Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	223	RAD 223 05/16/2019-Sectional Anatomy
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

   July of 2016

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

   The standard of success was met for both outcomes.

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

   No action plan or changes were implemented because the benchmark for success was met.

II. Assessment Results per Student Learning Outcome

Outcome 1: Recognize the protocols for obtaining sectional images of the head, neck, chest, abdomen, pelvis, spine and joints.

- Assessment Plan
  - Assessment Tool: Departmental final
  - Assessment Date: Winter 2013
  - Course section(s)/other population: 2nd year radiography students
  - Number students to be assessed: Number of students to be assessed is approximately 30

- How the assessment will be scored: Itemized analysis of the departmental final exam.
- Standard of success to be used for this assessment: 90% of the students will score 75% or above on the item analysis of the departmental final exam.
- 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)
	2019	

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

# of students enrolled	# of students assessed
26	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.

One student withdrew from the course 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 was offered during the year, and all students who completed the course were assessed.

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

This outcome cannot be assessed using this tool because it is not covered or taught in this course. This error will be corrected in an assessment update and/or syllabus revision. What can be assessed using this tool is that students will learn to identify anatomic structures from axial, coronal, and sagittal images. The tool used to assess this outcome was the 100-question multiple choice final exam administered in the WCC Testing Center using Blackboard. Total scores on the multiple-choice final examination were based on raw scores (i.e., correct answers receive 1 point, incorrect answers and unanswered questions receive no points).

The standard of success is 90% of the students will score 75% or above on the departmental final.

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
Twenty-five students took the 100-question final exam, and each question was worth 1 point. The highest score was 99%, the lowest score was 69%, the average score was 90%, and the median score was 92%. Seventeen students scored between 90 and 100%, 6 scored between 80 and 89%, 1 scored between 70 and 79%, and 1 scored between 60 and 69%. Based on these results, the standard of success was met for this modified outcome and tool.

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

Students demonstrated the ability to identify anatomic structures from axial, coronal, and sagittal 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.

There were seven question in this final exam in which less than 75% of students got the correct answer. The topics of these question are the fossa ovalis of the heart (64%), the mediastinal vessels of the heart (68%), the coronary arteries of the heart (44%), the heart chambers (68%), the shoulder girdle (72%), the celiac trunk (56%), and the portal vein (68%). Based on these results, more emphasis and additional instruction will be given in the sections of the course which cover this anatomy.

Outcome 2: Analyze the relationship of three dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine and joints.

- Assessment Plan
    - Assessment Tool: Departmental final
    - Assessment Date: Winter 2013
    - Course section(s)/other population: 2nd year radiography students

- Number students to be assessed: Number of students to be assessed is approximately 30
- How the assessment will be scored: Itemized analysis of the departmental final exam.
- Standard of success to be used for this assessment: 90% of the students will score 75% or above on the item analysis of the departmental final exam.
- 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)
	2019	

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

# of students enrolled	# of students assessed
26	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.

One student withdrew from the course 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 was offered during the year, and all students who completed the course were assessed.

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

The tool used to assess this outcome was the 100-question multiple choice final exam administered in the WCC Testing Center using Blackboard. Total scores on the multiple-choice final examination were based on raw scores (i.e., correct answers receive 1 point, incorrect answers and unanswered questions receive no points). The standard of success is 90% of the students will score 75% or above on the departmental final.

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
Twenty-five students took the 100-question final exam, and each question was worth 1 point. The highest score was 99%, the lowest score was 69%, the average score was 90%, and the median score was 92%. Seventeen students scored between 90 and 100%, 6 scored between 80 and 89%, 1 scored between 70 and 79%, and 1 scored between 60 and 69%. Based on these results, the standard of success was met for this modified outcome and tool.

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

Students demonstrated the ability to analyze the relationship of three-dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine, and joints.

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.

There were seven question in this final exam in which less than 75% of students got the correct answer. The topics of these question are the fossa ovalis of the heart (64%), the mediastinal vessels of the heart (68%), the coronary arteries of the heart (44%), the heart chambers (68%), the shoulder girdle (72%), the celiac trunk (56%), and the portal vein (68%). Based on these results, more emphasis and additional instruction will be given in the sections of the course which cover this anatomy.

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 were made based on the previous assessment because the benchmark was met.

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?

Through this course, students have gained the knowledge and developed the skills to identify anatomic structures from axial, coronal, and sagittal images, and analyze the relationship of three dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine and joints. Analysis of the final exam results identified areas where emphasis needs to be made or content needs to be improved. However, the overall results are impressive.

