Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	112	RAD 112 02/02/2021-Radiographic Positioning I
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Jim Skufis
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

   Fall 2011

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

   Unknown. The college does not have the assessment report available and the faculty preparer has retired.

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

   Unknown. The college does not have the assessment report available and the faculty preparer has retired.

II. Assessment Results per Student Learning Outcome

Outcome 1: Perform radiographic procedures of the chest, abdomen and upper extremity in accordance with current standards.

- Assessment Plan
  - Assessment Tool: Departmental RAD 112 practical exam
  - Assessment Date: Fall 2011
  - Course section(s)/other population: all
  - Number students to be assessed: ~35

- How the assessment will be scored: A rubric for RAD 112 practical exam will be used.
- Standard of success to be used for this assessment: 90% of the students will achieve a 3 (good) or 4 (excellent) rating
- Who will score and analyze the data: A Radiography Program faculty member.

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		

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

# of students enrolled	# of students assessed
58	30

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.

Enrollment was duplicated because of the lecture/lab enrollment. Only 29 students were ever registered. One non-registered student was added who has previously passed the course but was forced to temporarily suspend her education due to an injury in Winter 2020 and now needed a refresher to restart her education.

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 sections are taught with a combination of on campus labs and on-line lectures, 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.

Rather than using a departmental exam, we used students' practical lab exercises. Each radiographic exam of different areas (hand, wrist, forearm, etc.) was scored using a departmentally-developed rubric. Each lab exercise was scored on the three outcomes, procedures, analysis of radiographs and ALARA principles (radiation protection). The scores were calculated based on the point scale and an average for each exam area was calculated by outcome.

The scale for Radiographic procedures was 0 - 3.00. The average across all exam areas was 2.98.

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 scale for Radiographic procedures was 0 - 3.00. The average across all exam areas was 2.98. Students scored 3.0 in 11 of the 12 areas. The lowest average was 2.86, which students scored in 1 of 12 areas.

In addition, each outcome was analyzed for each exam area with an average, median, mode and standard deviation calculated. This assured us that all students were performing up to standards.

The standard of success was originally defined to be 90% of the students will achieve a 3 (good) or above rating. However, that rubric was no longer available, and we do not know what the overall scale was. Therefore, we've chosen to look at the data differently. We have chosen to set the standard of success at an overall average or 90% or higher.

Because data was not easily available on an individual basis that could be converted to cover all exam areas, we chose to use an average. Based on the average score of 2.98, students scored 99% on performing radiographic procedures. Therefore, students met our newly defined standard 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 of this assessment of students' ability to perform radiographic procedures, it is clear that they can indeed do these procedures. The lowest score for any of the exams (clavicle) was still 95%, well above the 90% score initially set as the benchmark.

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 the first time I have assessed this course and used this tool. I will need more assessment cycles before deciding to change anything substantive in the course. However the master syllabus will be updated to reflect the new tool.

Outcome 2: Critically analyze radiographs of the chest, abdomen and upper extremity for patient positioning, exposure technique and image processing errors.

- Assessment Plan
    - Assessment Tool: Departmental RAD 112 practical exam
    - Assessment Date: Fall 2011
    - Course section(s)/other population: all
    - Number students to be assessed: ~35
    - How the assessment will be scored: A rubric for RAD 112 practical exam will be used.
    - Standard of success to be used for this assessment: 90% of the students will achieve a 3 (good) or 4 (excellent) rating
    - Who will score and analyze the data: A Radiography Program faculty member.

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		

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

# of students enrolled	# of students assessed
58	30

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.

Enrollment was duplicated because of the lecture/lab enrollment. Only 29 students were ever registered. One non-registered student was added who has previously passed the course but was forced to temporarily suspend her education due to an injury in Winter 2020 and now needed a refresher to restart her education.

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 sections are taught with a combination of on campus labs and on-line lectures, 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.

Rather than using a departmental exam, we used students' practical lab exercises. Each radiographic exam of different areas (hand, wrist, forearm, etc.) was scored using a departmentally-developed rubric. Each exercise was scored on the three outcomes, procedures, analysis of radiographs and ALARA principles (radiation protection). The scores were calculated based on the point scale and an average for each exam area was calculated by outcome.

The scale for analysis of radiographs was 0 - 5.00. The average across all exam areas was 4.91.

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 scale for analysis of radiographs was 0 - 5.00. The average across all exam areas was 4.91. Students scored 5.0 in 7 of the 12 areas. The lowest average was 4.57, which students scored in only 1 of 12 areas.

In addition, each outcome was analyzed for each exam area with an average, median, mode and standard deviation calculated. This assured us that all students were performing up to standards.

Because data was not easily available on an individual basis that could be converted to cover all exam areas, we chose to use an average. Based on the average score of 4.91, students scored 98% for analysis of radiographs.

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 of this assessment of students' ability to perform critically analyze radiographs, it is clear that they can indeed do this task. The lowest score for any of the exams (forearm) was still 91%, above the 90% score initially set as the benchmark.

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 the first time I have assessed this course and used this tool. I will need more assessment cycles before deciding to change anything substantive in the course. However the master syllabus will be updated to reflect the new tool.

