WCC RADIOGRAPHY PROGRAM ANNUAL ASSESSMENT DATA: Graduate Class of 2024

Mission Statement: The mission of the Radiography Program is to provide students with a high-quality, well-rounded educational experience which results in graduates who possess the knowledge, skills, and abilities to enter the field of diagnostic imaging as entry-level radiographers. Graduates of the Washtenaw Community College Radiography Program will demonstrate the necessary skills to integrate the theoretical knowledge and essential clinical skills to perform radiologic procedures and provide exemplary patient care in a variety of healthcare settings with diverse patient populations.

Program Goals
Goal 1: Clinical Competency: Students will demonstrate proficiency in technical and clinical skills.
Goal 2: Critical Thinking: Students will demonstrate critical thinking and problem-solving skills.
Goal 3: Communication Skills: Students will demonstrate the ability to effectively communicate orally and in writing.
Goal 4: Professional and Ethical Principles: Students will demonstrate the ability to analyze and address ethical and medical issues in patient care while exhibiting professionalism in the clinical setting.

Goal 1: Clinical Competency: Students will demonstrate proficiency in technical and clinical skills.

	Student Outcomes	Assessment Tool	Benchmark	Timeline	Faculty Responsible	Results per Academic Year/Class	Analysis/Recommendations
1.1	Students will perform diagnostic radiographic procedures.	RAD 120 - Final Clinical Performance Evaluation: Technical Aptitude – 3rd statement **"Demonstrates proper manipulation of radiographic / fluoroscopic / portable equipment including tube, SID, table movement / locks / tube / bucky alignment"**	*Average score ≥ 3 (1 – 4-point scale) ^Average score ≥ 4 (1 – 5-point scale)	First Year, 3rd semester (Winter)	Clinical Coordinator	*Class of 2020: Average score 3.6 12 students 55%) received a score of 4 6 students (27%) received a score of 3 4 students (18%) received a score of 3.5 Class of 2021: No data due to COVID-19 restrictions Class of 2022: Average score 4.18 9 students (41%) received a score of 5 8 students (36%) received a score of 4 5 students (23%) received a score of 3 Class of 2023: Average score 4.08 9 students (36%) received a score of 5 10 students (40%) received a score of 4 5 students (20%) received a score of 3 1 student (4%) received a score of 2 **Class of 2024: Average score 4.12** 8 students (31%) received a score of 5 13 students (50%) received a score of 4 5 students (19%) received a score of 3	The assessment of students' technical aptitude in performing diagnostic radiographic procedures has shown notable trends across the classes from 2020 to 2024. For the Class of 2020, which utilized a 4-point scale for evaluation, the average score was a respectable 3.6. Within this cohort, 55% of students achieved the highest score of 4, while 27% scored a 3, and 18% received a 3.5. However, the following year, the Class of 2021 was unable to provide data due to COVID-19 restrictions, leaving a temporary gap in assessment. With the introduction of a 5-point scale in the Class of 2022, there was a shift in the average scores for the next three cohorts. The average score for the Class of 2022 was 4.18, with 41% of students earning a top score of 5, 36% achieving a score of 4, and 23% scoring a 3. The Class of 2023 achieved an average score of 4.08. In this cohort, 36% earned a 5, 40% received a 4, and while 20% received a 3, there was also 4% who scored a 2, indicating some variability in performance. The Class of 2024 maintained a strong average score of 4.12, with 31% securing a 5, 50% reaching a 4, and 19% receiving a score of 3. Overall, the data highlights a trajectory of improvement in the technical competencies of students in diagnostic radiography, particularly following the transition to a more comprehensive assessment scale. Based on the assessment tool's performance, no modifications are necessary at this time.
		RAD 150 - Radiographic Positioning Simulation Exercises (Spinal Column)	Students will achieve a score of 90% or higher	First Year, 4th semester (Sp/Su)	Clinical Coordinator	Class of 2020: Average score 97% Class of 2021: No data – campus closed Class of 2022: Average score 98%	The assessment of students' ability to perform diagnostic radiographic procedures has shown consistently high levels of achievement over recent years. The data indicates that the Class of 2020 excelled with an impressive average score of 97% in the RAD 150 Radiographic Positioning Simulation Exercises, specifically focused on the spinal column. Unfortunately, there is no assessment data available for the Class of 2021 due to campus closures.
		RAD 150 - Radiographic Positioning Simulation Exercises (Upper Extremities, Lower Extremities, and Spinal Column)	Students will achieve a score of 90% or higher on all three radiographic positioning simulations of the upper extremities, lower extremities, and spinal column	First Year, 4th semester (Sp/Su)	Clinical Coordinator	Class of 2023: Average score 97.7% **Class of 2024: Average score 97.2%**	Following this, the Class of 2022 maintained an outstanding performance with an average score of 98%, reflecting a continued trend of excellence in radiographic positioning skills. In response to evolving educational needs, the program implemented a new assessment tool that broadened the scope of evaluation to include not only the spinal column but also the upper and lower extremities. Preliminary results for the new assessment method were recorded for the Classes of 2023 and 2024, where students achieved average scores of 97.7% and 97.2%, respectively. These figures suggest that the revisions to the assessment tool have successfully maintained high standards of student performance while encompassing a more comprehensive range of radiographic procedures. Overall, the data reflects ongoing success in the program's ability to prepare students to perform standard radiographic procedures. Based on the assessment tool's performance, no modifications are necessary at this time.

