

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

Discipline	Course Number	Title
Radiography	222	RAD 222 11/14/2024- Pharmacology in Diagnostic Imaging
College	Division	Department
Inactive Divisions	Health Sciences	Allied Health
Faculty Preparer		Jim Skufis
Date of Last Filed Assessment Report		02/11/2021

**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 2019

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

The course was effective at meeting the students' needs based on the assessment data.

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

The Adverse Reaction Simulation was made more realistic by conducting it in the radiography lab and by changing the scenario given to the students to one that is more realistic for what a radiographer might face.

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

Outcome 1: Demonstrate appropriate patient care practices required for general and special radiographic procedures.

- Assessment Plan
  - Assessment Tool: Practical lab evaluation
  - Assessment Date: Fall 2022
  - Course section(s)/other population: All sections

- Number students to be assessed: All students
- How the assessment will be scored: Lab checklist (yes or no)
- Standard of success to be used for this assessment: 80% of the students will achieve a score of 100% for the practical skills evaluation.
- Who will score and analyze the data: Departmental 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)
2023		

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

# of students enrolled	# of students assessed
27	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.

All students enrolled were assessed.
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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.

Because this course is offered only once per year and only one section is offered, all students enrolled were assessed.
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5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Students were assessed using the Vital Signs Lab Check-Off, which is also part of our program's accreditation process. During the lab, students are required to demonstrate to the instructor that they can take and properly record the vital signs of temperature, pulse rate, respiration rate, and blood pressure on a fellow student. For the Vital Signs Check-Off, a 9-question Yes/No rubric was used to score the assignment with each question worth 10 points. Students demonstrating the skill asked for in the question received 10 points while students who did not demonstrate the skill received 0 points, for a total of 90 points possible. The skills involved taking vital signs (see attached rubric) and were evaluated by the instructor.
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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

In this assessment, all 27 students received 100%. The standard of success for this assessment was that 80% of students would achieve a score of 100%. For this assessment, 100% of students achieved a score of 100%; therefore, the standard of success has been met.

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

Based on these assessment results, students are able to demonstrate appropriate patient care practices for general and specialized radiographic procedures because they are able to monitor a patient's vital signs, which is within our profession's scope of 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.

Because all students received a 100%, no changes are anticipated.

Outcome 2: Identify the different physiological reactions associated with iodinated contrast administration.

- Assessment Plan
  - Assessment Tool: Departmental final exam using Blackboard
  - Assessment Date: Fall 2022
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Answer key
  - Standard of success to be used for this assessment: 80% of the students will score 70% or above for the exam.
  - Who will score and analyze the data: Departmental 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)
2023		

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

# of students enrolled	# of students assessed
27	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.

All students enrolled in the class 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.

Because only one section of this course is offered a year, all students enrolled were assessed.

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

The final exam for this course was used as the assessment tool. The final exam was used because it specifically addresses different physiological reactions associated with iodinated contrast administration. The exam was given via Blackboard and consisted of 80 multiple-choice questions. The tool was scored based on the percentage correct out of 80 questions.

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

In this assessment, 96% of students scored above 70%. The highest score was 96%, the lowest score was 68%, and the average score was 87%. The standard of success for this assessment was that 80% of students would achieve a score of 70% or better. Based on these results, the standard of success has been met by 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.

Based on the results of the assessment, students were able to identify the physiological reactions to IV contrast as described in the test questions. With this knowledge, they would be able to respond appropriately.

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 the standard of success was achieved, no changes are anticipated.

### 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.

This course is effective at meeting the students' needs based on the assessment data. Anecdotally, I feel the changes made to the scenario and location of the Adverse Reaction Simulation have been beneficial.

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?

I feel that this course is meeting students' needs as they train to become registered radiographers.

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 faculty at regular department meetings.

4. Intended Change(s)

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

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

Because I'll be retiring in July 2025, this will be my final assessment of this course.

### III. Attached Files

[RAD222 Final Exam Statistics Fall 2023](#)

[RAD222 Vital Signs Rubric](#)

[RAD222 Vital Signs Statistics Fall 2023](#)

**Faculty/Preparer:** Jim Skufis **Date:** 11/14/2024

**Department Chair:** Kristina Sprague **Date:** 11/18/2024

**Dean:** Shari Lambert **Date:** 11/25/2024

**Assessment Committee Chair:** Jessica Hale **Date:** 10/08/2025

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

Discipline	Course Number	Title
Radiography	222	RAD 222 10/20/2020- Pharmacology in Diagnostic Imaging
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?

No

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

3.

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

5.

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

Outcome 1: Demonstrate appropriate patient care practices required for general and special radiographic procedures.

