

Amarillo College-Radiography Program

Outcomes Assessment Plan 2024

August 2022-August 2023

Program Mission:

To provide a comprehensive educational environment that will prepare the radiography graduate to effectively engage in the daily challenges and responsibilities required of a competent and professional entry-level radiographer.

Goal 1: Monitor Program Effectiveness (updated -10/10/2024-mgh)					
Student Learning Outcome (SLO)	Measurement Tool	Benchmark	Timeframes	Group/Person Responsible	Results
1. Students will complete the program and take the ARRT certification exam.	1. Satisfaction of all program requirements.	1. No less than 75% of students will complete the program in all required courses.	1. During the program/ Within 12 months	1. Program Director	1. N=25 started program (5 exceptions (non-academic), per JRCERT Standard 6.1), 18 completed on time, 90% completion rate (SP 2023)
	2. Completion of the ARRT certification exam.	2. No less than 75% of graduates will successfully complete the ARRT exam on first attempt.	2. Within 6 months of graduation	2. Program Director	2. 95% first time ARRT pass rate N=19 tested, N=18 passed 1 st attempt (SP 2023)
2. Program will assess graduate satisfaction.	1. Item #30 from Radiography Graduate Survey.	1. Average of 4.0 (5.0 Likert).	1. Within 12 months of graduation	1. Program Director	1. Avg: 4.41; N=19 returned, N=17 answered question #30
3. Program will assess employer satisfaction.	1. Item #21 from Employer Survey.	1. Average of 3.0 (4.0 Likert).	1. Within 12 months of graduation	1. Program Director	1. Avg: 4.0; N=5 returned, N=3 answered question #21
4. Program will assess employment rate.	1. Radiography Graduate Survey.	1. Within 12 months of graduation, 75% of graduates seeking employment in the field will find employment.	1. Within 12 months of graduation	1. Program Director	1. 95% employed in Radiologic Sciences. N=19 completed, N=18 employed

Analysis/Revisions/Recommendations (Goal 1: Monitor Program Effectiveness):

SLO 1, Tool #1: We are pleased with the 90% completion rate in 2023. 5-year comparison: 2019: 88%, 2020: 96%, 2021: 87%, 2022: 95.7%, 2023: 90% 5-year average: 91.45%.

SLO 1, Tool #2: 2022 pass rate 95%. We continue to utilize Corectec Radiography review, multiple worksheets, & exams during RADR 2235 to help students prepare for the exit exam and the ARRT. Also, in RADR 2235 during spring of 2023, the instructor increased the number of questions with regards to the ARRT preparation exams we take during the exams. This increase more aligns with the 230 questions the graduates will see on the ARRT exam (combined of graded & pilot). 5-year comparison: 2019: 95%, 2020: 83%, 2021: 90%, 2022: 87%, 2023: 95% 5-year average: 89.9%.

SLO 2: Benchmark surpassed. Average 4.41 surpassed the benchmark & increased from previous 2 years, Five-year comparison: 2019: 4.14, 2020: 4.7, 2021:3.7, 2022: 4.0, 2023:4.41 (5.0 Likert)

SLO 3: Benchmark surpassed. Employers continue to be pleased with AC graduates work performance, 2023 responses average 4.0 (4.0 Likert). 5-year comparison: 2019: 3.9, 2020: 3.9, 2021: 3.8, 2022: 3.75, 2023: 4.0

SLO 4: Benchmark surpassed. The AC Radiography program continues to have a stellar employment rate for graduates. 5-year comparison: 2019: 95%, 2020: 100%, 2021: 90%, 2022: 100%, 2023: 95%, with 96.3% program 5-year average.

Goal 2: Graduate will be clinically competent.					
Student Learning Outcome (SLO)	Measurement Tool	Benchmark	Timeframes	Group/Person Responsible	Results
1. Student will provide appropriate radiation safety for patients and self.	1. Item 10 from clinical evaluation	1. 95% of students will score ≥ 4.0 (5.0 Likert)	1. 3 rd & 5 th semester	1. Clinical Coordinator	1. 3 rd semester, 97.8% scored ≥ 4.0 , N=46 5 th semester, 100% scored ≥ 4.0 , N=55
	2. Radiation Safety assignment RADR 2313	2. Average score of $\geq 80\%$	2. 1 st semester (FA 22)	2. Didactic instructor	2. Class average 85.58%, N=26 completed assignment
2. Students will recognize appropriate positioning skills and produce diagnostic images.	1. Item #15 from clinical evaluation	1. 95% of students will score ≥ 4.0 (5.0 Likert)	1. 5 th semester (SP 23)	1. Clinical Coordinator	1. 98.2% scored ≥ 4.0 , N=55
	2. RADR 2235, Procedures Exam, questions (#3 (humerus), 11 (abd.), 30 (pelvis), & 35 (calcaneus))	2. $\geq 80\%$ of questions will be answered correctly	2. 5 th semester (SP 23)	2. Didactic instructor	2. 93.4% of questions answered correctly, N=19 students for a total of 95 questions.