		RAD 240 - Final Clinical Performance Evaluation: Competency Maintenance – 2nd statement **"When the student is involved in procedures previously mastered, the student is able to perform the exam perform the exam with minimal assistance"**	Average score ≥ 3.5 (1 – 5-point scale) *Average score ≥ 4 (1 – 5-point scale)	Second Year, 7th semester (Sp/Su)	Clinical Coordinator	Class of 2020: No data – Students unable to attend clinical Class of 2021: Average score 5 21 students (100%) received a score of 5 Class of 2022: Average score 4.82 17 students (85%) received a score of 5 2 students (10%) received a score of 4 1 student (5%) received a score of 3 Class of 2023: Average score 4.96 22 students (96%) received a score of 5 1 student (4%) received a score of 4 ***Class of 2024: Average score 4.92** 23 students (92%) received a score of 5 2 students (8%) received a score of 4	The continued assessment of students' competency in performing diagnostic radiographic procedures is reflected through the RAD 240 Final Clinical Performance Evaluation, specifically focusing on the ability to execute previously mastered exams with minimal assistance. In analyzing the performance across the classes, the Class of 2021 exhibited exceptional results, achieving a perfect average score of 5, with all 21 students receiving this score. The Class of 2022 recorded a slightly lower average of 4.82, with a majority (85%) earning a score of 5, while two students scored a 4 and one student scored a 3. The following year, the Class of 2023 showed improvement, achieving an average score of 4.96, where 96% of the students once again scored a 5, and one student received a 4. Continuing this trend, the Class of 2024 maintained a strong performance with an average score of 4.92, where 92% scored a 5 and the remaining 8% received a 4. Overall, the data indicates a consistent level of proficiency and mastery among the students over the assessed years, showcasing their ability to perform diagnostic radiographic procedures with minimal assistance.
1.2	Students will demonstrate the ability to perform basic patient care assessment skills.	RAD 101: Patient Transfer Competency Form	^Average score ≥ 32 (total points 39) *Average score ≥ 27(total points 33) #Average score ≥ 40(total points 48)	First Year, 1st semester (Sp/Su)	RAD 101 Instructor	^Class of 2020: Average Score 37 ^Class of 2021: Average Score 38 *Class of 2022: Average Score 31.6 #Class of 2023: Average Score 45 **#Class of 2024: Average Score 45.8** 17 students received a score of 48 1 student received a score of 46 13 students received a score of 45 1 student received a score of 36 1 student received a score of 30	The assessment of patient transfer skills has evolved positively over the recent years. For the Class of 2020, the average score was 37, while the Class of 2021 slightly improved to an average of 38, demonstrating solid foundational competencies. The Class of 2022 achieved an average score of 31.6 on a rubric scaled to a maximum of 33 points. This score reflects a solid grasp of skills, indicating that the students were effectively engaging with the material and gaining important experiences. Recognizing the need for a more comprehensive evaluation, the assessment rubric was revised for the Classes of 2023, increasing the maximum score to 48 points. This change has yielded positive results, with the Class of 2023 achieving an average score of 45 and the Class of 2024 further improving to an average of 45.8. Notably, several students excelled, with 17 students scoring 48, demonstrating an exceptional grasp of patient transfer competency. This trajectory shows a clear enhancement in competency over the years, underscoring the importance of both the assessment tool's structure and the students' dedication to mastering essential patient care skills. The revitalized rubric appears to have fostered an environment that encourages higher performance in patient transfer competency, reflecting positively on the curriculum and instructional methods employed in the program.
		RAD 222 Patient Assessment Skills Check-Out Form: Venipuncture	Average score ≥ 17 (total points 20)	Second Year, 5th semester (Fall)	RAD 222 Instructor	Class of 2020 Average score 20 Class of 2021 Average score 20 Class of 2022 Average score 20 21 students (100%) received a score of 20	In evaluating the progression of patient care assessment skills among students in the RAD 222 course, we observe a significant shift indicated by the results from two different assessment tools: the Venipuncture and Vital Signs Check-Out Forms. For the Venipuncture assessment, students from the classes of 2020,

| RAD 222 Patient Assessment Skills Check-Out Form: Vital Signs | Average score ≥ 83 (total points 90) | Second Year, 5th semester (Fall) | RAD 222 Instructor | Class of 2023 Average score 90
22 students (100%) received a score of 90
Class of 2024 Average score 90
25 students (100%) received a score of 90 | 2021, and 2022 all exhibited consistent performance, each achieving an average score of 20. Notably, all 21 students in these classes (100%) scored the same, suggesting a uniform level of proficiency and comprehension in performing venipuncture at that time.

In contrast, the Vital Signs assessment for the class of 2023 shows a remarkable improvement. The average score rose to 90, with all 22 students (100%) achieving this caliber of performance. The trend of success continued with the class of 2024, which also registered an average score of 90, with all 25 students (100%) reaching this impressive benchmark.

The success of the new assessment tool in demonstrating students' proficiency in vital signs reflects the program's commitment to providing an effective learning environment that prepares students for real-world clinical practice. Such advancements indicate a shift towards fostering comprehensive patient care assessment skills, ultimately enhancing the competency and confidence of future healthcare professionals. |

