

Midlands Technical College
Assessment Plan for 2015-2019
(The cycle for the plan below: August 2019 -July 2020)

Goal #1: Possess the knowledge of positioning skills, technical factor solutions, and the utilization of radiation protection to be clinically competent as an entry-level radiographer.				
Outcomes	Measurement Tool	Benchmark	Results	Analysis/Action Plan
1. Utilize skeletons, radiographs, and diagrams to learn 206 bones of the human body, locations of the bones and organs in cross sectional anatomy.	Simulation lab Psychomotor Student Academic Final Evaluation Competency evaluation	85% will score \geq 85% in RAD 105 on 30 preselected questions	1.1. Not met <u>Results</u> RAD 105=50% N= 9/18	<p><u>Results 2015-16</u> RAD 105=28.6% N=1/14</p> <p><u>Results of 2016-17</u> RAD 105=75% N-12/16</p> <p><u>Results of 2017-18</u> RAD 105= 46% N= 6/13</p> <p><u>Results of 2018-2019</u> RAD 105=11% N= 2/19</p> <p><u>Results of 2019-2020</u> RAD 105= 50%</p> <p>Although a large increase has been demonstrated by the faculty taking more time to teach and review, the outcome was not met.</p> <p><i>Starting in fall 2020, this course will be absorbed and taught with the positioning courses each semester. This is due to the credit reduction of Guided Pathways.</i></p>

<p>2. Demonstrate an understanding of x-ray production to include equipment operation of x-ray tube, accessory devices needed to produce the image, and all basic technical skills.</p>	<p>Psychomotor Student Academic Final Evaluation Competency Evaluation Student Academic Final Exam</p>	<p>80% will complete the technical change chart section on final exam with \geq 85% accuracy</p>	<p>1.2</p> <p><u>Results</u> No Met</p> <p>RAD 110 = 68% N= 13/19</p>	<p><u>Results of 2015-16</u> RAD 110= 57% N=8/14</p> <p><u>Results of 2016-17</u> RAD 110= 69% N=11/16</p> <p><u>Results of 2017-18</u> RAD 110=38% N=5/15</p> <p><u>Results of 2018-2019</u> RAD 110= 37% N= 7/19</p> <p><u>Results of 2019-2020</u> N=13/19 N= 68%</p> <p>This outcome was revised from last year to focus on change chart only. This outcome was also affected by COVID closure of college and transitioning to virtual teaching. Although the outcome was not met the scores and understanding increased on change charts.</p>
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<p>3. Understanding of design and function of Screen-Film radiography (SF), Digital Radiography (DR), and Radiographic Fluoroscopy (RF). Student will mathematically interpret various technical factor changes with effect of final image, including DR exposure indices.</p>	<p>Student Academic Course Psychomotor Student Academic Final Evaluation</p>	<p>80% will successfully calculate a series of technical factors and exposure index math questions on the final examination with $\geq 85\%$ accuracy.</p>	<p>1.3 Results RAD 115- Summer II 2020 RAD 115= 68% N=13/19</p>	<p>Results of 2015-16 N/A Results of 2016-17 RAD 115= 15.4% N=2/13 Results of 2017-18 RAD 115: 38% N=6/16 Results of 2018-19 RAD 115= 56% N=9/16 Results of 2019-2020 RAD 115= 68% N=13/19 Outcome was not met but the math formula skills have increase by 12%. Due to credit reduction and Guided Pathways this course will be merged into RAD 110 in spring 2021.</p>
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<p>4. Demonstrate an understanding of the ethical responsibility for health care workers to protect patient privacy and to ensure infection control</p>	<p>Student Academic Course Student Academic Test Clinical Setting</p>	<p>80% of the students will \geq 90% on both HIPAA and Standard Precautions tests</p>	<p>1.4 Met</p> <p><u>Results</u> RAD 101= 94% N= 17/18</p>	<p><u>Results of 2015-16</u> RAD 101=100% N=5/5</p> <p><u>Results of 2016-17</u> RAD 100= 100% N= 7/7</p> <p><u>Results of 2017-2018</u> RAD 100= 100% 12/13</p> <p><u>Results of 2018-2019</u> RAD 101=100% 12/12</p> <p><u>Results of 2019-2020</u> RAD 101=94% 17/18</p> <p>Great orientation to the clinical home bases during the summer prior to starting the program full time. Faculty will maintain the standards as in the past.</p>
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<p>5. Students will develop a knowledge to perform well on examination #6, Digestive System anatomy.</p>	<p>Student Academic Course Simulation Lab Academic Test #6</p>	<p>80% of the students will \geq 85% examination #6, Digestive Anatomy.</p>	<p>1.5 No met RAD 130 RAD 130-68% N=13/19</p>	<p><u>Results for 2019-2020</u> New Outcome RAD 130-79% N=15/19 New outcome for 20-21: will focus on scores for Test #2: Shoulder, Humerus, Scapula and Clavicle</p>
<p>6. Complete the assigned rubric demonstrating methods radiographers can provide radiation protection to patients and others.</p>	<p>Student Academic Class Psychomotor Clinical Setting</p>	<p>80% of the students will score \geq 85% radiation protection rubric</p>	<p>1.6 Met <u>Results</u> RAD 235= 100% N=17/17</p>	<p>New Student Learning created to get students more involved in protection. 50% of the class did the actual work for the rubric. Due to COVID and moving virtual faculty created criteria for the remaining class to use for the rubric</p>
<p>7. Will utilize radiation protection methods during radiographic/fluoroscopic examinations</p>	<p>Student Academic Class Clinical Setting Clinical Evaluation</p>	<p>85% students score \geq 2.5 (scale of 1-3) on 5 of 15 "Instructor Competency Grading Sheet", item #4, "Evidence of Radiation Protection."</p>	<p>1.7 Summer 2020 Moved to Fall 2020 Due to Covid <u>Results</u> RAD 165= N=</p>	<p><u>Results of 2015-16</u> RAD 165= 100% N= 13/13 <u>Results of 2016-17</u> RAD 165= 93.8% N= 15/16 <u>Results of 2017-18</u> RAD 165= 92.3% N- 12/13 <u>Results of 2018-19</u> RAD 165=100% N= 17/17 <u>Results of 2019-2020</u> To be recorded after fall I, 2020.</p>

