

**Course Assessment Report  
Washtenaw Community College**

Discipline	Course Number	Title
Radiography	120	RAD 120 07/21/2021- Clinical Education
College	Division	Department
	Health Sciences	Allied Health
Faculty Preparer		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  12/15/2015
-----------------------

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

The previous assessment did not bring to light any gross deficiencies.
--

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

No intended changes documented.
---------------------------------

**II. Assessment Results per Student Learning Outcome**

Outcome 1: Properly use radiographic equipment to obtain diagnostic images of the spinal column.

- Assessment Plan
  - Assessment Tool: Simulation exams.
  - Assessment Date: Winter 2010
  - Course section(s)/other population: random selection from each section from past three years
  - Number students to be assessed: approximately 20
  - How the assessment will be scored:

- Standard of success to be used for this assessment:
- Who will score and analyze the data:

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)
	2020, 2021, 2019	

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

# of students enrolled	# of students assessed
71	69

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 from the program before the end of the Winter 2020 semester, and one student was dismissed before the end of the Winter 2020 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 the Winter semester of the first year of the two-year Radiography Program.

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

Students position a fellow classmate and manipulate the equipment just as if they were performing an exam on a patient. The tool used is a skills-based checklist. These simulations measure a student's psychomotor skills in the areas of patient care, communication, equipment operation, quality of positioning and radiation safety. Students perform the following radiographic examinations on a fellow student while faculty use this tool to assess the student. Please note no actual images are taken during these simulations.

Cervical spine projections include:

1. AP axial
2. Right Posterior Oblique (RPO)

3. Left Posterior Oblique (LPO)
4. Lateral
5. Odontoid

Thoracic spine projections include:

6. AP
7. Lateral
8. Swimmer's

Lumbar spine projections include:

9. AP
10. Right Posterior Oblique
11. Left Posterior Oblique
12. Lateral
13. L5-S1

Each positioning element is assigned a value relative to its importance in obtaining an image of diagnostic value. There are a total of 192 points possible.

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 results indicate that 59 of the 69 students ( 86% ) scored 95% or higher on this simulation. It is worthy to note that this data is over three different cohorts of students, which demonstrated the consistency of the course, this tool and the results. The standard of success for this outcome was that 85% of students would score 95% or better. The standard of success was met for this outcome and tool.

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

The results indicate that students can successfully manipulate and operate the radiographic equipment and effectively communicate with patients to position them properly to obtain diagnostic images of the spinal column. This signifies that

the lessons learned in lab are successfully being transferred to the clinical practice.

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.

This tool has been utilized for some time and still proves to be a valuable measure of student success in RAD 120. Including more exams would provide a clearer picture of student consistency in patient positioning and equipment operation.

### 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.

There were no intended changes noted in the previous report.

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 course is meeting the needs of students in every area of clinical education. Our current assessment tools and benchmarks allow faculty to quickly identify any student who may be struggling as well as those who are meeting and/or exceeding expectations.

The analysis also revealed that this tool is an excellent indicator of student success in the clinical setting, specifically a student's ability to apply the didactic education to the clinical setting. The students who scored below 80% were identified and placed on a performance improvement plan, but ultimately left the program voluntarily or failed clinically.

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

All assessment data is shared with department faculty during our scheduled monthly meetings. We share the same information with our clinical instructors during our scheduled advisory board meetings which occur twice each year. After it is presented in the meeting, it is also posted in Trajecsyst (our clinical digital record keeping system).

4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	The proposed changes would add two additional outcomes with associated tools to provide a better measure of the soft skills as well as the technical skills needed for success in this program.	These outcomes align with the learning outcomes standardized by our accrediting body (JRCERT). As faculty we have placed a strong emphasis on teaching these soft skills and assessing them only makes sense to make sure we are providing the proper tools and feedback to students.	2022
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Include additional simulation exams.	To provide a clearer picture of student consistency in patient positioning and equipment operation.	2022

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

6.
----

**III. Attached Files**

[Spinal Column simulation](#)  
[RAD 120 Spinal Column Sim Grades 2019-21](#)

**Faculty/Preparer:** Erin Hammond **Date:** 08/09/2021  
**Department Chair:** Kristina Sprague **Date:** 08/23/2021  
**Dean:** Eva Samulski **Date:** 09/13/2021  
**Assessment Committee Chair:** Shawn Deron **Date:** 11/30/2021

**Course Assessment Report**  
**Washtenaw Community College**

Discipline	Course Number	Title
Radiography	120	RAD 120 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: Properly use radiographic equipment to obtain diagnostic images of the spinal column.