	Goal 2: Critical Thinking: Students will demonstrate critical thinking and problem-solving skills.					
	Student Outcomes	**Assessment Tool**	**Benchmark**	**Timeline**	**Faculty Responsible**	**Results per Academic Year/Class**	**Analysis**
2.1	Students will calculate the correct exposure factors.	RAD 124 Lab Assignment Effect of Distance on Density/Exposure Maintenance Formula	Average score ≥ 20 (26 points)	First Year, 2nd semester (Fall)	RAD 124 Instructor	Class of 2020: Average score 22.25 Class of 2021: Average score 23.9 Class of 2022: Average score 24 Class of 2023: Average score 24.1 **Class of 2024: Average score 24.67** 3 students received a score of 28 (extra credit) 5 students received a score of 27 (extra credit) 13 students received a score of 26 1 student received a score of 25 2 students received a score of 22 1 student received a score of 21 1 student received a score of 17 1 student received a score of 0	In analyzing the performance of students across the RAD 124 Lab Assignment, which focused on calculating exposure factors and understanding the effect of distance and exposure maintenance, we observe a gradual improvement over the years from 2020 to 2024. The average score for the class of 2020 was 22.25, indicating a foundational understanding of the material. This average increased to 23.9 for the class of 2021 and further to 24 in 2022, showcasing a steady progression in comprehension. By the class of 2023, the average score reached 24.1, and in 2024, students achieved an average of 24.67, reflecting a commendable mastery of the concepts related to exposure maintenance formulas. This upward trend is notable, as it suggests that students are effectively engaging with the curriculum over time. However, the data also highlights scores indicative of varied understanding among students. A significant number of students demonstrated exceptional performance, with three students earning extra credit scores of 28, and five others scoring 27. Additionally, the highest frequency of scores centered around 26, achieved by 13 students, indicating a common level of understanding among the cohort. Conversely, the distribution of lower scores reveals challenges faced by some, as evidenced by one student scoring as low as 0 (the lab was not submitted on time) and others falling below the average. Specifically, two students scored 22, one scoring 21, and another scoring 17, underlying disparities in grasping the course material. In summary, the performance data from the RAD 124 Lab Assignment illustrates a notable trend of improvement in students' ability to calculate exposure factors, while also spotlighting the diversity in student understanding and achievement levels within the cohort. After discussion and review of this assessment tool's performance, faculty have determined that it will be replaced with a new lab assignment from RAD 124 – The Effects of Grids on Contrast and Image Quality. In this new assignment, students will calculate the appropriate mAs factors for imaging the abdomen phantom, transitioning from a non-grid to an 8:1 grid. Additionally, they will assess the differences in image quality produced by each technique. Faculty believe that this updated assessment tool will provide a more comprehensive understanding of the principles underlying radiographic exposure, enhance practical skills in adjusting imaging parameters, and reinforce critical thinking through the evaluation of technical factors influencing diagnostic outcomes.

| | | RAD 217 Radiographic Technique Manual Project - 1. Upper and lower extremities, 2. Skull procedures, and 3. Spinal Column, Chest, Abdomen, Ribs, and Sternum | Average score of 90% or better (100 points) - Combined average score of 3 assignments | Second Year, 5th semester (Fall) | Clinical Coordinator | 2020: Average score 97%
Class of 2021: Average score 96%
Class of 2022: Average score 97.6%
Class of 2023: Average score 98.5%
Class of 2024: Average score 97.2% | The assessment of Student Learning Outcome (SLO) 2.1 focused on students' ability to accurately calculate exposure factors in the realm of radiographic techniques. Evaluated through the RAD 217 Radiographic Technique Manual Project, students engaged in practical assessments across a variety of procedures, including the upper and lower extremities, skull procedures, and comprehensive examinations of the spinal column, chest, abdomen, ribs, and sternum.

Data collected from this assignment reflects a positive trend in student performance over the years. The 2020 cohort achieved an impressive average score of 97%. The following year, the Class of 2021 maintained a high standard with an average score of 96%. The Class of 2022 demonstrated even greater proficiency, recording an average score of 97.6%. This upward trajectory continued with the Class of 2023, whose average score peaked at 98.5%, indicating a significant mastery of the subject matter. Although the Class of 2024 saw a slight decrease, their average score remained commendably high at 97.2%.

Overall, these results illustrate a consistent level of excellence among students in calculating correct exposure factors, highlighting the effectiveness of the curriculum and the dedication of both students, program and clinical faculty in the ongoing development of this essential skill. |

| 2.2 | Students will solve problems in the clinical setting. | RAD 225 Final Evaluation (Judgment/Accountability 8th Statement) **"The student demonstrates the ability to think critically and solves problems or challenges as they arise"** | #Average score ≥ 3 (1 - 4-point scale) ^Average score ≥ 4 (1 - 5-point scale) | Second Year, 6th semester (Winter) | Clinical Coordinator | #Class 2020: Average score 3.6 8 students (36%) received a score of 4 14 students (64%) received a score of 3 ^Class of 2021: Average score 4.73 16 students (76%) received a score of 5 4 students (19%) received a score of 4 1 student (5%) received a score of 3 ^Class of 2022: Average score 4.55 12 students (60%) received a score of 5 7 students (35%) received a score of 4 1 student (5%) received a score of 3 ^Class of 2023: Average score 4.6 13 (59%) students received a score of 5 9 (41%)students received a score of 4 **^Class of 2024; Average score: 4.82** 20 (80%) students received a score of 5 5 (20%) students received a score of 4 | The assessment of students' problem-solving abilities in clinical settings, as evaluated through the RAD 225 Final Evaluation, showcases a notable upward trend in performance over the years. The Class of 2020, which utilized a 4-point scale for the assessment, achieved an average score of 3.6. Within this cohort, 36% of students scored the highest mark of 4, while 64% received a score of 3, demonstrating a solid yet foundational level of critical thinking and problem-solving skills. Following this, the Class of 2021 transitioned to a new 5-point scale and significantly improved their performance, achieving an impressive average score of 4.73. In this cohort, 76% of students received a perfect score of 5, indicating that the majority excelled in demonstrating critical thinking and problem-solving abilities. Only 19% received a score of 4, and a mere 5% scored 3, reflecting a strong overall performance. The positive trend carried on with the Class of 2022, which maintained an average score of 4.55. This class saw 60% of students achieving the highest score of 5, while 35% scored 4, and 5% received a score of 3. The results further illustrate the strengthening of students' critical thinking skills in a clinical context. In 2023, the Class of 2023 recorded an average score of 4.6, showing a slight improvement over the previous class and reinforcing the upward trajectory in problem-solving capabilities. In this cohort, 13 students achieved a perfect score of 5, while 9 students received a score of 4. This consistency reflects a continued development of strong critical thinking skills among students. The Class of 2024 further exemplified this positive trend, achieving the highest average score of 4.82. With 20 students scoring 5 and 5 students scoring a 4, this class has set a new standard for excellence in critical thinking and problem-solving abilities within clinical settings. In light of these outcomes, faculty discussions have led to the decision to amend the assessment tool for the Class of 2025, transitioning from the RAD 225 Final Evaluation to the Final Performance Evaluation from RAD 150 using the same statement. This change is predicated on the belief that utilizing an evaluation from the first year of the program will afford a more comprehensive assessment of students' critical thinking and problem-solving abilities as they set out to engage in the program. Faculty members contend that an early benchmark might better capture the initial stages of student development, allowing for targeted interventions and support throughout their educational journey. This shift aims to foster a deeper understanding of students' problem-solving skills and enhance their performance trajectory as they advance in their clinical training. |

