

## Amarillo College-Radiography Program

Outcomes Assessment Plan 2023

August 2021-August 2022

### 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: 10/6/2023-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=26 started program (3 exceptions (non-academic), per 6.1), 22 completed on time, 95.7% completion rate
	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. N=23 tested, 20 passed 1 <sup>st</sup> attempt, 87% 1 <sup>st</sup> time pass rate
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, N=20 returned (17 answered #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=3.75, N=12 returned
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. N=23 employed, 100% employment rate (N=24 completed SP 22, 1 not seeking Rad. Tech employment)

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

SLO 1, Tool #1: We are pleased with the 95.7 % completion rate in 2022. Five-year comparison: 2018: 85%, 2019: 88%, 2020: 96%, 2021: 87%, 2022: 95.7% 5-year average: 90.2%; SLO 1, Tool #2: 2022 pass rate 87%. We continue to utilize Corectec Radiography review during RADR 2235 to help students prepare for the exit exam and the ARRT.

Five-year comparison: 2018: 86%, 2019: 95%, 2020: 83%, 2021: 90%, 2022: 87% 5-year average: 88.3%

SLO 2: Five-year comparison: Met benchmark in 2022, which was an improvement from 2021. Although not measured, communications skills, critical thinking, & prepared for ARRT exam questions had 4.7, 4.5, & 4.0 averages respectively on the 5.0 Likert scale. We believe these results will help graduates be successful technologists.

SLO 3: Employers continue to be pleased with AC graduates work performance, 2022 responses average 3.75 (4.0 Likert). Five-year comparison: 2018: 3.91, 2019: 3.9, 2020: 3.9, 2021: 3.8, 2022: 3.75.

SLO 4: Five-year comparison: AC Radiography graduates continue to have a robust employment rate. 2018: 91%, 2019: 93%, 2020: 100%; 2021: 90%, 2022: 100%; 5-year average: 95.5%

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 $\geq 4.0$ (5.0 Likert)	1. 3 <sup>rd</sup> & 5 <sup>th</sup> semester	1. Clinical Coordinator	1. 3 <sup>rd</sup> sem. N=38, 36 scored 5, 2 scored 4; 5 <sup>th</sup> sem. N=73, 72 scored 5, 1 scored 3, 99.1 % scored $\geq 4$
	2. Radiation Safety assignment RADR 2313	2. Average score of $\geq 80\%$	2. 1 <sup>st</sup> semester (FA 21)	2. Didactic instructor	2. Average score=83.2; 16 scored $\geq 80\%$
2. Students will recognize appropriate positioning skills and produce diagnostic images.	1. Item #15 from clinical evaluation	1. 95% of students will score $\geq 4.0$ (5.0 Likert)	1. 5 <sup>th</sup> semester (SP 22)	1. Clinical Coordinator	1. N=73, 68 scored 5, 4 scored 4, 1 scored 2, 98.6% scored $\geq 4$
	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 <sup>th</sup> semester (SP 22)	2. Didactic instructor	2. 84.7% of questions were answered correctly; N=23 took exam

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

SLO 1, Tool #1: Benchmark surpassed, we continue to be pleased with results. SLO 1, Tool #2: This RADR 2313-Radiation Safety Assignment format was first used FA 2020. 2021 surpasses the benchmark for the first time. Instructor will continue to help students raise grades higher by continuing non-graded activities prior to the assignment.

SLO 2, Tool #1: Benchmark surpassed, we continue to be pleased with results for this tool.; SLO 2, Tool #2. Benchmark surpasses. RADR 2235 Procedures Questions: 84.7% of the preselected questions were answered correctly. The pelvis question did have a low success rate, however, with some wording clarification, the question should better assess students' knowledge. Instructor will work on clarifying question wording; Five-year comparison: SP 2019: 88% SP 2020: 83% SP 2021: 91.9% SP 2022: 84.7%

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 $\geq 4.0$ (5.0 Likert)	1. 1 <sup>st</sup> , 2 <sup>nd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> semesters	1. Clinical Coordinator	1. 1 <sup>st</sup> sem. N=84, 72 scored 5, 10 scored 4, 2 scored 3, 97.6% $\geq 4$ ; 2 <sup>nd</sup> sem. N=110, 90 scored 5, 20 scored 4, 100% scored $\geq 4$ ; 4 <sup>th</sup> sem. N=148, 131 scored 5, 12 scored 4, 2 scored 3, 3 scored 2, 96.6% $\geq 4$ ; 5 <sup>th</sup> sem. N=146, 135 scored 5, 9 scored 4, 2 scored 3, 98.6% $\geq 4$
	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 <sup>nd</sup> semester (SP 22)	2. Didactic instructor	2. 95% of students scored $\geq 80\%$ (n=20)
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 <sup>th</sup> semester (FA 21)	1. Didactic Instructor	1. 100% of students scored $\geq 85\%$ (N=24); <u>Starting FA 2022 this assignment will be changed/modified.</u>
	2. Successful completion written portion of the Patient Interview/Screen & X-ray Beam Assignment RADR 1313	2. Students will score $\geq 80\%$	2. 2 <sup>nd</sup> semester (SP 22)	2. Didactic Instructor	2. 90% of students scored $\geq 80\%$ (n=20)

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

SLO 1, Tool #1: Benchmark was surpassed in all timeframes for this measurement tool. SLO 1, Tool #2: Only one student did not make  $\geq 80\%$  on this assignment, we continue to be pleased with student outcomes for this tool.

