Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	259	RAD 259 11/06/2018- Introduction to Computed Tomography (CT) Instrumentation and Protocols
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: Recognize the Key fundamentals of computed tomography (CT) instrumentation.

- Assessment Plan
  - Assessment Tool: Embedded multiple-choice questions on the final exam.
  - Assessment Date: Winter 2017
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Blind-scored with answer key
  - Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.
  - 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)
2017		

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

# of students enrolled	# of students assessed
4	4

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 enrolled was the number of students 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.

All sections are taught on campus.

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

On the 80-question final exam of this course, there were 60 embedded multiple-choice questions, which measured the students' abilities to recognize key fundamentals of computed tomography instrumentation. These questions were blind-scored with an answer key. The number of correct answers out of these 60 questions was then used to calculate a percentage. The average score for this metric was 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 average score was 54.5 (91%). Two students tied for the high score--56 out of 60 (93%), and the lowest score was 52 out of 60 (87%). The standard of success was defined to be that 90% of students would score above 75%, and 100% of students scored above a 75% for this outcome. Therefore, students did achieve this learning outcome as measured by this 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 this assessment of students' ability to recognize key fundamentals of computed tomography instrumentation, it is clear that students can recognize these aspects of CT instrumentation. The lowest score was 87%, well above the 75% 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.

Although this benchmark for success was met, the assessment population size is very small. It will be helpful to do this assessment with larger classes.

Outcome 2: Identify routine protocols for acquiring computed tomography (CT) images of the head, neck, spine, thorax, abdomen, and pelvis.

- Assessment Plan
    - Assessment Tool: Embedded multiple-choice questions on the final exam.
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Blind-scored with an answer key
    - Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.
    - 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)
2017		

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

# of students enrolled	# of students assessed
4	4

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 enrolled was the number of students 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.

All sections are taught on campus.

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

On the 80-question final exam of this course, there were 20 embedded multiple choice questions which measured the students' abilities to identify routine protocols for acquiring computed tomography images of the head, neck, spine, thorax, abdomen, and pelvis. These questions were blind-scored with an answer key. The number of correct answers out of these 20 questions was then used to calculate a percentage. The average score for this metric was 89%.

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 average score was 17.75 (89%). The high score was 19 out of 20 (95%), and the lowest score was 16 out of 20 (80%). The standard of success was defined to be that 90% of students would score above 75%, and 100% of students scored above a 75% for this outcome. Therefore, students did achieve this learning outcome as measured by this 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 this assessment of students' ability to identify routine protocols for acquiring computed tomography images of the head, neck, spine, thorax, abdomen, and pelvis, it is clear that students can identify these protocols. The lowest score was 80%, above the 75% 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.

Although this benchmark for success was met, the assessment population size is very small. It will be helpful to do this assessment with larger classes.

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?

RAD 259 is meeting students' needs by helping them to recognize the fundamentals of computed tomography instrumentation and by helping them to identify routine protocols for acquiring computed tomography images of the head, neck, spine, thorax, abdomen, and pelvis. This is important if students are to succeed early in their clinical training. Since the inception of this course, fewer students in the CT program have had issues with earning sufficient competencies during their clinical courses, and this course is the reason why.

2. 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.

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?

The text used for this course has just come out in a new edition, so the required course changes will need to be made.

III. Attached Files

Assessment Data from RAD 259

Faculty/Preparer:	Jim Skufis	**Date:** 11/07/2018
Department Chair:	Kristina Sprague	**Date:** 11/10/2018
Dean:	Valerie Greaves	**Date:** 11/14/2018
Assessment Committee Chair:	Shawn Deron	**Date:** 12/10/2018

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	259	RAD 259 12/16/2015-Introduction to Computed Tomography (CT) Instrumentation and Protocols
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: Recognize the Key fundamentals of computed tomography (CT) instrumentation.

- Assessment Plan
  - Assessment Tool: Embedded multiple-choice questions on the final exam.
  - Assessment Date: Winter 2017
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Blind-scored with answer key
  - Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.
  - 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)
2015		

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

# of students enrolled	# of students assessed
11	11

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 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 was 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.

The final exam for this course consists of 80 questions. Sixty embedded questions from the final exam concerning the key fundamentals of computed tomography were pulled and scored from each student's final exam. The standard of success was that 90% of students will score 75% or better on these 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
Ninety-one percent of students scored higher than 75% on CT Fundamentals questions from the Final Exam. 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 these assessment results, students are able to recognize the key fundamentals of computed tomography instrumentation for a variety of different scanner types and protocols.

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 met the standard of success, but since this course is relatively new, I am looking for different instructional material.

Outcome 2: Identify routine protocols for acquiring computed tomography (CT) images of the head, neck, spine, thorax, abdomen, and pelvis.

- Assessment Plan
    - Assessment Tool: Embedded multiple-choice questions on the final exam.
    - Assessment Date: Winter 2017
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Blind-scored with an answer key
    - Standard of success to be used for this assessment: 90% of the students will score 75% or higher on the outcome related questions.
    - 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)
2015		

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

# of students enrolled	# of students assessed
11	11

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 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 was 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.

The final exam for this course consists of 80 questions. Twenty embedded questions from the final exam concerning routine computed tomography protocols for acquiring images of the head, neck, spine, thorax, abdomen, and pelvis were

pulled and scored from each student's final exam. The standard of success was that 90% of students will score 75% or better on these 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
Ninety-one percent of students scored higher than 75% on routine protocols questions from the Final Exam. 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 these assessment results, students are able to identify routine protocols for acquiring computed tomography images of the head, neck, spine, thorax, abdomen, and pelvis.

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 met the standard of success, but since this course is relatively new, I am looking for different instructional material.

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 meeting students' needs by giving them an introduction and overview of the major components of a CT scanner, how it works, its function, and the technologist's interface with it, plus the basic scanning protocols common to CT imaging. The assessment brought to light that I should be looking for more resources; however, this field is very specialized and few resources in the form of texts and videos exist. I will keep looking.

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 at departmental meetings and with clinical instructors at 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 259 Assessment Data

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