| | | Radiography Student Professional Skills Evaluation Question – 6 **"The student demonstrates the ability to think critically and solve problems or challenges with which he/she is confronted."** | Average score ≥ 3 (1 – 4-point scale) | Annually in June | Clinical Coordinator | Class 2020: Average score 3.8
18 students (82%) received a score of 4
4 students (18%) received a score of 3

Class of 2021: Average score 3.8
12 students (80%) received a score of 4
3 students (20%) received a score of 3

Class of 2022: Average score 3.77
15 students (75%) received a score of 4
1 student (5%) received a score of 3.67
4 students (20%) received a score of 3

Class of 2023: Average score 3.83
19 (83%) students received a score of 4
4 (17%) students received a score of 3

Class of 2024: Average score 3.84
21 (84%)students received a score of 4
4 (16%) students received a score of 3 | The assessment of students' critical thinking and problem-solving skills in the clinical setting demonstrates a commendable trend among radiography students over the years from 2020 to 2024. Each class achieved consistent average scores, indicative of their ability to address challenges effectively.

In the Class of 2020, the average score was 3.8, with a notable 82% of students achieving the highest rating of 4. This performance set a solid foundation for the subsequent classes. The Class of 2021 maintained this score at 3.8, with 80% of students again receiving a score of 4, reinforcing the program's strengths in developing these essential skills.

The following year, the Class of 2022 experienced a slight dip in average score to 3.77, yet 75% of students still attained a score of 4. A unique case stood out with one student scoring 3.67, reflecting a minor deviation in performance among the cohort. Despite this, the overall results remained strong.

The Class of 2023 showed improvement, achieving an average of 3.83, with 83% earning a score of 4, indicating a resurgence in students' problem-solving capabilities. The Class of 2024 further built upon this success with an average score of 3.84, and 84% reaching the top score of 4. This upward trajectory underscores a steady progress in critical thinking skills as students advance through the program.

Overall, the data illustrates a consistent performance in problem-solving and critical thinking across the classes, reflecting both the student's dedication and the effectiveness of the educational framework in preparing them for challenges in a clinical environment. |

	Goal 3: Communication Skills: Students will demonstrate the ability to effectively communicate orally and in writing.					
	Student Outcomes	**Assessment Tool**	**Benchmark**	**Timeline**	**Faculty Responsible**	**Results per Academic Year/Class**	**Analysis**
3.1	Students will use effective oral communication skills in the clinical setting.	RAD 120 Final Evaluation: Patient Communication – 1st statement **"The student demonstrates the ability to communicate with the patient in a professional manner"**	*Average score ≥ 3 (1 – 4-point scale) +Average score ≥ 4 (1 – 5-point scale)	First Year, 3rd semester (Winter)	Clinical Coordinator	*Class of 2020: Average score 3.7 17 students (71%) received a score of 4 7 students (29%) received a score of 3 Class of 2021: No data due to COVID-19 restrictions +Class of 2022: Average score 4.27 12 students (55%) received a score of 5 6 students (27%) received a score of 4 3 students (14%) received a score of 3 0 students (0%) received a score of 2 1 students (4%) received a score of 1 Class of 2023: Average score 4.36 13 students (52%) received a score of 5 8 students (32%) received a score of 4 4 students (16%) received a score of 3 **Class of 2024:** Average score 4.5 15 (57%) students received a score of 5 9 (34%) students received a score of 4 2 (9%) students received a score of 3	The assessment of oral communication skills in a clinical setting for the program has yielded promising results over the years. Evaluated through the RAD 120 Final Evaluation, students are assessed based on their ability to engage with patients professionally. The Class of 2020 set a strong foundation with an average score of 3.7 on a 4-point scale, reflecting a commendable level of communication proficiency among students. Notably, 71% of students scored a 4, demonstrating effective communication, while the remaining 29% scored a 3, indicating room for growth. Due to the disruptions caused by the COVID-19 pandemic, no data was collected for the Class of 2021. However, the subsequent classes showed an upward trend in communication effectiveness. The Class of 2022 achieved an impressive average score of 4.27 on a 5-point scale, with over half of the students (55%) earning the highest possible score of 5. This illustrates a significant improvement in their ability to communicate with patients. Building on this success, the Class of 2023 recorded an even higher average of 4.36, with 52% achieving a score of 5 and 32% scoring a 4. This continued upward trajectory highlights a consistent enhancement in students' oral communication skills. The Class of 2024 further reinforced this positive trajectory, achieving an average score of 4.5. In this cohort, 57% of students received a score of 5, while 34% scored a 4, demonstrating a consistent pattern of excellence in oral communication skills. Overall, the assessment data reveals a significant improvement in students' effective communication in the clinical setting, culminating in higher average scores and a greater percentage of students achieving top scores in more recent cohorts. This indicates a positive trajectory in developing essential communication skills among radiology students.
		Radiography Student Professional Skills Evaluation - Question 1 **"The student communicates with patients in a manner that you would expect/require of an entry-level radiographer."**	Average score ≥ 3 (1 – 4-point scale)	Annually in June	Clinical Coordinator	Class of 2020 Average score 3.8 18 students received a score of 4 4 students received a score of 3 Class of 2021 Average score 3.94 20 students received a score of 4 1 student received a score of 3 Class of 2022 Average score 3.91 18 students received a score of 4 1 student received a score of 3.67 1 student received a score of 3 Class of 2023 Average score 4 24 students (100%) received a score of 4 **Class of 2024 Average score 3.92** 23 (92%)students received a score of 4 2 (8%) students received a score of 3	The assessment of oral communication skills among radiography students across several graduating classes reveals a positive trend in performance over the years. In the Class of 2020, the students had an average score of 3.8, with the majority (18 students) attaining a score of 4, while 4 students scored a 3. The following year, the Class of 2021 demonstrated an improvement, achieving a higher average score of 3.94. In this cohort, 20 students received the highest score of 4, and only 1 student scored a 3. Continuing on this upward trajectory, the Class of 2022 maintained a strong performance with an average score of 3.91. Notably, 18 students earned a perfect score of 4, although 1 student received a somewhat lower score of 3.67 and 1 additional student scored a 3. The Class of 2023 marked a significant milestone with all 24 students (100%) receiving a score of 4, indicating a consistent demonstration of effective communication skills expected of entry-level radiographers. In the most recent Class of 2024, the trend continued, as 23 students achieved a score of 4, while 2 students scored a 3. Overall, the data reflects an encouraging pattern of enhanced oral communication skills in the clinical setting, preparing students well for their roles as future radiographers.