<p>8. Demonstration 6 of 12 specific competency examinations in clinic</p>	<p>Student Academic Class Simulation lab Psychomotor Competency Exam</p>	<p>85% of the students will complete $\geq 80\%$ accuracy on 6 examinations</p>	<p>1.8 Met</p> <p><u>Results</u> RAD 101= 94% N=17/18</p>	<p>New Outcome</p> <p><u>Results of 2017-18</u> RAD 101=90% N-19/21</p> <p><u>Results of 2018-19</u> RAD 101=95% N=18/19</p> <p><u>Results of 2019-2020</u> RAD 101= 94% N= 17/18</p> <p>This outcome was new in the fall of 2017. The outcome exceeded by 9-10 % points. Anticipate equal scores in fall of 2020.</p> <p>New Outcome for 2020-2021</p>
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<p>9. Demonstrate a positive work ethic during clinical rotations.</p>	<p>Clinical Evaluations</p>	<p>80% of the students will achieve a successful rating of ≥ 3(5point scale) or above on the Instructor Performance Evaluation, #6 “Productivity: Output of satisfactory work”.</p>	<p>1.9 Met</p> <p><u>Results</u> RAD 153= 100% N= 18/18</p>	<p><u>Results of 2015-16</u> RAD 153= 100% N=17/17</p> <p><u>Results of 2016-17</u> RAD 153= 95% N= 20/21</p> <p><u>Results of 2017-18</u> RAD 153=100% N= 19/19</p> <p><u>Results of 2018-19</u> RAD 153= 100% N=18/18</p> <p><u>Results of 2019-2020</u> RAD 153=100% N=18/18 To raise the # of patient procedures sheets in 2020-2021</p>
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<p>10. Demonstrate the knowledge and understanding of appropriate modality and exam selection for GI and GU systems as well as the accompanying dose to the patient for each.</p>	<p>Student Academic Class Psychomotor Clinical Setting Evaluations</p>	<p>80% of the students achieve $\geq 85\%$ on the Fluoroscopy Project rubric.</p>	<p>1.10 Met</p> <p><u>Results</u> RAD 284= 94% N= 16 /17</p>	<p><u>Results of 2015-16</u> RAD 284=85% N=9/12</p> <p><u>Results of 2016-17</u> RAD 284=85% N=9/12</p> <p><u>Results of 2017-18</u> RAD 284= 92.9% N= 13/14</p> <p><u>Results of 2018-19</u> RAD 284-90.9% N= 10/11</p> <p><u>Results of 2019-2020</u> RAD 284=94% N=16/17</p> <p>Due to credit reduction and Guided Pathways this outcome will become an objective of RAD 268. This will be valued as a separate 10 point category.</p>
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GOAL #2: Ability to communicate effectively to both written and oral forms.			
1. Demonstrate a successful presentation of the second radiographic case study.	Clinical Setting Academic Class presentation	85% of the students will score $\geq 80\%$ on the "Film Presentation Rubric".	<p>2.1 Met</p> <p><u>Results</u> RAD 155=100% N= 19/19</p> <p><u>Results of 2015-16</u> RAD 155= 100%/ 92.3% N=13/113 N=12/13</p> <p><u>Results of 2016-17</u> RAD 155=100%/ 100% N=16/16 both</p> <p><u>Results of 2017-2018</u> RAD 155= 100%/ 100% N= 13/13</p> <p><u>Results of 2018-19</u> RAD 155= 100% N=19/19</p> <p><u>Results of 2019-2020</u> RAD 155-100% N=19/19</p> <p>Score to be raised from 80% to 85% score on the presentation</p>

