

Outcomes Assessment Plan – Spring 2021

| Goal 1: Students will demonstrate CLINICAL COMPETENCE | | | | | | |
|---|--|--------------------------------------|---|-------------------|-------------------|-------------------|
| Student Learning Outcomes | Assessment Tool | Timeframe | Benchmark | Spring 2020 | Fall 2020 | Spring 2021 |
| 1.1: Student will apply positioning skills | 1.1.1: DMI 51A Lab, final positioning practical, section 5 | 2 nd Semester (formative) | Average score $\geq 90\%$ | 88.9% (15) | 94.4% (12) | 89.7% (13) |
| | 1.1.2: DMI 68, Student Clinical Evaluation, section 2.2 | Final Semester (summative) | Average score ≥ 2.7 on 3-point scale | 2.5 (10) | 2.89 (9) | 2.78 (9) |
| 1.2: Students will practice radiation protection | 1.2.1: DMI 51A Lab, final positioning practical, section 9 | 2 nd Semester (formative) | Average score $\geq 90\%$ | 90% (15) | 91.7% (12) | 90.6% (13) |
| | 1.2.2: DMI 68, Student Clinical Evaluation, section 5 | Final Semester (summative) | Average score ≥ 2.7 on 3-point scale | 2.87 (10) | 2.96 (9) | 2.91 (9) |

Analysis

1.1.1: Benchmark not met. Students scored 0.3% less than the benchmark.

1.1.2: Benchmark met. Student learning was maintained because clinical staff and preceptors worked diligently with intern students affected by the fragmented clinical time caused by COVID 19. Students achieved program-level SLO's by focusing on patient positioning on diagnostic radiographic exams.

1.2.1: Benchmark met. Student learning was maintained because faculty required students to use proper radiation protection techniques while practicing in the lab. Students achieved program-level SLO's by using lead shielding throughout the lab and not just during the final practical.

1.2.2: Benchmark met. Student learning was maintained because preceptors continued to emphasize and follow radiation protection protocols. Two clinical sites have altered their requirements on lead shielding. The policy change has required the Student Clinical Evaluation to be altered to reflect those changes. Students achieved program-level SLO's by following proper radiation protection protocol.

Action Plan

1.1.1: Faculty will continue to emphasize the importance of positioning skills, reinforce best practices, and encourage students to work diligently during lab times. Extra time will be given to students at the beginning of the lab to practice positioning as a group.

1.1.2: Faculty and Clinical Preceptors will continue to emphasize the importance of positioning skills and reinforce best practices.

1.2.1: Faculty will continue to emphasize the importance of radiation safety.

1.2.2: Faculty will continue to monitor this outcome.

Re-Evaluation Date

At the conclusion of Fall 2021

| Goal 2: Students will demonstrate CRITICAL THINKING | | | | | | |
|--|--|--------------------------------------|---|--------------------|------------------|--------------------|
| Student Learning Outcomes | Assessment Tool | Timeframe | Benchmark | Spring 2020 | Fall 2020 | Spring 2021 |
| 2.1: Students will analyze radiographic images | 2.1.1: DMI 51B, final exam, image critique questions | 2 nd Semester (formative) | Average score $\geq 90\%$ | 83.3% (15) | 83.3% (9) | 82% (13) |
| | 2.1.2: DMI 68, Student Clinical Evaluation, section 2.7 | Final Semester (summative) | Average score ≥ 2.7 on 3-point scale | 2.7 (10) | 2.87 (9) | 3 (9) |
| 2.2: Students will manipulate technical factors | 2.2.1: DMI 50A, written lab, Three-Dimensional Thinking – Part Two | 1 st Semester (formative) | Average score $\geq 90\%$ | 100% (15) | 100% (13) | 100% (13) |
| | 2.2.2: DMI 68, Student Clinical Evaluation, section 2.3 | Final Semester (summative) | Average score ≥ 2.7 on 3-point scale | 2.7 (10) | 2.89 (9) | 2.89 (9) |

Analysis

2.1.1: Benchmark not met. Students scored 8% lower than the benchmark. Historically, the assessment committee has discussed ways to improve the average score for this SLO. This semester, the faculty member checked the discrimination index for the questions covering image critique but found them to be within reasonable limits. The assessment committee previously discussed reducing the benchmark; however, the committee rejected the idea to review this assessment tool further.

2.1.2: Benchmark met. DMI 68 students present a case study called a "site visit presentation." In this presentation, they go over every aspect of radiography, including analyzing radiographic images. This presentation helps solidify student knowledge of the area.

2.2.1: Benchmark met. This lab demonstrates the importance of spatial reasoning and how to manipulate technical factors to visualize an image. Students must take images of different objects with varying densities to discuss how technical factors change the image quality.

2.2.2: Benchmark met. DMI 68 students are encouraged, and in many cases required, to use manual techniques. Even if AEC is available, students use manual techniques. These techniques are also discussed during site visits, and students are randomly asked how they would manipulate technical factors for a given situation.

Action Plan

2.1.1: The assessment committee will continue to monitor the data. The faculty and the assessment committee agree the current score is appropriate when compared to similar scores spanning the past 20-years. If there is a significant change to this score, the faculty and the assessment committee will discuss the change.