| 3.2 | Students will practice writing skills. | RAD 120 - Contrast Case Study Paper | Average score ≥ 80 points (100- point rubric) | First Year, 3rd semester (Winter) | Clinical Coordinator | Class of 2020: Average score 97
Class of 2021: Average score 97
Class of 2022: Average score 97
Class of 2023: Average Score 97
Class of 2024: Average Score 95.5
7 students received a score of 100
2 students received a score of 99
2 students received a score of 97
4 students received a score of 96
3 students received a score of 95
1 student received a score of 92
1 student received a score of 91
1 student received a score of 90
1 student received a score of 88
1 student received a score of 83
1 student received a score of 81 | The assessment of Student Learning Outcome 3.2, which focuses on students' writing skills as demonstrated through the RAD 120 Contrast Case Study Paper, has yielded impressive results over the past five cohorts. The data show that the classes of 2020, 2021, and 2022 achieved a remarkable average score of 97, while the class of 2023 maintained this exceptional standard with the same average. The class of 2024, while slightly lower, still demonstrated strong performance with an average score of 95.5. Furthermore, seven students scored a perfect 100 on the assessment, indicating the high level of mastery achieved across the board.

Given the consistently high performance, faculty have engaged in discussions regarding the need for fresh assessment strategies that not only continue to challenge students but also diversify the evaluation of their writing skills. As a result, it has been agreed upon that the Clinical Site Orientation Assignment addressing Medical Emergencies and Communicating with Difficult Patients for the Clinical Course RAD 110 Medical will be implemented for the Class of 2025 as a replacement for the Contrast Case Study Paper.

This decision stems from a desire to align student learning outcomes with real-world clinical scenarios, thereby enhancing the relevance of the assignments. The new assignment will not only assess writing skills but will also emphasize important aspects of clinical communication and emergency response, which are essential competencies in the healthcare field. This report was assigned to prepare students for the complexities of patient interactions and the demands of their future clinical roles. By engaging with more practical and situationally relevant assignments, students will not only refine their writing abilities but also strengthen their critical thinking and communication skills, ultimately leading to a more productive educational experience in the clinical setting. |
| | | RAD 225 – Advanced-Level Training Research Paper | Average score ≥ 80 points (100- point rubric) | Second Year, 6th semester (Winter) | Clinical Coordinator | Class of 2020: Average score 96
Class of 2021: Average score 97
Class of 2022: Average score 98
Class of 2023: Average score 99
Class of 2024: Average score 98
12 students received a score of 100
5 students received a score of 99
3 students received a score of 98
1 student received a score of 97
1 student received a score of 96
1 student received a score of 95
1 student received a score of 93
1 student received a score of 87 | The assessment of writing skills for students enrolled in RAD 225 – Advanced-Level Training Research Paper from the classes of 2020 to 2024 demonstrates a consistent upward trend in average scores over the years. In 2020, the class achieved an average score of 96, which increased to 97 in 2021, grew further to 98 in 2022, and peaked at 99 in 2023. Although the average in 2024 returned to 98, the overall performance remained exceptional.

The assessment results from the most recent class revealed an impressive range of individual scores. Notably, 12 students achieved perfect scores of 100, underscoring a high level of proficiency in research paper writing. Additionally, five students scored 99, while three secured 98. Rounding out the performance metrics, one student received a score of 97, another achieved a score of 96, with additional students scoring 95, 93, and 87. This data illustrates not only the gradual enhancement of writing skills among the students but also highlights the commitment to academic excellence within the program. |