- Assessment Plan
  - Assessment Tool: Simulation exams.
  - Assessment Date: Winter 2010
  - Course section(s)/other population: random selection from each section from past three years
  - Number students to be assessed: approximately 20
  - How the assessment will be scored:
  - Standard of success to be used for this assessment:
  - Who will score and analyze the data:

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	25

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.

All enrolled students were assessed.

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 assessed.

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

Simulation exercises are what program faculty use to assess a student's psychomotor skills for all aspects of doing radiographic procedures. An analysis based on a scoring rubric compiled for each student from the RAD 120 Final Simulation covering the three exams of the spine—the C-spine (AP, Lateral, Right Oblique, left Oblique, and Ondontoid), the T-spine (AP, Lateral, and Swimmers), and the L-spine (AP, Lateral, and L5-S1)--was done to determine whether or not students were able to properly use radiographic equipment to image the spinal column.

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

Eighty-eight percent of students received a 95% or better on the C-, T-, and L-Spine portions of the RAD 120 Final Simulation as scored from the rubric. The benchmark for this outcome was that 85% of students will score an average of 95% or better on the rubric.

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 properly use radiographic equipment to obtain diagnostic images of the spinal column as verified 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 of the spinal column as well as instruction in the use of radiographic equipment. 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

- [RAD 120 Final Simulation](#)
- [RAD 120 Course Assessment Rubric](#)
- [RAD 120 Course Assessment Data](#)

**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  
Washtenaw Community College

Discipline	Course Number	Title
Radiography	120	RAD 120 11/25/2014-Clinical Education
Division	Department	Faculty Preparer
Math, Science and Health	Allied Health	Jim Skufis
Date of Last Filed Assessment Report		

**I. Assessment Results per Student Learning Outcome**

Outcome 1: Properly use radiographic equipment to obtain diagnostic images of the spinal column.

- Assessment Plan
  - Assessment Tool: Simulation exams.
  - Assessment Date: Winter 2010
  - Course section(s)/other population: random selection from each section from past three years
  - Number students to be assessed: approximately 20
  - How the assessment will be scored:
  - Standard of success to be used for this assessment:
  - Who will score and analyze the data:

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)
	2014	

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

# of students enrolled	# of students assessed
24	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.

The number of students assessed matches the number of students enrolled.

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.

All students enrolled were included.

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

Item analysis from the course simulations of the three exams of the spine—the C-spine (AP, Lateral, Right Oblique, left Oblique, and Ondontoid), the T-spine (AP, Lateral, and Swimmers), and the L-spine (AP, Lateral, and L5-S1). Each part of the positioning for each view is given a point value. There are a total of 132 points.

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 for success used in this assessment was that 85% of the students

would score 95% or better. Twenty-one of the twenty-four students scored above a 95%, therefore the standard was met.

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

Students have transferred what they have learned in the classroom and lab to the clinical site and can successfully position their patients and manipulate the equipment to produce diagnostic images.

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.

This is a valid method of assessment. It could be expanded to include more exams.

## 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?

This course is meeting my students' needs to transfer and practice what they have learned in the classroom to their clinical practice. We do constant competency-based assessment, so the results of this assessment were of no surprise.

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

Results will be shared with department faculty and clinical instructors during normal program advisory meetings which occur twice a year.

Intended Change(s)

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

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

Nope.

## III. Attached Files

[RAD 120 Course Assessment Stats 2014](#)

[RAD 120 Course Assessment Scoring Rubric](#)

<b>Faculty/Preparer:</b>	Jim Skufis	<b>Date:</b> 11/25/2014
<b>Department Chair:</b>	Connie Foster	<b>Date:</b> 11/26/2014
<b>Dean:</b>	Kristin Brandemuehl	<b>Date:</b> 12/01/2014
<b>Assessment Committee Chair:</b>	Michelle Garey	<b>Date:</b> 01/05/2015

**COURSE ASSESSMENT REPORT**

**Background Information**

1. Course assessed:  
 Course Discipline Code and Number: RAD 120  
 Course Title: Clinical Education  
 Division/Department Codes: ALHD
  
2. Semester assessment was conducted (check one):  
 Fall 20\_\_  
 **Winter 2008**  
 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-five 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 spinal column, specifically the C-spine (AP, Lateral, RPO, LPO, and Ondontoid), T-spine (AP, Lateral, and Swimmers), and L-spine (AP, Lateral, and L5-S1) for a total of eleven projections.
  