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

This assessment will be shared with the Radiography faculty at a departmental meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	Outcome #1 will be changed to "Students will learn to identify anatomic structures from axial, coronal, and sagittal images."	The previous outcome of "Recognize the protocols for obtaining sectional images of the head, neck, chest, abdomen, pelvis, spine, and joints" could not be measured or assessed because it is not done in this course.	2022
Course Assignments	More emphasis and additional instruction will be given in the sections of the course identified as not being as well understood by students in the form	These areas were identified in the course assessment, and additional emphasis through coursework will help students strengthen	2022

	of additional homework questions and assignments created by the instructor in Anatomy TV.	understanding of these topics.	

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

On to another master syllabus update!

III. Attached Files

RAD223 Final Exam Statistics
Vascular heart chambers
Varcular-celiac artery
Heart fossa ovalis
Heart mediastinal vessels
Heart-coronary arteries
Upper Extremity Shoulder Girdle
Vascular portal vein

Faculty/Preparer:	Jim Skufis	**Date:** 05/16/2019
Department Chair:	Kristina Sprague	**Date:** 05/21/2019
Dean:	Valerie Greaves	**Date:** 06/14/2019
Assessment Committee Chair:	Shawn Deron	**Date:** 07/09/2019

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Radiography	223	RAD 223 07/07/2016-Sectional Anatomy
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Connie Foster
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Recognize the protocols for obtaining sectional images of the head, neck, chest, abdomen, pelvis, spine and joints.

- Assessment Plan
  - Assessment Tool: Departmental final
  - Assessment Date: Winter 2013
  - Course section(s)/other population: 2nd year radiography students
  - Number students to be assessed: Number of students to be assessed is approximately 30
  - How the assessment will be scored: Itemized analysis of the departmental final exam.
  - Standard of success to be used for this assessment: 90% of the students will score 75% or above on the item analysis of the departmental final exam.
  - 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)
	2016	

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.

The number of students assessed was the same as the number of students enrolled in the course (25).

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 course completers 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 tool used to assess this outcome was a 100 question multiple-choice exam administered in the WCC Testing Center using Blackboard. Total scores on the multiple-choice final examination were based on raw scores, (e.g., correct answers received 1 point, incorrect and unanswered questions received zero points). Students were permitted to attempt the exam one time. The standard of success is 90% of the students will score 75% or above on the item analysis on the departmental final exam.

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
25 students took the exam, the highest score was 97% and the lowest score was 73%. 48% (12) of the students scored between 90 – 100%, 48% (12) of the students scored between 80 - 89%, and 4% (1) student scored between 70 - 79%. Students scored less than 75% on the following 12 exam questions.

Question	% Correct	Topic
2	36%	Lower Extremity- muscles
13	64%	Abdomen-portal vein
18	68%	Male pelvis-rectum
31	56%	Brain-pineal gland
41	68%	Vascular-Azygos vein
42	68%	Heart-chambers

68	48%	Vascular-Celiac Artery
77	64%	Upper Extremity-muscle
80	44%	Heart-fossa ovalis
84	68%	Brain-internal carotid/vertebral arteries
86	52%	Heart-coronary arteries
88	60%	Upper extremity-shoulder girdle

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.

Students demonstrated the ability to accurately identify the protocols for obtaining sectional images of the head, neck, chest, abdomen, pelvis, spine and joints.

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 topics covered in the 12 exam questions in which there was less than 75% correct are areas in which student achievement could be improved.

Outcome 2: Analyze the relationship of three dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine and joints.

- Assessment Plan
    - Assessment Tool: Departmental final
    - Assessment Date: Winter 2013
    - Course section(s)/other population: 2nd year radiography students
    - Number students to be assessed: Number of students to be assessed is approximately 30
    - How the assessment will be scored: Itemized analysis of the departmental final exam.
    - Standard of success to be used for this assessment: 90% of the students will score 75% or above on the item analysis of the departmental final exam.
    - 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)
	2016	

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.

The number of students assessed was the same as the number of students enrolled in the course (25).

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 course completers 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 tool used to assess this outcome was a 100 question multiple-choice exam administered in the WCC Testing Center using Blackboard. Total scores on the multiple-choice final examination were based on raw scores, (e.g., correct answers received 1 point, incorrect and unanswered questions received zero points). Students were permitted to attempt the exam one time.

The standard of success is 90% of the students will score 75% or above on the item analysis on the departmental final exam.

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

25 students took the exam, the highest score was 97% and the lowest score was 73%. 48% (12) of the students scored between 90 – 100%, 48% (12) of the students scored between 80 - 89%, and 4% (1) student scored between 70 - 79%.

Students scored less than 75% on the following 12 exam questions.

Question	% Correct	Topic
2	36%	Lower Extremity- muscles
13	64%	Abdomen-portal vein
18	68%	Male pelvis-rectum
31	56%	Brain-pineal gland
41	68%	Vascular-Azygos vein
42	68%	Heart-chambers
68	48%	Vascular-Celiac Artery
77	64%	Upper Extremity-muscle
80	44%	Heart-fossa ovalis
84	68%	Brain-internal carotid/vertebral arteries
86	52%	Heart-coronary arteries
88	60%	Upper extremity-shoulder girdle

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.