Goal 4: Professional and Ethical Principles: Students will demonstrate the ability to analyze and address ethical and medical issues in patient care while exhibiting professionalism in the clinical setting.						
Student Outcomes	**Assessment Tool**	**Benchmark**	**Timeline**	**Faculty Responsible**	**Results per Academic Year/Class**	**Analysis**
4.1 Students will recognize the ethical and medical issues in patient care.	RAD 110 writing assignment, Patient/Co-Worker Communication, and Cultural Diversity	Average score of 80 points or better (100 points rubric)	First Year, 1st semester (Fall)	Clinical Coordinator	Class of 2020: Average score 94 Class of 2021: Average score 85 Class of 2022: Average score 93 Class of 2023: Average score 92 **Class of 2024: Average score 95** 6 students received a score of 100 2 students received a score of 99 3 students received a score of 98 2 students received a score of 97 3 students received a score of 96 3 students received a score of 95 1 student received a score of 94 1 student received a score of 93 2 students received a score of 92 1 student received a score of 88 1student received a score of 81 1 student received a score of 80	The evaluation of students in the RAD 110 course across the Classes of 2020 to 2024 reflects a strong performance in recognizing the ethical and medical issues in patient care. The overall trend in scores demonstrates a stable and high level of achievement, with average scores ranging from 85 to 95. The Class of 2020 achieved a high average score of 94, indicating a solid grasp of the course material. The following year, the Class of 2021 experienced a decline in average performance with an average score of 85, suggesting potential challenges this cohort faced in mastering the ethical and medical principles taught in the course. However, the subsequent classes showed noteworthy improvement, with the Class of 2022 averaging 93 and the Class of 2023 maintaining an equally commendable average of 92. The Class of 2024 then surpassed all previous averages, attaining an impressive 95. A closer look at individual scores reveals that six students excelled by achieving perfect scores of 100, highlighting exceptional understanding and application of the course content. Additionally, multiple students demonstrated high performance, with the scores demonstrating a competitive and motivated learning environment. The distribution of scores reflects a well-rounded class performance, although it also indicates the presence of outliers, with a few students scoring lower than the majority. Notably, one student received a score of 81 and another scored as low as 80, suggesting room for additional support for those who may struggle with the subject matter. In summary, the assessment data provides a narrative of consistent high achievement in understanding ethical and medical issues in patient care within the RAD 110 course, showcasing the dedication of both students and instructors in fostering an environment conducive to learning and excellence.
	RAD 103 – Unit 4 Homework Essay Questions on Ethical and Medical Issues in Patient Care	Average score > 32 points (40 points)	First Year, 1st semester (Sp/Su)	RAD 103 Instructor	Class of 2020: Average score 39 Class of 2021: Average score 40 Class of 2022: Average score 40	The assessment of student learning outcomes (SLO) pertaining to ethical and medical issues in patient care has evolved with the introduction of a new evaluation tool, reflecting a commitment to enhancing educational practices. Transitioning from the RAD 103 course's unit homework essay questions, which yielded average scores of 39 for the class of 2020 and 40 for the class of 2021, the program has embraced a more structured approach through the RAD 222 course, which focuses on the ARRT Code of Ethics. The initial results from the new assessment tool indicate a promising trend, with the class of 2023 achieving an average score of 38.91 and the class of 2024 showing further improvement at an average score of 39.81. Additionally, 25 students attained the highest score of 40, showcasing a strong understanding of ethical standards in patient care. While the scores reflect areas for continued growth, the slight improvements and high-achieving students suggest that the new assessment tool effectively assesses the student's understanding of this important topic and fosters critical discussions around ethical practices. This progress illustrates the program's dedication to developing well-rounded healthcare professionals equipped to navigate patient care complexities with integrity and ethical consideration.
	RAD 222 ARRT Code of Ethics Assignment	Average score > 32 points (40 points)	Second Year, 5th semester (Fall)	RAD 222 Instructor	Class of 2023: Average score 38.91 **Class of 2024: Average score 39.81** 25 students received a score of 40 1 student received a score of 38 1 student received a score of 37	

| 4.2 | Students will exhibit professional behaviors in the clinical setting. | RAD 150 Final Performance Evaluation – (Interpersonal Relationships: The ability to communicate and interact in a professional manner with clinical staff and peers.) **"Student communicates well with staff members, peers, and physicians in an effort to promote a productive and respectful environment"** | *Average score ≥ 3 (1 – 4-point scale) +Average score ≥ 4 (1 – 5-point scale) | First Year, 4th semester (Spring/Summer) | Clinical Coordinator | *Class of 2020: Average score 3.9 Average score 3.8 22 students (88%) received a score of 4 3 students (12%) received a score of 3

 *Class of 2021: Average score 3.9 20 students (91%) received a score of 4 2 students (9%) received a score of 3

 +Class of 2022: Average score 4.86 17 students (85%) received a score of 5 3 students (15%) received a score of 4

 +Class of 2023: Average score 4.42 14 students (58%) received a score of 5 6 students (25%) received a score of 4 4 students (17%) received a score of 3

 +Class of 2024: Average score: 4.58 18 students (69%) received a score of 5 5 students (10%) received a score of 4 3 students (11%) received a score of 3 | The assessment of student learning outcomes (SLO) related to exhibiting professional behaviors in the clinical setting has shown commendable improvement over recent years, reflecting the program's commitment to developing professionalism within the field of radiography. The RAD 150 Final Performance Evaluation specifically focuses on interpersonal relationships, assessing students' abilities to interact professionally with clinical staff, peers, and physicians.

 For the class of 2020, the average score was 3.9 on a 4-point scale, with 88% of students receiving the highest score of 4, indicating a solid foundation in professional interactions. The following year, the class of 2021 maintained this performance level with an identical average score of 3.9, where 91% of students achieved a score of 4.

 In 2022, the program transitioned to a 5-point scale to provide a more nuanced evaluation of student performance. The class of 2022 demonstrated an exceptional turnaround, achieving an impressive average score of 4.86, with 85% of students earning a perfect score of 5. This reflects a significant enhancement in communication skills and professional behavior.

 Continuing this positive trend, the class of 2023 reported an average score of 4.42, with 58% achieving a score of 5, although with a slight increase in the variety of scores. The class of 2024 built on this foundation, obtaining an average score of 4.58, with 69% of students receiving a score of 5, further illustrating the effectiveness of the program's focus on professional communication.

