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.

2015-2018
ASSESSMENT PLAN

Goal 1: STUDENTS AND GRADUATES WILL BE CLINICALLY COMPETENT.

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Measurement Tool</th>
<th>Benchmark</th>
<th>Timeframe</th>
<th>Responsible Party</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1:</td>
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<tr>
<td>Students will manipulate radiation exposure factors for examinations.</td>
<td>Clinical Competency Rubric Form And Laboratory Competency Form</td>
<td>95% pass rate for Principles of Radiation Physics.</td>
<td>Summer Session</td>
<td>Clinical Instructor</td>
<td>2015 = 98 %&lt;br&gt;2016 = 94 %&lt;br&gt;2017 = 97 %&lt;br&gt;2018 = ___ %</td>
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<tr>
<td>SLO 2:</td>
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<tr>
<td>Students will adapt to patient needs and utilize positioning skills to appropriately demonstrate anatomical structures for examinations.</td>
<td>Radiology Positioning Experiment</td>
<td>Average Score 4 out-of-5 points</td>
<td>Fall Semester</td>
<td>Program Faculty</td>
<td>2015: 4 pts&lt;br&gt;2016: 5 pts&lt;br&gt;2017: 5 pts</td>
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<tr>
<td></td>
<td>Laboratory Competency Form</td>
<td>Average Score 4 out of 5 points</td>
<td>Fall Semester</td>
<td>Program Faculty</td>
<td>2015: __ pts&lt;br&gt;2016: 5 pts&lt;br&gt;2017: 5 pts&lt;br&gt;2018: ___ pts</td>
</tr>
</tbody>
</table>
2015-2017: Action/Analysis: GOAL 1:

SLO 1: Tool 1: Benchmark was met and evaluated. Continue to monitor.
Findings:
Clinical Instructors evaluated 48 students (N=48) enrolled in the program utilizing the Rubric Clinical Competency Assessment Forms in the category for Principles of Radiation Protection. 98% passed this SLO. N = 47. 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=48). 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=48) for how well they utilize Storage and Handle Image Receptor (IR Devices). 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.
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<td>SLO 1: Students will calculate exposure factors to produce diagnostic radiographs.</td>
<td>Applied Mathematical Calculation Experiment. Radiographic formula calculation oral examination.</td>
<td>75% of all students will be able to calculate Inverse Square Law. 75% of all students will be able to write formulas on the board and solve problems.</td>
<td>Fall Semester</td>
<td>Program Faculty</td>
<td>2015 88 % 2016 94 % 2017 82 % 2018 ___ %</td>
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<tr>
<td>SLO 2: Students will be able to perform alternative patient positions for trauma procedures.</td>
<td>Clinical Competency Rubric Form Laboratory Competency Form</td>
<td>Students must perform a trauma hand examination. Average score 4-out-of 5 points Students must complete a Portable Chest Exam. Average Score 4 out of 5 points</td>
<td>Fall Semester</td>
<td>Program Faculty</td>
<td>2015: 4 pts 2016: 5 pts 2017: 5 pts 2018: ___ pts</td>
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2015-2017: 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=48). 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 48. (N=48). 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 48. (N=48). 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 48 students. The class successfully passed this objective with an average score of 4 out of 5 possible points.
## Goal 3: STUDENTS WILL DEMONSTRATE PROFESSIONALISM.

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<td>SLO 1: Students will analyze the importance of professional development.</td>
<td>Behavioral Assessment Form First Year.</td>
<td>75% of all first year students enrolled will receive a score of Meets Standards on the form.</td>
<td>Summer Session</td>
<td>Clinical Instructor</td>
<td>2015: 97% 2016: 88% 2017: 93% 2018: ____%</td>
</tr>
<tr>
<td>Behavioral Assessment Form Second Year.</td>
<td>Behavioral Assessment Form Second Year.</td>
<td>75% of all second year students enrolled will receive a score of Meets Standards on the form.</td>
<td>Summer Session</td>
<td>Clinical Instructor</td>
<td>2015: 100% 2016: 100% 2017: 100% 2018: ____%</td>
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<tr>
<td>Graduation Application Audit Form</td>
<td>Graduation Application Audit Form</td>
<td>70% of students who started the program will graduate.</td>
<td>Summer Session</td>
<td>Program Faculty</td>
<td>2015: 75% 2016: 81% 2017: 83% 2018: ____%</td>
</tr>
<tr>
<td>Program Completion Semester-by-Semester Audit Form</td>
<td>Program Completion Semester-by-Semester Audit Form</td>
<td>30% of the students enrolled in the program will not progress.</td>
<td>Each Semester</td>
<td>Program Faculty</td>
<td>2015: 25% 2016: 19% 2017: 17% 2018: ____%</td>
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</table>
SLO 1 and SLO 2: Tool 1: Benchmark met and evaluated. Continue to monitor.