- Assessment Plan
  - Assessment Tool: Practical lab evaluation
  - Assessment Date: Fall 2013
  - Course section(s)/other population: One section of this course is offered per year.
  - Number students to be assessed: All students
  - How the assessment will be scored: Lab checklist (yes or no)

- Standard of success to be used for this assessment: 80% of the students will achieve a score of 100% for the practical skills evaluation.
- Who will score and analyze the data: 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)
2019		

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

# of students enrolled	# of students assessed
25	23

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 students who completed the course 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.

Because this course is offered only once per year and only one section is offered, all students enrolled were assessed.

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

Students were assessed using the Vital Signs Lab Check-Off, which is also part of our program's accreditation process. During the lab, students are required to demonstrate to the instructor that they can take and properly record the vital signs of temperature, pulse rate, respiration rate, and blood pressure on a fellow student.

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

For the Vital Signs Check-Off, a 9-question Yes/No rubric was used to score the assignment with each question worth 10 points. Students demonstrating the skill asked for in the question received 10 points while students who did not



demonstrate the skill received 0 points, for a total of 90 points. The skills involved taking vital signs (see attached rubric) and were evaluated by the instructor.

In this assessment, 20 students received a 100% and 3 students received a 90%. The standard of success for this assessment was that 80% of students would achieve a score of 100%. For this assessment, 87% of students achieved a score of 100%; therefore, the standard of success has been met.

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

Based on these assessment results, students are able to demonstrate appropriate patient care practices for general and specialized radiographic procedures because they are able to monitor a patient's vital signs which is within our profession's scope of 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.

The three students who did not achieve a 100% on their Vital Signs Check-Off missed the same thing, locating the brachial artery. More emphasis on the vascular anatomy of the upper arm will be provided in future lessons in this course.

Outcome 2: Identify the different physiological reactions associated with iodinated contrast administration.

- Assessment Plan
  - Assessment Tool: Departmental final exam using Blackboard
  - Assessment Date: Fall 2013
  - Course section(s)/other population: One section of this course is offered per year.
  - Number students to be assessed: All students
  - How the assessment will be scored: Answer key
  - Standard of success to be used for this assessment: 80% of the students will score 70% or above for the exam.
  - Who will score and analyze the data: 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)
2019		

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

# of students enrolled	# of students assessed
25	23

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 students who completed the course 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.

Because only one section of this course is offered a year, all students enrolled were assessed.

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

The final exam for this course was used as the assessment tool. The final exam was used because it specifically addresses different physiological reactions associated with iodinated contrast administration. The exam was given via Blackboard and consisted of 83 multiple-choice questions with three extra-credit questions for a total of 86 questions. The tool was scored based on the percentage correct out of 83 questions.

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

In this assessment, 100% of students scored above a 70%. The highest score was 102% (due to the extra-credit questions), the lowest score was 77%, and the average score was 90%. The standard of success for this assessment was that 80% of students would achieve a score of 70% or better. Based on these results, the standard of success has been met by 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.

Based on the results of the assessment, students were able to identify the physiological reactions to IV contrast as described in the test questions. With this knowledge, they would be able to respond appropriately.

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 course already includes an adverse reaction simulation in the TI building using an anthropomorphic phantom. The phantom simulates the cardiac and respiratory symptoms of a contrast reaction. However, other aspects of the simulation are not accurate with what would be happening in an imaging department (i.e., lack of a power injector, the patient being in a bed rather than on a X-ray table, etc.). I am looking into improving this simulation to make it more true-to-life for what a radiographer would face in terms of physiological reactions of a patient reacting to IV contrast.

### 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 this is the first time this course has been assessed, no changes were made.

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 effective at meeting the students' needs based on the assessment data. However, I do see areas that could be improved based on my own experience as a CT technologist, such as making the adverse reaction simulation more realistic to what a technologist would face while working in an imaging department.

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 faculty at regular department meetings.

4.  
Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Course Materials (e.g. textbooks,	We would like to improve the	This course is near the end of the	2021

handouts, on-line ancillaries)	simulation to make it more true-to-life for what a radiographer could face in terms of physiological reactions to a patient reacting to IV contrast. These include the lack of a power injector, the patient being in a bed rather than on an X-ray table, etc.	program and our goal is to provide the students with an opportunity to be well prepared for issues that may arise in either their clinical education or in their job after graduation.	
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	More emphasis will be placed on the vascular anatomy of the upper arm, particularly locating the brachial artery.	A few students had difficulty locating the brachial artery on the Vital Signs Check-Off.	2021

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

No

### III. Attached Files

[Vital Signs Check-Off](#)

[Vital Signs Check-Off Statistics](#)

[Final Exam Statistics](#)

**Faculty/Preparer:** Jim Skufis **Date:** 10/26/2020

**Department Chair:** Kristina Sprague **Date:** 10/26/2020

**Dean:** Valerie Greaves **Date:** 10/27/2020

**Assessment Committee Chair:** Shawn Deron **Date:** 02/10/2021