<p>2. Present two papers; one on a modality of interest and the second on the final pathology using APA format and effective oral communications skills</p>	<p>Student Academic Course Cognitive Rubrics APA & Oral communications</p>	<p>90% will achieve ≥ 3.6 on the "Oral Communication" rubric and $\geq 95\%$ "APA" rubric.</p>	<p>2.2</p> <p>Not met</p> <p>Results RAD 225=89% N=16/18</p>	<p>Results of 2015-16 RAD 225=100%/93% N=15/15 14/15</p> <p>Results of 2016-17 RAD 225= 92%/92% N= 12/13 12/13</p> <p>Results of 2017-18 RAD 225= 86% both N= 12/14</p> <p>Results of 2018-19 RAD 225 Su 18= 69% N=9/13</p> <p>Results 2019-2020 Results=89% N=16/18</p> <p>Outcome was missed by 1%, but overall scores increased 20%. Increase could be due to increase in students by 5. Due to credit reduction and Guided Pathways this course will be merged into the positioning courses. Pathology papers will continue for learning component.</p>
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GOAL #3: Will be able to problem solve using critical thinking skills				
1. Use critical thinking skills to adapt standard procedures for non-routine patients, weight bearing studies: Feet, Ankles, Knees	Student Academic Class Cognitive Psychomotor Simulation Lab Competency Examinations	90% of the students will successfully complete test #1 on Weight Bearing Examinations with an $\geq 85\%$	3.1 Not Met <u>Results</u> RAD 130=83% N- 15/18	<p>Added outcome to target "special views"</p> <p><u>Results of 2017-18</u> RAD 130=69% N=9/13</p> <p><u>Results of 2018-19</u> RAD 130=100% N= 19/19</p> <p><u>Results of 2019-2020</u> RAD 130= 83.3% N= 15/18</p> <p>Faculty will move this evaluation to Test #2 so more reviewing can be done in the lab prior to test. Short by 17% compared to year prior.</p>