 Overall, the introduction of the 5-point scale has enriched the assessment process, allowing for greater differentiation in student performance and enabling faculty to identify areas for improvement more effectively. This narrative signifies not only the ongoing success in cultivating professional behaviors among students but also highlights the program's adaptability and dedication to enhancing educational outcomes in clinical environments. Such improvements emphasize the importance of strong interpersonal skills in radiography, ultimately contributing to a respectful and productive healthcare atmosphere. |
| | | Radiography Student Professional Skills Evaluation: 2nd statement **"The student communicates with fellow students., staff, managers, and physicians in a manner you would expect /require of an entry level radiographer."** | Average score ≥ 3 (1 – 4-point scale) | Annually in June | Clinical Coordinator | Class of 2020: No Data available due to Covid

 Class of 2021: Average score 3.88 13 students (74%) received a score of 4 2 students (26%) received a score of 3

 Class of 2022: Average score 3.95 19 (95%) students received a score of 4 1 (5%) student received a score of 3.67 | The evaluation of student learning outcomes (SLO) related to exhibiting professional behaviors in the clinical setting has demonstrated a significant progression in student performance over the years. Previously, the Radiography Student Professional Skills Evaluation focused on the second statement regarding communication with peers and healthcare staff. For the class of 2021, which was notably the first class assessed post-COVID disruptions, students achieved an average score of 3.88, with 74% of students earning a score of 4 and 26% achieving a score of 3. The following year, the class of 2022 showed improvement, raising the average score to 3.95, with 95% of students attaining a score of 4 and only one student scoring 3.67. |

| | | Radiography Student Professional Skills Evaluation: 12th statement **"The student uses professional judgment and shows respect for organizational policies and norms."** | Average score ≥ 3 (1 – 4-point scale) | Annually in June | Clinical Coordinator | Class of 2023: Average score 3.96
22 (97%) students received a score of 4
1 (3%) student received a score of 3

Class of 2024; Average score 3.92
23 (92%) students received a score of 4
2 (8%) students received a score of 3 | Recognizing the need for continuous improvement and more comprehensive evaluation, the faculty introduced a new assessment tool that focuses on using professional judgment and respecting organizational policies and norms. This shift was made to better align the assessment criteria with the evolving demands of the clinical environment and to foster a deeper understanding of professional behaviors among students. The results from the class of 2023 reflected a strong performance, with an average score of 3.96 where 97% of students received a perfect score of 4, and only 3% scored 3. The class of 2024 continued this trend, averaging a score of 3.92, with 92% of students achieving a score of 4.

This positive trend underscores the program's effectiveness in cultivating professional behaviors and standards among students, equipping them with the necessary skills to thrive in clinical environments. The consistency in high scores across the classes illustrates a strong commitment to professionalism and adherence to organizational practices, reinforcing the value of this educational framework in shaping competent and professional radiographers. |

Program Effectiveness Measures:							
Student Outcomes	**Assessment Tool**	**Benchmark**	**Timeline**	**Faculty Responsible**	**Results per class**		**Analysis**
1 The 5-year average pass rate for the ARRT credentialing examination is not less than 75% on the first attempt.	ARRT Annual Program Summary Report for WCC graduates	The five-year average pass rate of not less than 75% on the 1st attempt of the National Radiography Certificate Examination administered by the American Registry of Radiologic Technologist (ARRT).	Annually in July	Program Director	2020: 100% 2021: 95% 2022: 100% 2023: 100% **2024: 100%** 25/25 Passed 5 Year Average 99%		The effectiveness of the radiography program can be quantitatively assessed through the pass rates of its graduates on the ARRT credentialing examination over a five-year period. According to the ARRT Annual Program Summary Report for WCC graduates, the program has consistently demonstrated strong performance, achieving a remarkable five-year average pass rate of 99%. In detail, the data reveals that in 2020, the program achieved a perfect pass rate of 100%. This trend continued into 2021, with a slightly reduced but still impressive pass rate of 95%. Nonetheless, the program rebounded with perfect pass rates again in 2022, 2023, and 2024, showcasing the unwavering commitment to academic excellence in the field of radiography. Overall, every graduate in the most recent evaluation period successfully passed the examination, resulting in a total of 25 out of 25 graduates achieving success. This exceptional performance not only meets but significantly exceeds the established benchmark of a minimum 75% pass rate on the first attempt, thus reflecting the program's effectiveness in preparing students for certification by the American Registry of Radiologic Technologists. The sustained high performance indicates a vigorous curriculum and the effectiveness of instructional methodologies employed by the faculty.

2	5-year average job placement rate of graduates actively seeking employment is no less than 75% within 6 months of graduation.	Email & Social Media	Five-year average job placement rate of not less than 75% within 6 months of graduation.	Annually in July	Program Director	2020: 95% 2021: 95% 2022: 100% 2023: 95% **2024: 96%** 24/25 Students 5 Year Average 96%	The effectiveness of the program in terms of job placement rates for graduates actively seeking employment is reflected in a commendable five-year average of 96%. According to the assessment data, the job placement rates over the past five years have been consistently high, exceeding the established benchmark of 75%. In 2020, 95% of graduates found employment within six months of graduation, a success rate that was matched in 2021. The program achieved a notable milestone in 2022 with a perfect job placement rate of 100%. The following years maintained strong performance, with job placement rates of 95% in 2023 and 96% in 2024, leading to a total of 24 out of 25 students successfully securing positions in the workforce. It is important to note that while the Class of 2024 has achieved an impressive rate of employability, one student is currently enrolled in the WCC MRI program and is not yet working in the radiography field. This student is projected to complete her program at the end of the 2025 winter semester, indicating that her employment status will be reviewed when completing the 2025 Program Effectiveness Data for the JRCERT. Overall, the program's strong job placement statistics underscore its effectiveness in preparing graduates for successful careers in radiology.
3	Students admitted to the program will successfully complete the program within the 2-year sequence.	Admission/ Graduation data	*70% of the students admitted and enrolled in the program will complete the program within two years. The measure will be based on program retention rates (i.e., the number of students admitted to the program and the number of students who complete the program within two years.) #70% of the students admitted and enrolled in the program will complete the program within two years. The benchmark will be based on program retention rates defined by the Joint Review Committee on Education in Radiologic Technology (JRCERT). When calculating the completion rate, the program will not consider students who attrite due to nonacademic reasons. This can include financial, medical/mental health, or family reasons, military deployment, a change in major/course of study, and/or other reasons classified as a nonacademic withdrawal.	Annually in July	Program Director	*2020: 69% #2021: 92% #2022: 80% #2023: 82% **#2024: 92%**	The effectiveness of the program is demonstrated through its completion rates, with a benchmark set to achieve at least 70% of students successfully finishing the program within a two-year timeframe. This metric is closely aligned with the guidelines from the Joint Review Committee on Education in Radiologic Technology (JRCERT), which emphasizes that only students who complete the program for academic reasons will be counted towards this measure. Nonacademic withdrawals, such as those due to financial difficulties, medical issues, family obligations, military deployment, or changes in academic focus, are excluded from these calculations. Since the Class of 2020, there has been a remarkable improvement in completion rates, which rose to 92%, clearly surpassing expectations. In the subsequent years, the performance remained strong, with completion rates of 80% in 2022, 82% in 2023, and once again reaching 92% in 2024. Overall, these metrics reflect a positive trend in program effectiveness and retention, illustrating a commitment to student success and a continuous effort to address factors that may impede academic progression. Given this context, faculty are considering raising the benchmark from 70% to 80% for the next review cycle. This proposed adjustment aims to reflect the program's upward trajectory and set a more ambitious standard for student success, fostering an environment that encourages sustained academic achievement and completion.

