

**COMMUNITY COLLEGE OF ALLEGHENY COUNTY/BOYCE CAMPUS  
RADIOLOGIC TECHNOLOGY PROGRAM (558)**

**MISSION STATEMENT:**

Community College of Allegheny County Boyce Campus Radiologic Technology Associate Degree Program is committed to produce competent entry-level radiographers that perform within the healthcare industry.

**2018-2021**

**ASSESSMENT PLAN of LEARNING OUTCOMES and DATA RESULTS**

<b>Goal 1: STUDENTS AND GRADUATES WILL BE CLINICALLY COMPETENT.</b>					
<b>Student Learning Outcome</b>	<b>Measurement Tool</b>	<b>Benchmark</b>	<b>Timeframe</b>	<b>Responsible Party</b>	<b>Results</b>
SLO 1: Students will manipulate radiation exposure factors for examinations.	Clinical Competency Rubric Form And Laboratory Competency Form	95% pass rate for Principles of Radiation Physics.	Summer Session	Clinical Instructor	2018 = 98 % 2019 = ___ % 2020 = ___ % 2021 = ___ %
	Clinical Competency Rubric Form	95% pass rate for Storage and Handling of the CR IR. Additionally, Digital equipment manipulation is evaluated.	Summer Session	Clinical Instructor	2018 = 100 % 2019 = ___ % 2020 = ___ % 2021 = ___ %
SLO 2: Students will adapt to patient needs and utilize positioning skills to appropriately demonstrate anatomical structures for examinations.	Radiology Positioning Experiment	Average Score 4 out-of-5 points	Fall Semester	Program Faculty	2018: 4 pts 2019: _ pts 2020: _ pts 2021: ___ pts
	Laboratory Competency Form	Average Score 4 out of 5 points	Fall Semester	Program Faculty	2018: 4 pts 2019: _ pts 2020: _ pts 2021: ___ pts

**2018-2021: Action/Analysis: GOAL 1:**

**SLO 1: Tool 1:** Benchmark was met and evaluated. Continue to monitor.

Findings:

Clinical Instructors evaluated 84 students (N=84) enrolled in the program utilizing the Rubric Clinical Competency Assessment Forms in the category for Principles of Radiation Protection. 98% passed this SLO. N = 83. Only one student failed this objective for the semester and did not pass the clinical course. Additionally, clinical faculty evaluated students on how well the store and handle Image Receptor devices. The population studies was (N=84). All students passed the SLO with a 100% pass rate.

**SLO 1: Tool 2:** Benchmark was met and evaluated. Continue to monitor.

Findings:

Clinical Instructors evaluated the students enrolled in the program. (N=84) for how well they utilize Storage and Handle Image Receptor (CR IR Devices and how well the students manipulated Digital Imaging software and equipment). All students pass this competency evaluation with a 100% rate.

**SLO 2: Tool 1:** Benchmark was met and evaluated. Continue to monitor.

Findings:

All students enrolled in the program for RAD 107 and RAD 157 had to complete a series of positioning experiments for the Chest, Abdomen, Upper and Lower Extremities and Skull. The students had to score a minimum of 4 points-out-of-5 to meet this learning outcome. The average score was 4 points for the population of students. N= 48.

**SLO 2: Tool 2:** Benchmark was met and evaluated. Continue to monitor.

Findings:

All students enrolled in RAD 107, RAD 157, RAD 108, RAD 158 and RAD 208 had to pass a laboratory competency examination for Chest, Abdomen, Upper and Lower Extremities and Skull procedures. They minimum score to pass was 4 points out of 5 to meet this learning outcome. The average score was 4 points for the population of students. N = 68.

**Goal 2: STUDENTS WILL ASSESS SITUATIONS; EMPLOY CRITICAL THINKING AND PROBLEM SOLVING SKILLS.**

<b>Student Learning Outcome</b>	<b>Measurement Tool</b>	<b>Benchmark</b>	<b>Timeframe</b>	<b>Responsible Party</b>	<b>Results</b>
SLO 1: Students will calculate exposure factors to produce diagnostic radiographs.	Applied Mathematical Calculation Experiment.	75% of all students will be able to calculate Inverse Square Law.	Fall Semester	Program Faculty	2018 88 % 2019 ___ % 2020 ___ % 2021 ___ %
	Radiographic formula calculation oral examination.	75% of all students will be able to write formulas on the board and solve problems.	Fall Semester	Program Faculty	2018 86 % 2019 ___ % 2020 ___ % 2021 ___ %
SLO 2: Students will be able to perform alternative patient positions for trauma procedures.	Clinical Competency Rubric Form	Students must perform a trauma hand examination. Average score 4-out-of 5 points	Fall Semester	Program Faculty	2018: 4 pts 2019: ___ pts 2020: ___ pts 2021: ___ pts
	Laboratory Competency Form	Students must complete a Portable Chest Exam. Average Score 4 out of 5 points	Fall Semester	Program Faculty	2018: 4 pts 2019: ___ pts 2020: ___ pts 2021: ___ pts

**2018-2021: Action/Analysis: GOAL 2:**

**SLO 1: Tool 1:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in RAD 107 had to calculate the Inverse Square Law. Population (N=72). The minimum average score to meet this objective was a 75%. Students passed this requirement with an 88% average score.