<p>2. Student will complete a skull project, 19 preselected radiographic images taken. These images will have the anatomy, positioning criteria and the evaluation criteria labeled on each radiograph.</p>	<p>Student Academic Class Cognitive Psychomotor Simulation Lab</p>	<p>All students \geq 90% or better on the skull project</p>	<p>3.2 Not completed yet</p> <p><u>Result</u></p> <p>RAD136= N=</p>	<p><u>Results of 2015-16</u> RAD 136=53.8% N=7/13</p> <p><u>Results of 2016-17</u> RAD 136= 93.7% N= 15/16</p> <p>Grading rubric changed for clarity</p> <p><u>Results of 2017-18</u> RAD 136=64% N= 9/14</p> <p><u>Results of 2018-19</u> RAD 136=92% N=12/13</p> <p><u>Results of 2019-2020</u> Due to COVID-19, this objective has been moved to fall 2020 RAD 165 as a written objective, 10 point category.</p>
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<p>3. Evaluate the radiographic image on anatomy of part, proper alignment of tube, technique manipulation, image identification and radiation protection.</p>	<p>Student Academic Class Cognitive Psychomotor Simulation Lab Clinical Settings</p>	<p>85% of the students will score a 2.8 or higher (on a 3.0 point scale) average on the "Instructor Competency Grading Sheet", Image Evaluation Criteria, #7 (proper alignment)</p>	<p>3.3 Not completed until fall II 2020</p> <p><u>Results</u></p> <p>RAD 258= % N= /</p>	<p><u>Results of 2015-16 #6-10</u> RAD 258=100% N=13/13</p> <p><u>Results of 2016-17 #6-10</u> RAD 258=84.6% N=11/13</p> <p>New criteria set for objective. Faculty wanted to be specific to proper alignment in 5th semester</p> <p><u>Results of 2017-18</u> RAD 258= 88% N=7/8</p> <p><u>Results of 2018-19</u> RAD 258=82.5% N= 14/17</p> <p><u>Results of 2019-2020</u> RAD 258= N=</p> <p>Due to COVID an preloading fall courses into summer II the clinical courses are loaded into fall I and fall II..</p>
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<p>4. Demonstrate understanding of competent patient care procedures, infection control methods, and proper communication methods.</p> <p>New Outcome Fall 2019</p>	<p>Student Academic Class Cognitive</p>	<p>80% of students will score 4 out of 5 on the "Infection Control Chart".</p>	<p>3.4 Not Met</p> <p><u>Results</u> RAD 102=77.8% N=14/18</p>	<p>Previous years focuses on the sectional test scores. New outcome used in fall, 2019 first time.</p> <p><u>Results of 2019-2020</u> RAD 102= 77.8% N=14/18</p> <p>With this being a new outcome faculty will maintain the same objectives for the project. Valuable data was obtained from this project.</p>
<p>5. Demonstrate knowledge required of a rising senior student and eventually that required of an entry level registered radiologic technologist and determine readiness for ARRT National Board Satisfactorily pass midterm test based on the course objectives.</p>	<p>Student Academic Class Cognitive</p>	<p>80% of the students ≥ 80% on each of the 200 question exams.</p>	<p>3.5 Not Met</p> <p><u>Results</u> RAD 220= 12% N= 2/17</p>	<p><u>Results of 2015-16</u> Old outcome used St. Catherine tests.</p> <p><u>Results of 2016-17</u> Old outcome used St. Catherine tests.</p> <p>New Outcome deployed <u>Results of 2017-18</u> RAD 220= 42% N=3/14</p> <p><u>Results of 2018-19</u> RAD 220- 0% N=0/11</p> <p><u>Results of 2019-2020</u> RAD 220=12% N=2/17</p> <p>After 3 years of terrible scores the instructors have restructured the desired test result to reflect more of the ARRT score versus our regular testing scores.</p>

<p>6. Students will demonstrate knowledge and skills required for non- routine patients.</p>	<p>Student Academic Class Cognitive</p>	<p>85% of the students will score \geq 90% on the midterm test, Special Views.</p>	<p>3.6</p> <p>RAD 225- Summer 2020</p> <p>Due to COVID this course became a summer I-5 week. Therefore, the midterm was dropped. Both of the pathologies sections will be due in fall semester and a test will be given in RAD 136.</p> <p>Beginning Fall 2020 this course will be absorbed in RAD 130 & RAD 136.</p>	<p><u>Results of 2015-16</u> RAD 225= 53% N=8/15</p> <p><u>Results of 2016-17</u> RAD 225= 39% N=5/13</p> <p><u>Results of 2017-18</u> RAD 225 65% N= 9/14</p> <p>Changed to summer semester</p> <p><u>Results of 2018-19</u> RAD 225= 29% N= 5/17</p> <p><u>Results of 2019-2020</u> Due to Guided Pathways and Credit Reduction this course has been absorbed into the positioning courses. The pathologies and fractures will be used in RAD 136.</p>
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<p>7. Demonstrate understanding of the design and function of x-ray circuitry, image intensification and digital imaging.</p>	<p>Student Academic Class Cognitive Psychomotor Clinical Setting</p>	<p>85% of the students will score ≥ 2.5, Instructor Competency Sheet #5 "Technique Manipulation"</p>	<p>3.7 Met</p> <p><u>Results</u></p> <p>RAD 268- 100% N=16/16</p>	<p><u>Results of 2015-16</u> RAD 268=100% N=5/5</p> <p><u>Results of 2016-17</u> RAD 268=100% N=8/9</p> <p><u>Results of 2017-18</u> RAD 268=90.9% N=10/11</p> <p><u>Results of 2018-19</u> RAD 268-100% N=11/11</p> <p><u>Report of 2019-2020</u> RAD 268=100% N=16/16</p> <p>This outcome has been successful as we have exceeded the expectation each year. Faculty will look to increase the 85% success to 90% success for spring 21.</p>
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<p>8. Demonstrate their understanding of image quality control and exposure values in the clinical setting</p>	<p>Clinical Setting Psychomotor</p>	<p>Students will collect measurements of SID, OID, kVp, Ma, Sec and EI values for the diagnostic images taken during final clinical rechecks. They will select 10 images to focus on, print to paper. Student will explain and/or calculate what technical changes could've been done to improve these images. 80% of the students will score at least 85% on the project.</p>	<p>3.8 Met</p> <p><u>Results</u> RAD 121= 100% N= 16/16</p>	<p><u>Results of 2015-16</u> RAD 121= 62% (final exm) N=8/13</p> <p><u>Results of 2016-17</u> RAD 121= 86% (exam final) N=12/14</p> <p><u>Results of 2017-18</u> RAD 121 62% (final exam) N=8/13</p> <p>New outcome changed</p> <p><u>Results of 2018-19</u> RAD 121=60% N=9/15</p> <p><u>Results of 2019-2020</u> RAD 121=100% N=16/16</p>
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GOAL #4: Be professionally minded and value life-long learning