Outcome 3: Apply the principles of ALARA when obtaining diagnostic radiographs of the chest, abdomen and upper extremity.

- Assessment Plan
    - Assessment Tool: Departmental RAD 112 practical exam
    - Assessment Date: Fall 2011
    - Course section(s)/other population: all
    - Number students to be assessed: ~35
    - How the assessment will be scored: A rubric for RAD 112 practical exam will be used.
    - Standard of success to be used for this assessment: 90% of the students will achieve a 3 (good) or 4 (excellent) rating
    - Who will score and analyze the data: A Radiography Program faculty member.

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		

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

# of students enrolled	# of students assessed
58	30

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.

Enrollment was duplicated because of the lecture/lab enrollment. Only 29 students were ever registered. One non-registered student was added who has previously passed the course but was forced to temporarily suspend her education due to an injury in Winter 2020 and now needed a refresher to restart her education.

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 sections are taught with a combination of on campus labs and on-line lectures, 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.

Rather than using a departmental exam, we used students' practical lab exercises. Each radiographic exam of different areas (hand, wrist, forearm, etc.) was scored using a departmentally-developed rubric. Each exercise was scored on the three outcomes, procedures, analysis of radiographs and ALARA principles (radiation protection). The scores were calculated based on the point scale and an average for each exam area was calculated by outcome. The scale for radiation protection was 0 - 2.00. The average across all exam areas was 1.96.

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 scale for radiation protection was 0 - 2.00. The average across all exam areas was 1.96. Students scored 2.0 in 8 of the 12 areas. The lowest average was 1.79, which students scored in only 1 of 12 areas. In addition, each outcome was analyzed for each exam area with an average, median, mode and standard deviation calculated. This assured us that all students were performing up to standards. Because data was not easily available on an individual basis that could be converted to cover all exam areas, we chose to use an average. Based on the average score of 1.96, students scored 98% on radiation protection.

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 of this assessment of students' ability to apply ALARA principles (radiation protection), it is clear that they can indeed do this task. The lowest score for any of the exams (wrist) was still 90%, at the 90% score initially set as the benchmark.

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 the first time I have assessed this course and used this tool. I will need more assessment cycles before deciding to change anything substantive in the course. However the master syllabus will be updated to reflect the new tool.

Outcome 4: Communicate clearly, effectively and in a therapeutic manner when producing diagnostic radiographs of the chest, abdomen and upper extremity.

- Assessment Plan
    - Assessment Tool: Departmental RAD 112 practical exam
    - Assessment Date: Fall 2011
    - Course section(s)/other population: all
    - Number students to be assessed: ~35
    - How the assessment will be scored: A rubric for RAD 112 practical exam will be used.
    - Standard of success to be used for this assessment: 90% of the students will achieve a 3 (good) or 4 (excellent) rating
    - Who will score and analyze the data: A Radiography Program faculty member.

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		

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

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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.

Enrollment was duplicated because of the lecture/lab enrollment. Only 29 students were ever registered. One non-registered student was added who has previously

passed the course but was forced to temporarily suspend her education due to an injury in Winter 2020 and now needed a refresher to restart her education.

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 sections are taught with a combination of on campus labs and on-line lectures, 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.

Students do not communicate with patients as part of this course. This outcome is better evaluated in a clinical course, so it was not assessed in this assessment.

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

Students do not communicate with patients as part of this course. This outcome is better evaluated in a clinical course, so it was not assessed in this assessment.

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

Students do not communicate with patients as part of this course. This outcome is better evaluated in a clinical course, so it was not assessed in this assessment.

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.

Students do not communicate with patients as part of this course. This outcome is better evaluated in a clinical course, so it was not assessed in this assessment.

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.

Because the prior assessment report for this course is unavailable, this cannot be discussed.

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?

RAD 112 is meeting the students' needs by helping them master the skills of performing radiographs of the chest, abdomen, and upper extremities; critically analyzing those images, and practicing radiation safety in accordance with accepted guidelines. Communication with patients is not well taught in this course since the students are performing exams on radiography simulation mannequins which contain human bones. This skill is taught and assessed in Methods of Patient Care (RAD 101) and assessed in clinical courses such as RAD 217 and RAD 225. What this assessment brought to light was the need to update the master syllabus for this course.

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

The results of this assessment will be shared with program faculty during regular faculty meetings and with our program's advisory committee during advisory committee meetings.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Other: Update Master Syllabus	Change the assessment tool for outcomes #1 - #3.	A different tool was used to assess the course and it was more effective.	2021
Other: Update Master Syllabus	Remove outcome #4.	This outcome should be assessed in a clinical course.	2021

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

Time for another Master Syllabus update.

III. Attached Files

RAD112 Course Assessment Data

Faculty/Preparer:	Jim Skufis	**Date:** 02/02/2021
Department Chair:	Kristina Sprague	**Date:** 02/03/2021
Dean:	Valerie Greaves	**Date:** 02/16/2021

Assessment Committee Chair: Shawn Deron **Date:** 03/24/2021