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 eleven projections listed above from the simulations were scored separately. One-hundred and thirty-two points were possible. The high score was 132 points (100%) and 7 students achieved this. The low score was 125 (95%). The average score was 130 (98%) and the median score was 129 (97.7%). Using a 95% or better as the standard of success for the eleven projections making up the three exams, all 20 students (100% 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.

Please return completed form to the Office of Curriculum & Assessment, SC 247.

**COURSE ASSESSMENT REPORT**

Using 95% or better as the standard of success for the eleven projections making up the three exams, 20 students (100% of the sample population) achieved the learning outcome. 95% was used as the standard of success because this is the minimum score students must achieve if they are to pass their ARRT mandatory and elective competencies.

- 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**

- 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 eleven projections from the simulation exam indicate that the items missed most often dealt with improper collimation. This should be correlated back to the students' midterm and final semester evaluation to determine if the lack of proper collimation has been noticed in other exams and is truly a skill they haven't mastered. Because these exams are commonly performed in all clinical settings and are required competencies for the ARRT registry, this assessment should be a good indicator of student learning for this course. Although the outcome expectation for this assessment has been met, it is felt that more emphasis needs to be placed on proper collimation of the images during clinical instruction.

- 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: Although the outcome expectation for this assessment has been met, it is felt that more emphasis needs to be placed on proper collimation of the images during clinical instruction.

**COURSE ASSESSMENT REPORT**

**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 spinal column in a realistic manner (i.e., students must simulate the eleven projections 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. Although this tool was effective, more guided practice for students would be helpful, especially concerning proper collimation.

**Submitted by:**

Name: <u><i>[Signature]</i></u>	Date: <u>11/25/08</u>
Department Chair: <u><i>[Signature]</i></u>	Date: <u>11/26/08</u>
Dean: <u><i>[Signature]</i></u>	Date: <u>11/26/08</u>

*logged 11/26/08 sjv*

**COURSE ASSESSMENT REPORT**

**Background Information**

1. Course assessed:

Course Discipline Code and Number: RAD 120  
Course Title: Clinical Education  
Division/Department Codes: ALHD Radiography program

2. Semester assessment was conducted (check one):

- Fall 20\_\_
- Winter 2004
- Spring/Summer 20\_\_

3. Assessment tool(s) used: check all that apply.

- Portfolio
- Standardized test
- Other external certification/licensure exam (specify): ARRT certification exam
- Survey
- Prompt
- Departmental exam
- Capstone experience (specify):
- Other (specify):

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.  
NO, the tool has not been altered.

5. Indicate the number of students assessed/total number of students enrolled in the course.

28 student assessed; 28 students enrolled in RAD 120

6. Describe how students were selected for the assessment.

All students admitted to the radiography program are required to take RAD 120.

**Results**

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.

No changes were made to RAD 120 as a result of the previous assessment.

2. State each outcome from the master syllabus that was assessed.

85% of the students will pass the ARRT exam.

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.

89% of the 28 students passed the ARRT exam with a mean score of 82.2.

Below is the mean scores for the 5 sections of the ARRT exam:

- A. Radiation Protection: 8.2
- B. Equipment Operation and Quality Control: 8.2
- C. Image Production and Evaluation: 8.1
- D. Radiographic Procedures: 8.2
- E. Patient Care: 8.5

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success.

89% of the 28 students passes the ARRT registry exam.

COURSE ASSESSMENT REPORT

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

Strengths: The students who passed the ARRT exam demonstrated that they had good critical thinking skills and that they were able to assimilate the didactic and clinical components of the radiography program.

Weaknesses: The benchmark for the percentage of students passing the national ARRT exam was met.

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.

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:

Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.

The results of the national ARRT certification exam provides important feedback on how well the students are able to assimilate the didactic and clinical portions of the radiography program.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

Submitted by:

Name: Connie F2578

Date: 6/28/06

Department Chair: Connie F2578

Date: 6/28/06

Dean: [Signature]

Date: 7/21/06