**SLO 1: Tool 2:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in RAD 157 had to calculate heat units for radiographic tube output measurements for various generating systems. The population of student's studies was 54. (N=54). The minimum pass score had to be a 75%. Students passed this requirement with an 86% average score.

**SLO 2: Tool 1:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in the clinical course RAD 108 had to complete a trauma hand examination. The population of students evaluated was 72. (N=72). The average score for this necessary to pass this clinical competency was 4 out of 5 points. The class average was 4 points.

**SLO 2: Tool 2:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in RAD 108 had to complete a Laboratory Competency for a mock Portable Chest Examination. The population studied was 72 students. The class successfully passed this objective with an average score of 4 out of 5 possible points.

**Goal 3: STUDENTS WILL DEMONSTRATE PROFESSIONALISM.**

<b>Student Learning Outcome</b>	<b>Measurement Tool</b>	<b>Benchmark</b>	<b>Timeframe</b>	<b>Responsible Party</b>	<b>Results</b>
SLO 1: Students will analyze the importance of professional development.	Behavioral Assessment Form First Year.	75% of all first year students enrolled will receive a score of Meets Standards on the form.	Summer Session	Clinical Instructor	2018 97 % 2019 ___ % 2020 ___ % 2021 ___ %
	Behavioral Assessment Form Second Year.	75% of all second year students enrolled will receive a score of Meets Standards on the form.	Summer Session	Clinical Instructor	2018 100 % 2019 ___ % 2020 ___ % 2021 ___ %
SLO 2: Students will complete the program.	Graduation Application Audit Form	70% of students who started the program will graduate.	Summer Session	Program Faculty	2018: 75 % 2019: ___ % 2020: ___ % 2021: ___ %
	Program Completion Semester-by-Semester Audit Form	30% of the students enrolled in the program will not progress.	Each Semester	Program Faculty	2018: 25 % 2019: ___ % 2020: ___ % 2021: ___ %

**2015-2017: Action/Analysis:**

**SLO 1 and SLO 2: Tool 1:** Benchmark met and evaluated. Continue to monitor.

Findings:

Clinical affiliates require students enrolled in the program to display professional behaviors expected for a health care professional. Therefore, an assessment form is utilized to measure student's behaviors in the first and second year clinical courses: RAD 108 and RAD 208. The total population studied was N = 84. All students from the first and second year passed the assessment with a 100% score.

**SLO 1 and 2: Tool 2:** Benchmark met and evaluated. Continue to monitor.

Findings:

Graduation audits are conducted each year to evaluate the total number of students who progress in the program to meet all the curriculum requirements to graduate. By this assessment, CCAC can monitor the number of graduates who have met all professional growth requirements to become an entry-level radiographer. 70% was our minimum benchmark. The actual data collected from the audit reports found 75% of the students who started the program two years ago graduated in 2018 and 25% did not meet the standards of the program and was advised to choose another major, etc.

**Goal 4: STUDENTS WILL COMMUNICATE TO MEET INDUSTRY STANDARDS.**

<b>Student Learning Outcome</b>	<b>Measurement Tool</b>	<b>Benchmark</b>	<b>Timeframe</b>	<b>Responsible Party</b>	<b>Results</b>
SLO 1: Students will utilize oral and written communication skills.	Patient Chart	100% of all students will properly document a patient history.	Summer Session	Clinical Instructor	2018 = 100 % 2019 = ___ % 2020 = ___ % 2021 = ___ %
	Patient Chart	100% of all students will properly document patients vital signs records.	Summer Session	Clinical Instructor	2018 = 100 % 2019 = ___ % 2020 = ___ % 2021 = ___ %
SLO 2: Students will be able to write properly and put data in a Hospital/Imaging Center PACS system.	Clinical Competency Evaluation Form.	90% of all students will write and put proper data in the computer system.	Summer Semester	Program Faculty	2018: 95 % 2019: ___ % 2020: ___ % 2021: ___ %
	Clinical Competency Evaluation Form.	90% of all students will conduct a competent review of required patient data to meet departmental standards.	Summer Semester	Program Faculty	2018: 100 % 2019: ___ % 2020: ___ % 2021: ___ %

**2018-2021: Action/Analysis:**

**SLO 1: Tool 1:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in RAD 158 and RAD 258 must read and evaluate a patient's chart while enrolled in these clinical courses. All students must be able to write a history of a patient for the Radiologist for clinical examinations. 100% of the student enrolled in these courses met this learning assessment outcome. N = 48 first years students and N = 43 second year students.

**SLO 1: Tool 2:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students must evaluate a patient's chart and review vital signs. In addition to the evaluation of the chart, all second year students have to successfully perform a series of vital signs on a patient under direct supervision of qualified staff in RAD 258. All students completed this outcome.

