effective Performance" on Q2 "Patient Safety and Welfare - The ability to comfort and protect the patient from harm" of RAD 110 Final

Performance Evaluation--the benchmark was 95% of students will have received an "Effective Performance" rating from their evaluator to Question #2 of the RAD 110 Final Performance Evaluation concerning Patient Safety.

Students did achieve this learning outcome by these standards of success.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Based on the results, students do provide for patient safety and care as independently verified by their clinical instructors and by the program faculty.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Because all students achieved the outcome and this is the standard used for our program's accreditation, no changes are planned.

II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

I feel that this course is providing a structured clinical experience in the application of knowledge and skill in positioning the upper extremities, the chest, and the abdomen as well as instruction in the use of radiographic equipment while providing for patient safety. It did not bring anything surprising to light.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This information will be shared with program faculty during departmental meetings and with clinical instructors during Advisory Committee meetings.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

4. Is there anything that you would like to mention that was not already captured?

none

III. Attached Files

[Radiographic Procedure Evaluation](#)
[Spreadsheet of data used for the analysis](#)
[RAD 110 Mid-Semester Simulation](#)
[RAD 110 Final Semester Simulation](#)
[RAD 110 Final Performance Evaluation](#)

Faculty/Preparer:	Jim Skufis	Date: 12/15/2015
Department Chair:	Connie Foster	Date: 12/16/2015
Dean:	Valerie Greaves	Date: 01/23/2016
Assessment Committee Chair:	Michelle Garey	Date: 02/11/2016

COURSE ASSESSMENT REPORT

Background Information

1. Course assessed:
 Course Discipline Code and Number: RAD 110
 Course Title: Clinical Education
 Division/Department Codes: 15600

2. Semester assessment was conducted (check one):
 Fall 20²⁰
 Winter 20__
 Spring/Summer 20__

3. Assessment tool(s) used: check all that apply.
 Portfolio
 Standardized test
 Other external certification/licensure exam (specify):
 Survey
 Prompt
 Departmental exam
 Capstone experience (specify):
 Other (specify): Simulation exams

4. Have these tools been used before?
 Yes
 No

If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

5. Indicate the number of students assessed/total number of students enrolled in the course.
 Twenty students were assessed out of the thirty-seven enrolled in the class.

6. Describe how students were selected for the assessment.
 Assessed students were selected randomly.

Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
 No prior assessments have been done for this course.

2. State each outcome from the master syllabus that was assessed.
 Perform radiographic exams of the chest.

3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. Please attach a summary of the data collected.
 Twenty student simulations were chosen at random and the PA and Lateral chest component of the exam was scored separately. Eight-four points were possible. The high score was 84 points (100%) and 14 students achieved this. The low score was 73 (87%). The average score was 83 (99%) and the median score was 79 (94%). Using a 95% or better as the standard of success for a Routine PA and Lateral chest exam, 17 of the 20 students (85% of the sample population) achieved the learning outcome.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success.
 Using a 95% or better as the standard of success for a Routine PA and Lateral chest exam, 17 of the 20 students (85% of the sample population) achieved the learning outcome. A 95% percent was used as the standard of

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success because this is the minimum score students must achieve if they are to pass their ARRT mandatory and elective competencies.

- 5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: Manipulation of equipment, patient positioning, radiation protection, patient communication, judgement, and organization.

Weaknesses: This assessment cannot be used to determine actual image quality because students simulate on fellow students and no images are taken because of radiation safety concerns.

Changes influenced by assessment results

- 1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses, along with a timeline for these actions.

Retrospective analysis of the PA and Lateral chest component of the simulation exam indicate that the items missed most often dealt with beam collimation (radiation protection and image quality) and central ray to bucky alignment (equipment manipulation). Only three of the twenty students sampled did not achieve the learning outcome of this assessment--none of the twenty students failed the entire simulation exercise. Anecdotal evidence also suggests that some students were performing their simulation exercises in exam rooms that they were unfamiliar with. Therefore, learning may have not been the issue and unfamiliarity with the test environment might have been. Because equipment manipulation and radiography of the chest is covered earlier in the program than in previous years, a more controlled or familiar simulation environment is thought to be needed to assess the learning outcomes. Therefore, an effort will be made by the clinical instructor conducting the simulation exams to undertake these in general radiographic exam rooms that the students are familiar with on all future simulations.

- 2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.

Master syllabus
Change/rationale:

Curriculum
Change/rationale:

Course syllabus
Change/rationale:

Course assignments
Change/rationale:

Course materials (check all that apply)
 Textbook
 Handouts
 Other:
Change/rationale:

Instructional methods
Change/rationale:

Other:
Change/rationale:

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Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.
Because the assessment tool does measure the learning outcome of performing radiographic exams of the chest in a realistic manner (i.e., students must simulate a PA and Lateral chest exam and demonstrate the same proficiency to earn the ARRT competency), it is effective in measuring student learning outcomes.
2. If the assessment tools were not effective, describe the changes that will be made for future assessments.
Better control or more familiar simulation environment for the students during future simulations.

Submitted by:

Name: [Signature] Date: 11/08/06
Department Chair: [Signature] Date: 11/22/06
Dean: [Signature] Date: 11/28/2006