Findings:
Clinical affiliates expressed concerns that students enrolled in the program at times do not display professional behaviors expected and required for a health care professional. Therefore, a new assessment form was developed to measure student’s behaviors in the first and second year clinical courses: RAD 108 and RAD 208. The total population studied was N = 48 for first year students and N= 43 for second year students. Only three (3) students from the first year class failed to meet this learning outcome. The second year students all passed the assessment.

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 2015 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.

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| Students will utilize oral and written communication skills. | Patient Chart | 100% of all students will properly document a patient history. | Summer Session | Clinical Instructor | 2015 = 100 %  
2016 = 100 %  
2017 = 100 %  
2018 = ____ % |
|                          | Patient Chart | 100% of all students will properly document patients vital signs records. | Summer Session | Clinical Instructor | 2015 = 100 %  
2016 = 100 %  
2017 = 100 %  
2018 = ____ % |
| SLO 2:                   | Research Paper Evaluation Form. | 80% of all students will write a competent paper. | Summer Semester | Program Faculty | 2015: 95 %  
2016: 98 %  
2017: 97 %  
2018: ____ % |
| Students will be able to write a research paper. | Literature Review Evaluation Form. | 80% of all students will conduct a competent literature review. | Summer Semester | Program Faculty | 2015: 100 %  
2016: 100 %  
2017: 100 %  
2018: ____ % |
2015-2017: 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 research and write a paper on a subject relating to Diagnostic Imaging. The program expects 80% of the students enrolled to pass this requirement the first time. The students the minimum requirement of a 95% pass rate was achieved. Rejected papers (5%) had to be revised and evaluated again before they received a passing score.

**SLO 2: Tool 2:** Benchmark met and evaluated. Continue to monitor.
Findings:
Students enrolled in Rad 158 and Rad 258 completed a Literature review on the topics for their research papers. 1005 of the review had a passing score.
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| PEM 1:  | ARRT Data by Exam Date | 75% or higher to meet JRCERT Requirements within 6 months after graduation. | December each year. | Program Director | 2016: 67%  
2015: 66%  
2014: 85%  
2013: 81%  
2012: 79%  
Avg = 75% |
| PEM 2:  | Graduate Survey | 75% or higher | December each year. | Program Director | 2016: 83%  
2015: 79%  
2014: 87%  
2013: 77%  
2012: 81%  
Avg = 84% |
| PEM 3:  | Program Completion Rate Audit Form | 70% | July every year. | Program Director | 2016: 81%  
2015: 75%  
2014: 72%  
2013: 98%  
2012: 72%  
Avg = 80% |
| PEM 4:  | Employer Satisfaction Survey | 80% will rank our graduates Excellent on the survey. | January every year. | Program Director  
Institutional Research. | 2016: 91%  
2015: 85%  
2014: 89%  
2013: 94%  
2012: 89%  
Avg = 90% |
Action/Analysis:

PEM1: Benchmark was met. Between the years of 2011 to 2015; the program graduates are passing the national certification examination the first time in compliance with the JRCERT STANDARDS. This is a serious achievement. The reason for the improvement is as follows:

2012:  
Students enrolled in the program had a difficult time understanding and manipulating Digital Equipment. To solve this concern, CCAC purchased a new Digital and PACS system for the Radiologic Technology Laboratory costing $375,000.00.

2013:  
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. However, the program experienced several behavioral conduct situations. Students must practice professional behavior at all times. A new Behavioral Assessment Form was developed and will be implemented in the program starting in the FALL of 2015. Fifty-Percent (50%) of the student’s clinical grade will now be determined by clinical behavioral assessment each semester for all clinical courses: (RAD 108, RAD 158, RAD 208, RAD 218 and RAD 258).

2015:  
The program increased the grade scale to 80% for a minimum “C” letter grade in all RAD courses in 2012. ARRT national board scores improved dramatically. However, the program experienced an academic student complaint that the grade scale was unfair and should follow all other Allied Health Programs who utilize a minimum passing score of 75%. The Radiologic Technology Program experienced a dramatic decrease on the first time pass rate of the national examination for the graduating class of 2015.

CCAC will continue to monitor students/graduates ARRT scores to comply with the JRCERT.

2016:  
The program faculty sought administrative approval to increase the minimum grade scale higher than a 75% for the program and was denied. The class of 2016 first time pass rate for the ARRT examination was a 67%. Therefore, the program implemented a Comprehensive Examination requirement for the final course in the program during RAD 258C Clinical 5. The examination will be 200 points. The first class to take the examination will be in the summer of 2017. Faculty will evaluate the results to see if this measurement tool can help increased the first time pass rate for the class of 2017.

We value the JRCERT accreditation!
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.