| 4 | Graduates will indicate that the program adequately prepared them for entry-level positions. | Graduate Exit Survey (Question 11) **"Do you feel that the WCC Radiography Program prepared you for an entry-level position in a radiology department?"** | Average score > 3 (5-point scale; 5 = strongly agree, 1=strongly disagree) | Second Year, 7th semester (Spring/Summer) | Program Director | 2020: Average score 4.6
22 (100%) of 22 graduates responded
14 graduates (64%) Strongly agree
8 graduates (36%) Agree

2021: Average score 4.9
21 (95%) of 22 graduates responded
20 graduates (95%) Strongly agree
1 graduates (5%) Agree

2022: Average score 4.9
20 (100%) of 20 graduates responded
17 graduates (85%) Strongly agree
3 graduates (15%) Agree

2023: Average score 4.9
23 (100%) of 23 graduates responded
21 graduates (91%) Strongly agree
2 graduates (9%) Agree

2024: Average score 4.68
25 (100%) of 25 graduates responded
20 graduates (80%) Strongly agree
4 graduates (16%) Agree
1 graduate (4%) Neither Agree nor Disagree | The effectiveness of the WCC Radiography Program in preparing graduates for entry-level positions in radiology has shown a largely positive trend over the past five years. The graduate exit surveys consistently reflect high satisfaction among respondents regarding the program's readiness for professional roles.

In 2020, the program received an average score of 4.6, with a complete response rate from all 22 graduates. A significant 64% of graduates expressed strong agreement about their preparedness, while 36% agreed. The following year, 2021, marked an impressive improvement, with the average score rising to 4.9. Of the 21 graduates who participated, a notable 95% strongly agreed they felt prepared, with the remaining 5% simply agreeing.

This high satisfaction level continued into 2022, with another average score of 4.9 from 20 respondents. Seventeen graduates (85%) strongly agreed with the program's effectiveness, and three (15%) agreed. In 2023, a similar pattern emerged, as 23 graduates rated the program's preparedness at an average score of 4.9, with 91% strongly agreeing and 9% agreeing.

However, in 2024, a minor decline was evident, with an average score of 4.68 from 25 graduates. Despite this decrease, 80% strongly agreed that they were adequately prepared for entry-level positions, while 16% agreed, and 4% neither agreed nor disagreed.

Overall, the survey data indicates a strong consensus among graduates that the WCC Radiography Program effectively prepares them for the demands of their careers, with steady levels of satisfaction despite slight fluctuations in scores over the years. |
| 5 | Employers will indicate that the program graduates are adequately prepared for entry-level positions. | Radiography Student Professional Skills Evaluation **"If an entry-level radiographer position was available within the department, I would consider hiring this student."** | Average score > 3 (4-point scale) | Annually in June | Clinical Coordinator | 2020 Average score 3.82
18 students (86%) received a score of 4
4 students (14%) received a score of 3

2021 Average score 3.94
14 students (93%) received a score of 4
1 students (7%) received a score of 3

2022 Average score 3.82
16 students (80%) received a score of 4
4 students (20%) received a score of 3

2023 Average score 3.87
20 students (87%) received a score of 4
3 students (13%) received a score of 3

2024 Average score 3.92
22 (92%) students received a score of 4
2 (8%) students received a score of 3 | The assessment of program effectiveness for radiography graduates highlights a consistent trend in employer feedback regarding the preparedness of students for entry-level positions. Using the Radiography Student Professional Skills Evaluation, where employers indicate their willingness to hire graduates, the data shows a generally positive outlook over the course of five years.

In 2020, the average score for graduates was 3.82, with a noteworthy 86% of students achieving the highest rating of 4, signifying strong endorsement from employers. In 2021, there was a rise in the average score to 3.94, with an impressive 93% of students receiving top marks. This upward trend continued, demonstrating the growing confidence employers have in the program's graduates.

However, 2022 saw a slight dip in the average score, returning to 3.82, while still maintaining a solid 80% of students rated as 4. The following year, 2023, reflected a resurgence in scores, averaging 3.87 with 87% of students rated as 4. By 2024, the average score further improved to 3.92, with an uplifting 92% of students achieving the highest rating.

Across the five years, the overall outstanding performance indicates that the program is effectively equipping students with the necessary skills and competencies sought by employers, ensuring they are well-prepared to step into entry-level radiographer roles upon graduation. |