Analysis/Revisions/Recommendations (Goal 2: Graduate will be clinically competent):

SLO 1, Tool 1: Surpassed benchmark, the program is pleased with results.

SLO 1, Tool 2: Surpassed benchmark. FA 2020 was the first semester for this assignment format. The average has increased from FA 2020 to FA 2022. We are pleased and will continue to strive to increase student understanding, engagement, & retention to help the average scores to increase. 3-year comparison: FA 2020: 76.9, FA 2021: 83.2; FA 2022: 85.6

SLO 2, Tool 1: Surpassed benchmark.

SLO 2, Tool 2: Benchmark surpassed. There was a significant increase in % correct of SP 2022 (84.7%). 5-year comparison: SP 2019: 88%, SP 2020: 83%, SP 2021: 91.9%, SP 2022: 84.7%; SP 2023: 93.4%

Goal 3: Graduate will display communication skills.					
Student Learning Outcome (SLO)	Measurement Tool	Benchmark	Timeframes	Group/Person Responsible	Results
1. Student will demonstrate verbal skills when relating to patients.	1. Item 7 & 16 from Clinical Evaluation.	1. 95% of students will score ≥ 4.0 (5.0 Likert)	1. 1 st , 2 nd , 4 th , 5 th semesters	1. Clinical Coordinator	1. 1 st semester, 98.9% scored ≥ 4.0 , N=92; 2 nd semester, 95.5% scored ≥ 4.0 , N=144; 4 th semester, 100% scored ≥ 4.0 , N=116; 5 th semester, 98.2% scored ≥ 4.0 , N=11
	2. Successful completion of Oral portion of the Patient Interview/Screening & X-ray Beam Assignment RADR 1313	2. Students will score $\geq 80\%$	2. 2 nd semester (SP 23)	2. Didactic instructor	2. 100% scored $\geq 80\%$, N=25
2. Student will demonstrate written communication skills.	1. Successful completion of Written portion of Case Study RADR 2305	1. Students will score $\geq 85\%$	1. 4 th semester (FA 22)	1. Didactic Instructor	1. Only 8 scored $\geq 85\%$, 42% surpassed benchmark (FA 22: 1st time for this assignment format)
	2. Successful completion written portion of the Patient Interview/Screen & X-ray Beam Assignment RADR 1313	2. Students will score $\geq 80\%$	2. 2 nd semester (SP 23)	2. Didactic Instructor	2. 96% scored $\geq 80\%$, Average score 87.23, only 1 scored $< 80\%$

Analysis/Revisions/Recommendations (Goal 3: Graduate will display communication skills):

SLO 1, Tool 1: Benchmark surpassed. We as a department are pleased with the results. Clinical Coordinator will continue to implement role play as well as other teaching strategies to increase student success in this area.

SLO 1, Tool 2: Benchmark surpassed. Comparison data: SP 2022: 95%, SP 2023: 100% scored $\geq 80\%$

SLO 2, Tool 1: We did not meet the benchmark; however, FA 2022 was the first time for the new format of this assignment. The assignment went from a traditional written paper (FA2021) to fill-in-the-blanks, short answer, matching, m/c, essay questions. The instructor believes this assignment format better assesses student learning. The program will continue to evaluate to ensure the benchmark (which was not changed) and the measurement tool are aligned. No comparison data available in this cycle due to it being a new assignment.

SLO 2, Tool 2: There was an increase from previous year. Although 100% did not score $\geq 80\%$, we are pleased with the progress. Comparison data: SP 2022: 90%, SP 2023: 96% scored $\geq 80\%$.

Goal 4: Graduate will display critical thinking/problem-solving skills.					
Student Learning Outcome (SLO)	Measurement Tool	Benchmark	Timeframes	Group/Person Responsible	Results
1. Students will be able to evaluate radiographic images for acceptability.	1. Image Acceptability/Critique Assignment RADR 1202 & RADR 1250	1. The students will score an $\geq 85\%$ in 1202 and average score of $\geq 90\%$ in 1250	1. 3 rd semester & 5 th semester (SU 23 & SP 23)	1a. Didactic instructor	1. 1202 (SU 23): Chest avg.: 79.34; Abdomen avg.: 79.17; Upper extremity avg.: 83.00; Lower extremity avg.: 85.16 1250 (SP 2023): C-spine avg.: 85.47; L-spine avg.: 89.83; Skull avg.: 84.70; GI avg.: 79.05
	2. Item #9 on Clinical Evaluation in Practicum V	2. 95% of students will score ≥ 4.0 (5.0 Likert)	2. 5 th semester	2. Clinical Coordinator	2. 98.2% scored ≥ 4.0 , N=55
2. Students will demonstrate adaptive behavior for critical or stressful scenarios.	1. Item 11 on Clinical Evaluation in Practicum V	1. 95% of students will score ≥ 4.0 (5.0 Likert)	1. 5 th semester	1. Clinical Coordinator	1. 98.2% scored ≥ 4.0 , N=55
	2. Successful completion of Oral portion of Case Study RADR 2305	2. The student will score $\geq 85\%$	2. 4th semester (FA 22)	2. Didactic Instructor	2. 78.9% (N=15) scoring $\geq 85\%$, N=19 total.