**SLO 2: Tool 1:** Benchmark met and evaluated. Continue to monitor.

Findings;

Students enrolled in RAD 158 and RAD 258 must perform data entry skills in a Diagnostic Imaging Department. The program expects 90% of the students enrolled to pass this requirement the first time. The students achieved a 95% pass rate. Rejected data was corrected under direct supervision by qualified staff. (5%) of the data entered was revised and evaluated before the entry was distributed in the PACS system.

**SLO 2: Tool 2:** Benchmark met and evaluated. Continue to monitor.

Findings:

Students enrolled in RAD 158 and RAD 258 completed a review of patient data relating to Imaging Department requirements. 100% of the data entered into the computer system was acceptable information under direct supervision from qualified staff.

**PROGRAM EFFECTIVENESS MEASURES :**

Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party	Results
<p>PEM 1:                      Graduates will pass the national certification examination in Radiography on the first or second or third attempt.</p>	<p>ARRT Data by Examination Date. The ARRT permits all graduates three (3X) times to pass the examination.</p>	<p>75% or higher average to meet ARRT Requirements after graduation.</p>	<p>December each year.</p>	<p>Program Director</p>	<p>2017: 81 %                      2016: 90 %                      2015: 85 %                      2014: 92 %                      2013: 93 %  <b>Avg = 88 %</b></p>
<p>PEM 2:                      Graduates will be gainfully employed within 12 months post-graduation.</p>	<p>Graduate Survey</p>	<p>75% or higher</p>	<p>December each year.</p>	<p>Program Director</p>	<p>2017: 83 %                      2016: 79 %                      2015: 87 %                      2014: 77 %                      2013: 81 %  <b>Avg = 84%</b></p>
<p>PEM 3:                      Students will complete the program.</p>	<p>Program Completion Rate Audit Form</p>	<p>70%</p>	<p>July every year.</p>	<p>Program Director</p>	<p>2017: 81 %                      2016: 75 %                      2015: 72 %                      2014: 98 %                      2013: 72 %  <b>Avg = 80 %</b></p>
<p>PEM 4:                      Employers will higher CCAC graduates.</p>	<p>Employer Satisfaction Survey</p>	<p>80% will rank our graduates Excellent on the survey.</p>	<p>January every year.</p>	<p>Program Director                      Institutional Research.</p>	<p>2017: 91 %                      2016: 85 %                      2015: 89 %                      2014: 94 %                      2013: 89 %  <b>Avg = 90 %</b></p>

**Action/Analysis: 2017-2012:**

**PEM1: Benchmark was met. Between the years of 2017 to 2013; the program graduates are passing the national certification examination in compliance with the ARRT STANDARDS and POLICIES. This is a serious achievement. The reason for the improvement is as follows:**

**2017:**

**Students and graduates have access to on-line computer modules that help them prepare for the national board examination! This has stabilized pass rates and assisted students and graduates in preparation for the board examination in Radiography provided by the ARRT.**

**2016:**

**Students enrolled in the Radiologic Technology Program have state-of-the-art Digital Equipment to work with on campus and in the clinical affiliates. Having access to digital imaging equipment has dramatically increase students and graduates abilities to perform well on the national certification examination and become employed in the medical community locally and nationally.**

**2015:**

**Students demonstrated at times having difficulty understanding mathematical formulas relating to radiography procedures. CCAC started a new concept of a Math Café located at each campus. Professional tutors with math degrees now tutor students in all subject areas.**

**2014:**

**Students enrolled in the program could perform clinical competency examinations very well. The program increased behavioral conduct standards. Students must practice professional behavior at all times. Behavioral Assessment Form is utilized for every clinical course. Fifty-Percent (50%) of the student's clinical grade is based upon behavioral standards required by the ARRT and ASRT each semester. This evaluation has improved national board performance.**

**2013:**

**The program increased the level of academic intensity in all RAD courses to meet ARRT examination content. National board scores improved dramatically.**

**2012:**

**The program faculty updated all program course offerings and content. This increased graduates scores on the national certification examination.**

**See next page for PEM 2, 3 and 4.**

**PEM2: Benchmark was met and exceeded. CCAC is the first choice of employers in Allegheny County. Employ surveys reflect satisfaction with our program! CCAC graduates dominate the workforce every year due to the reputation of the College, Program and Faculty. In fact, 82% of all Radiology Managers of our clinical affiliates our CCAC Radiologic Technology Program Graduates.**

**Continue to monitor and we will continue to lead all other schools in the area by workforce demands!**

**PEM 3: Benchmark was met. Radiologic Technology Program attrition rate is 15-20% on average. CCAC is changing lives for our community and graduates.**

**Continue to monitor.**

**PEM 4: Benchmark was met. Graduate employer surveys demonstrate that 90% of all employer surveys rank CCAC's Radiography Program as an **EXCELLENT** program!**

**Continue to monitor.**