<p>1. Demonstrate an understanding and value of life-long learning and professional development activities</p>	<p>Clinical Setting Affective Cognitive</p>	<p>85% of students will attend \geq 8 hours of validated professional development (continuing education) seminars during their final semester</p>	<p>4.1 Not completed</p> <p>RAD 268- 0% N=0/0</p> <p>Due to COVID-19 the SCSRT meeting was cancelled. Local chapter also did not provide meetings.</p>	<p>Results of 2015-16 Evaluated on older criteria RAD 268=92% N=11/12 (satisfactory output of work)</p> <p>Results of 2016-17 Error: not evaluated this year due to matrix changes.</p> <p>Changed to Life Long Learning</p> <p>Results of 2017-18 RAD 268=92.9% N=13/14</p> <p>Results of 2018-19 RAD 268=100% N=11/11</p> <p>Results 2019-2020 Due to COVID-19 the SCSRT meeting was cancelled. Local chapter also did not provide meetings.</p>
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	Student Academic Class	85% of the students will attend \geq one professional local society meeting during the semester.	<p>4.2</p> <p>No Completed</p> <p>RAD 101 RAD 101= N=</p>	<p><u>Results of 2015-16</u> Previous outcome (test3 LLL) RAD 101=100%</p> <p>New outcome used <u>Results of 2016-17</u> RAD 101=100% N=17/17</p> <p><u>Results of 2017-18</u> RAD 101=71% N=15/21</p> <p><u>Results of 2018-19</u> RAD 101=95% N=18/19</p> <p><u>Results of 2019-2020</u> RAD 101 0% Due to COVID-19 the SCSRT meeting was cancelled. Local chapter also did not provide meetings.</p>
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GOAL #5: To support the General Education Corew of the college by delivering a course that meets the Oral Communication competency for certain programs.

<p>1. Present two papers; one on a modality of interest and the second on the final pathology. The student will use APA format and will present using effective oral communications skills</p>	<p>Student Academic Class Cognitive Psychomotor</p>	<p>Students will achieve ≥ 3.6 "Oral Communication" rubric and a $\geq 95\%$ "APA" rubric for both papers</p>	<p>5.1 Met</p> <p><u>Results</u> RAD 225=89% N=16/18</p>	<p><u>Results of 2015-16</u> <u>Results of 2016-17</u></p> <p>New objective added to replace Public Speaking course</p> <p><u>Results of 2017-18</u> RAD 225-2=69% N=9/13</p> <p><u>Results of 2018-19</u> RAD 225= 86%/86% N=12/14 12/14</p> <p><u>Results of 2019-2020</u> RAD 225=89% N=16/18</p> <p>This course has been deleted due to credit reduction. The positioning portion will be merged into RAD 130 & RAD 136.</p>
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