

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Magnetic Resonance Imaging	160	MRI 160 08/14/2019-MRI Advanced Imaging Procedures
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Catherine Blaesing
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: Differentiate the protocols for the advanced Magnetic Resonance Imaging (MRI) scanning procedures.

- Assessment Plan
 - Assessment Tool: Departmental final exam
 - Assessment Date: Spring/Summer 2019
 - 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 higher on each related outcome question.

- 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)
		2018, 2017, 2016

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

# of students enrolled	# of students assessed
17	17

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 included in this assessment.

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 in this assessment.

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

A multiple-choice and true/false final exam was given with one point awarded for each correct answer. The final exam was 20% of the overall final grade.

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 of success states that 80% of the students will score 70% or higher on each related outcome question. To more accurately reflect students' overall understanding of the area, we used the standard of success: 80% of students will score correctly on 70% of the outcome-related questions. 13 common outcome-related questions from 2016, 2018 and 2019 were used to assess this outcome.

80% of the students scored 11/13 (84.6%) questions correctly, meeting the standard of success.

In the future, the standard of success will be updated to read, "70% of students will score 70% or higher on the final exam."

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

The average score for the students for 2016, 2017, and 2018 was 79.2%, 90.7%, and 93.8% respectively. The overall average was 87.9%, well above the ARRT standard to pass (76%). The assessment shows the students acquired an excellent understanding of MRI 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.

Since students met the standard of success, our plan for continuous improvement includes adopting the new ARRT requirements for MRI technologists. This will prepare the next students since MRI protocols change frequently.

We will evaluate the two questions from this outcome which had lower results, to investigate whether we should add instruction on these areas or revise the questions themselves.

Outcome 2: Identify the clinical indications and contraindications for the advanced Magnetic Resonance Imaging (MRI) scanning procedures.

- Assessment Plan
 - Assessment Tool: Departmental final exam
 - Assessment Date: Spring/Summer 2019
 - 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 higher on each related outcome question.
 - 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)
		2018, 2017, 2016

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

# of students enrolled	# of students assessed
17	17

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 included in this assessment.

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 in this assessment.

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

A multiple-choice and true/false final exam was given with one point awarded for each correct answer. The final exam is weighted 20% of the student's final grade.

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 of success states that 80% of the students will score 70% or higher on each related outcome question. To more accurately reflect students' overall understanding of the area, we used the standard of success: 80% of students will score correctly on 70% of the outcome-related questions. Ten common outcome-related questions from 2016, 2018 and 2019 were used to assess this outcome.

80% of the students scored 8/10 (80%) questions correctly, meeting the standard of success.

In the future, the standard of success will be updated to read, "70% of students will score 70% or higher on the final exam."

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

The average score for the students for 2016, 2017, and 2018 was 79.2%, 90.7%, and 93.8% respectively. Based on the average final score of 87.9%, well above the

ARRT standard to pass at 76%, the students' results indicates their understanding of the material.

- 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.

Since students met the standard of success, our plan for continuous improvement includes adopting the new ARRT requirements for MRI technologists.

We will evaluate the two questions from this outcome which had lower results, to investigate whether we should add instruction on these areas or revise the questions themselves.

III. Course Summary and Intended Changes Based on Assessment Results

- 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 previous assessment has been completed.

- 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 students' needs by providing an understanding of more advanced MR imaging, along with clinical applications, to prepare the student for the MRI registry.

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

Department faculty will be given a copy of this report and an opportunity to comment on its contents. The annual meeting for all MRI staff to review and make recommendations will also continue.

- Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	Improvements to this course will include newly developed advanced	This will provide students with a better understanding of advanced MR imaging. Along	2021

	MR imaging and pulse sequences.	with clinical applications, this will help prepare the student for the MRI registry.	
Assessment Tool	The assessment tool will be updated from "departmental final exam" to "final exam".	To ensure consistency in data collection for future assessment.	2020
Other: Standard of success	Standard of success to be used for this assessment: 80% of the students will score 70% or higher on each related outcome question should be changed to read "70% of students will score 70% or higher on the final exam".	The standard of success should reflect students' performance on the topics, not the class performance on each individual question. It is important for these tools and standards of success to reflect ARRT standards and rankings.	2020

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

6.

III. Attached Files

- [MRI 160 2016 Course Performance](#)
- [MRI 160 2018 Course Performance](#)
- [MRI 160 2019 Course Performance](#)
- [MRI 160 Common questions data](#)
- [MRI 160 2016, 2018-2019 Assessment Data](#)

Faculty/Preparer: Catherine Blaesing **Date:** 09/20/2019
Department Chair: Kristina Sprague **Date:** 09/24/2019
Dean: Valerie Greaves **Date:** 09/24/2019
Assessment Committee Chair: Shawn Deron **Date:** 03/06/2020