Students demonstrated the ability to analyze the relationship of three dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine, and joints.

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 topics covered in the 12 exam questions in which there was less than 75% correct are areas in which the student achievement could be improved.

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?

Through this course, students have gained the knowledge and developed the skills to identify scanning protocols and sectional anatomy. The assessment of the final exam identified questions that need to be changed and updated.

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

This assessment will be shared with the radiography faculty at a departmental meeting.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	The following changes will be instituted based on the results of the assessment process: 1. Update the student learning outcomes. 2. Change the assessment tool. 3. Review the homework questions that cover the topics on the 12 final exam questions in which students scored less than 75%. 4. Review exam questions that covered the topics on the 12 final exam questions in which students scored less than 75%.	Improve student learning	2017

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

5.

III. Attached Files

RAD 223_2016 Statistics

Faculty/Preparer:	Connie Foster	**Date:**	07/09/2016
Department Chair:	Connie Foster	**Date:**	07/11/2016
Dean:	Valerie Greaves	**Date:**	07/12/2016
Assessment Committee Chair:	Michelle Garey	**Date:**	10/03/2016

COURSE ASSESSMENT REPORT

I. Background Information

1. Course assessed:
   Course Discipline Code and Number: RAD 223
   Course Title: Sectional Anatomy
   Division/Department Codes: HAT/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):

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.
   Exam questions were modified and new questions and images were added.

5. Indicate the number of students assessed/total number of students enrolled in the course.
   30 students (all students in the course; only one section of this course is offered each year)

6. Describe how students were selected for the assessment.
   All students in the course were assessed

II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
   Powerpoint lectures were modified to include additional images and worksheets were created for students.

2. List each outcome that was assessed for this report exactly as it is stated on the course master syllabus.

Recognize the protocols for obtaining sectional images of the head, neck, chest, abdomen, pelvis, spine, and joints.
Analyze the relationship of three-dimensional anatomy on sectional images of the head, neck, chest, abdomen, pelvis, spine, and joints will be studied.

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.***
   All 30 students achieved the learning outcomes of RAD 223. 19 students (63%) of the students scored between 90 - 100%; 8 (27%) scored between 80 - 89%; 3 (10%) scored between 70 - 79%. The average score was 90% on the exam.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment.***
   The percent correct for the distractors of each question was examined (see attached distractor list). For 13 (22%) of the questions no distractors were selected; For 27 (45%) of the questions only 1 of the distractors was selected; For 16 (27%) of the questions two distractors were selected; For 4 (7%) of the questions all three of the distractors were selected.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.
   Strengths: The students were able to identify anatomical structures on sectional images in different scanning planes and to understand the relationship of anatomical structures.

   Weaknesses: The distractors for many of the questions were not effective.

III. 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.
   The students met the expectations of the course. The distractors for the final exam were ineffective.

2. Identify 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.
   a. ☐ Outcomes/Assessments on the Master Syllabus
      Change/rationale:

   b. ☐ Objectives/Evaluation on the Master Syllabus
      Change/rationale:

   c. ☐ Course pre-requisites on the Master Syllabus
      Change/rationale:

   d. ☐ 1st Day Handouts
      Change/rationale:

   e. ☐ Course assignments
      Change/rationale:

   f. ☒ Course materials (check all that apply)
      ☐ Textbook
      ☐ Handouts
      ☒ Other: Departmental Examination

   g. ☐ Instructional methods
      Change/rationale:

   h. ☐ Individual lessons & activities
      Change/rationale:

3. What is the timeline for implementing these actions? The departmental exam will be revised for the 2009 Winter semester.

COURSE ASSESSMENT REPORT

IV. 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 departmental exam was effective to the extent that it showed that the students were able to identify anatomical structures on different scanning planes. The exam did not discriminate between the stronger and weaker students.
2. If the assessment tools were not effective, describe the changes that will be made for future assessments.
   The distractors not chosen by students for the exam questions will be replaced or eliminated.
3. Which outcomes from the master syllabus have been addressed in this report?
   All __X___ Selected _____
   If "All", provide the report date for the next full review: __Winter 2011_____.
   If "Selected", provide the report date for remaining outcomes: _____.

Submitted by:

Print: Connie FOSTER (Faculty/Preparer) **Signature** Connie Foster **Date:** 11/26/08

Print: Connie FOSTER (Department Chair) **Signature** Connie Foster **Date:** 11/26/08

Print: [illegible] (Dean/Administrator) **Signature** [illegible] **Date:** 11/26/08

10 copies 11/26/08 sjv

Approved by the Assessment Committee 11//08