2.1.2: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

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Re-Evaluation Date

At the conclusion of Fall 2021

| Goal 3: Students will demonstrate an understanding of PROFESSIONALISM | | | | | | |
|--|--|--------------------------------------|---|--------------------|--------------------|--------------------|
| Student Learning Outcomes | Assessment Tool | Timeframe | Benchmark | Spring 2020 | Fall 2020 | Spring 2021 |
| 3.1: Students will demonstrate professional ethics | 3.1.1: DMI 52: ethics exam | 2 nd Semester (formative) | Average score ≥90% | 95% (15) | 97% (10) | 90% (12) |
| | 3.1.2: DMI 68, Student Clinical Evaluation, section 3 | Final Semester (summative) | Average score ≥2.7 on 3-point scale | 2.9 (10) | 2.92 (9) | 2.9 (9) |
| 3.2: Students will demonstrate an appreciation for radiologic sciences | 3.2.1: Number of current students who initiate advanced CT modality certification | Final Semester (summative) | 60% of students will begin CT certification | no data | no data | no data |
| | 3.2.2: Number of current students who are members of a professional radiologic society | All students | 25% of students will be members | 47.9% (48*) | 25.6% (39*) | 51% (49*) |

*number of students whom replied

Analysis

3.1.1: Benchmark met. The students achieved program-level student learning outcomes by completing assignments discussing ethics.

3.1.2: Benchmark met. DMI 68 students demonstrate ethics by following policy and procedures. If a student receives counseling on their behavior, their grade in section three of the student clinical evaluation will be lowered.

3.2.1: Benchmark not analyzed. In Spring 2020, the assessment committee discussed changing this assessment tool to measure students volunteering in a mentor program. The mentor program was not completed in time, and a new assessment tool needed to be found. The committee decided to measure a student's appreciation for radiologic sciences by assessing their timeliness on turning in assignments. Turning assignments in on time demonstrates an appreciation for radiologic sciences because it demonstrates a student's dedication to the program and profession.

3.2.2: Benchmark met. The students achieved program-level student learning outcomes by faculty encouraging students to register for professional organizations. The faculty discussed the benefits and importance of radiologic societies. A few students have mentioned they are interested in the ASRT's Student Leadership Program.

Action Plan

3.1.1: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

3.1.2: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

3.2.1: The assessment committee has decided to change this assessment tool to "DMI 50B and DMI 51A: assignments turned in on time." As discussed in the P&P Manual's Professional Conduct section, timeliness is considered essential requirements for Radiologic Sciences department students and is part of the students' academic review.

3.2.2: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

Re-Evaluation Date

At the conclusion of Fall 2021

| Goal 4: Students will demonstrate effective COMMUNICATION skills in the medical environment | | | | | | |
|--|---|--------------------------------------|-------------------------------------|--------------------|------------------|--------------------|
| Student Learning Outcomes | Assessment Tool | Timeframe | Benchmark | Spring 2020 | Fall 2020 | Spring 2021 |
| 4.1: Students will demonstrate oral communication skills | 4.1.1: DMI 51A Lab, final positioning practical, section 1 | 2 nd Semester (formative) | Average score ≥90% | 90% (15) | 100% (12) | 100% (13) |
| | 4.1.2: DMI 68, Student Clinical Evaluation, section 1.1, 1.2, and 1.3 | Final Semester (summative) | Average score ≥2.7 on 3-point scale | 2.87 (10) | 2.85 (9) | 2.85 (9) |
| 4.2: Students will practice written communication skills | 4.2.1: DMI 50A, Research paper | 1 st Semester (formative) | Average score ≥90% | 76.7% (15) | 87% (13) | 79% (13) |
| | 4.2.2: DMI 66, Research paper | Final Semester (summative) | Average score ≥90% | 93% (10) | No data | No data |

Analysis

4.1.1: Benchmark met. The students achieved program-level student learning outcomes by practicing exam introductions.

4.1.2: Benchmark met. The students achieved program-level student learning outcomes by communicating clearly with patients, physicians, co-workers, peers, and other departments and is readily understood.

4.2.1: Benchmark not met. This is the third semester this writing assignment has been put in place and is the first professional-level writing assignment. The assessment committee suggested reviewing a good research paper and discuss the importance of writing and communication.

4.2.2: Benchmark not analyzed. When the new research papers were introduced in Fall 2020, the assessment committee decided to wait until Spring 2022 to assess DMI 66's research paper. By waiting, the assessment committee will have better summative data on this assessment tool.

Action Plan

4.1.1: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

4.1.2: We will continue to gather data and monitor this trend. If it continues to stay above benchmarks, the Assessment Committee will find a new summative analysis of image analysis.

4.2.1: The assessment committee will continue to monitor the data. The faculty and the assessment committee agree the current score is appropriate given the difficulty of the assignment. If there is a significant change to this score, the faculty and the assessment committee will discuss the change.

4.2.2: Results from this assessment will be available for Spring 2022's assessment plan.

Re-Evaluation Date

At the conclusion of Fall 2021