SLO 2, Tool #1: Benchmark surpassed. The assignment for this SLO was changed in fall 2022, to better assess student learning. We will track new data beginning 2022; SLO 2, Tool #2: The assignment format is still relatively new, we would like to have 100 % of students  $\geq 80\%$  instructor will continue with student engagement techniques in preparation for the assignment.

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 <sup>rd</sup> semester & 5 <sup>th</sup> semester (SP 22 & SU 22)	1a. Didactic instructor	1. Results: SP 22 (5 <sup>th</sup> semester) RADR 1250; AVG=83.4, N=22. #1: 5 $\geq 90\%$ ; #2: 6 $\geq 90\%$ ; #3: 11 $\geq 90\%$ ; #4: 6 $\geq 90\%$ Results SU 22 (3 <sup>rd</sup> semester) RADR 1202 Overall average: 81% (N=19) #1: 2 $\geq 85\%$ ; #2: 6 $\geq 85\%$ ; #3: 15 $\geq 85\%$ ; #4: 13 $\geq 85\%$
	2. Item #9 on Clinical Evaluation in Practicum V	2. 95% of students will score $\geq 4.0$ (5.0 Likert)	2. 5 <sup>th</sup> semester (SP 22)	2. Clinical Coordinator	2. N=73, 61 scored 5, 11 scored 4, 1 scored 3, 98.6% $\geq 4$
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 $\geq 4.0$ (5.0 Likert)	1. 5 <sup>th</sup> semester (SP 22)	1. Clinical Coordinator	1. N=73, 61 scored 5, 11 scored 4, 1 scored 3; 98.6% scored $\geq 4$
	2. Successful completion of Oral portion of Case Study RADR 2305	2. The student will score $\geq 85\%$	2. 4 <sup>th</sup> semester (FA 21)	2. Didactic Instructor	2. 91.6% of students scored $\geq 85\%$ (N=24)

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

SLO 1, Tool #1. The measurement tools in RADR 1202 & 1250 benchmark was not met in 2022. We continue adjust/modify this assignment to ensure the SLO, Measurement tool and benchmarks are appropriately aligned. SLO 1, Tool #2. The department is pleased with these results. Five-year comparison: SP 2018: 100%; SP 2019: 98.4%; SP 2020: 100%; SP 2021:100%; SP 2022: 98.6% scored no less than 4 (5.0 Likert)

SLO 2, Tool #1: We strive to have students demonstrate adaptive behavior in critical/stressful scenarios, therefore we are pleased with the result of 98.6%  $\geq 4$  and the four-year comparison, SP 2019: 100%, SP 2020: 100%, SP 2021 100%, SP 2022 98.6% scored  $\geq 4$ . SLO 2, Tool #2: We are pleased with the results, however, to better measure this SLO, the instructor is considering to modify the oral portion of this assignment beginning in FA 2023. Four-year comparison: FA 2018: 95%, FA 2019: 95%, FA 2020 90.9%, FA 2021 91.5% 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 $\geq 4.0$ (5.0 Likert)	1. 5 <sup>th</sup> semester (SP 22)	1. Clinical Coordinator	1. N=73, 73 scored 5, 100% scored $\geq 4$
	2. RADR 1203, Five Pre-selected questions on Exam 4	2. $\geq 80\%$ of questions will be answered correctly	2. 1 <sup>st</sup> semester (FA 21)	2. Didactic Instructor	2. 95.48% of questions were answered correctly (N=22)
2. Students will be able to differentiate between various modalities and professional organizations.	1. RADR 1201, Five Pre-selected questions on Exam 1	1. $\geq 80\%$ of questions will be answered correctly	1. 1 <sup>st</sup> semester (FA 21)	1. Didactic Instructor	1. 74% of questions were answered correctly (N=20); 100 questions attempted, 74 questions answered correctly, 26 questions answered incorrectly.
	2. RADR 2309-Will complete modality paper	2. Students will score $\geq 85\%$	2. 4 <sup>th</sup> semester (FA 21)	2. Didactic Instructor	2. 91.7% of students scored $\geq 85\%$ (N=24). FA 2021 is last semester for the exact assignment format.

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

SLO 1, Tool #1: We continue to be pleased with these results. Four-year comparison: SP 2019: 100%; SP 2020, SP 2021 100%, SP 2022: 100 %scored  $\geq 4.0$ . SLO 1, Tool #2.

Benchmark surpassed. We are pleased with this relatively new measurement tool (started FA 2019) Comparison data: 2019: 90.9%, 2020: 94.6%, 2021 91.7% answer correctly

SLO 2, Tool #1: Did not meet benchmark, the 74% reported above is not where we would like to be. If measured individually, three of the five questions had  $\geq 85\%$  of questions answered correctly. Instructor will ensure student engagement activities are helping students prepare for these types of questions to help raise our results. SLO 2, Tool #2: 100% of the students did not score 85% FA 2021 is the last semester for this exact exam format, FA 2022 will have new assignment to better assess student learning, new data be collected on new assignment. Four-year comparison: FA 2018: 100%; FA 2019: 96% FA 2020: 90.9%, FA 2021:91.7% scored  $\geq 85\%$

Overall Analysis:

The Amarillo College Radiography program staff continue to work as a group and with the Radiography Outcomes Assessment committee to strengthen/adapt measurement tools and related benchmarks to ensure a strong assessment plan.