Analysis/Revisions/Recommendations (Goal 4: Graduate will display critical thinking/problem-solving skills):

SLO 1, Tool 1: in RADR 1202 to better assess student learning, there was a slight modification in the assignment (CXR image). There was an increase from 71.62 in SU 2022 to 79.34 in SU 2023. Although the benchmark was not met, there was a slight increase from an overall average of 80.97 in SU 2022 to 81.66 in SU 2023. We will continue to strengthen pre-assignment preparation.

SLO 1, Tool 2: Student success is quite high in this area. Clinical Coordinator will continue current teaching strategies to retain this level of success

SLO 2, Tool 1: Benchmark surpassed

SLO 2, Tool 2: Although 78.9% scoring $\geq 85\%$ was a decrease from the previous years, the AC Radiography program is pleased with the use of this tool. The instructor will evaluate the assessment to help verify it is assessing quality information to help the student to increase success. Comparison data: FA 2020: 90.9% scored $\geq 85\%$; FA 2021: 91.6% scored $\geq 85\%$; FA 2022: 78.9% scored $\geq 85\%$

Goal 5: Graduate will exhibit professional development.					
Student Learning Outcome (SLO)	Measurement Tool	Benchmark	Timeframes	Group/Person Responsible	Results
1. Students will be able to demonstrate conduct as outlined in the ARRT "Code of Ethics".	1. Item 14 on Clinical Evaluation in Practicum V	1. 95% of students will score ≥ 4.0 (5.0 Likert)	1. 5 th semester	1. Clinical Coordinator	1. 100% scored 5, N=55
	2. RADR 1203, Pre-selected questions on Exam 4	2. $\geq 80\%$ of questions will be answered correctly	2. 1 st semester (FA 22)	2. Didactic Instructor	2. 94.6% of questions answered correctly, N=130 question attempts, N=123 correct answers.
2. Students will be able to differentiate between various modalities and professional organizations.	1. RADR 1201 Pre-selected questions on Exam #1	1. Students will score $\geq 80\%$	1. 1 st semester (FA 22)	1. Didactic Instructor	1. 86.67 % of questions answered correctly, N=105 question attempts, N=91 correct answers.
	2. RADR 2309-Modality/Professional Organizations Assignment	2. Students will score $\geq 85\%$	2. 4 th semester (FA 22)	2. Didactic Instructor	2. 36.94% exceeded the benchmark, N=19 completed with only 7 scoring $\geq 85\%$. <u>(FA 22: 1st time for this assignment format)</u>

Analysis/Revisions/Recommendations (Goal 5: Graduate will exhibit professional development):

SLO 1, Tool 1: The program is very pleased with 100% of students scoring 5.0 on this tool. Comparison data: SP 2021: 100%, SP 2022: 100%, SP 2023: 100%.

SLO 1, Tool 2: Benchmark surpassed, students continue to be successful with these legal/ethical questions. Comparison data: 2019: 90.9%, 2020: 94.6%, 2021: 91.7%, 2022: 94.6% answer correctly

SLO 2, Tool 1: Benchmark surpassed with a significant increase from 74% of questions answered correctly in FA 2021. Comparison data: FA 2021: 74%, FA 2022: 86.67%.

SLO 2, Tool 2: We did not meet the benchmark; however, FA 2022 was the first time for the new format of this assignment. The assignment went from a traditional written paper (FA 2021) to m/c, fill-in-the-blank, matching and two essay question assignment. The instructor believes this assignment format better assess student learning. Program will evaluate to ensure the benchmark (which was not changed) and the measurement tool are aligned. No comparison data available in this cycle due to being a new assignment.

Overall Analysis:

The Amarillo College Radiography program continually strive to increase student retention and knowledge. We continuously take steps to increase results on assignments/tools to help graduates be successful in the Radiologic Sciences professions. We do have some further ongoing analysis and revisions to ensure the benchmarks and the measurement tools align.