Blackhawk Technical College
Associate Degree Radiography Program

Outcomes and Assessment

for the Class of 2023

Cohort Group

2021-2023

Blackhawk Technical College Associate Degree Radiography Program Mission and Goals

PROGRAM MISSION:

The Mission of the Blackhawk Technical College Associate Degree Radiography Program is to prepare the Student to Practice Entry-Level Diagnostic Medical Radiography.

PROGRAM GOALS/BTC CORE ABILITIES:

GOAL 1: DEMONSTRATE CRITICAL THINKING
GOAL 2: DEMONSTRATE EFFECTIVE COMMUNICATION
GOAL 3: DEMONSTRATE PROFESSIONAL WORK BEHAVIORS
GOAL 4: DEMONSTRATE DIVERSE AND INCLUSIVE PRACTICES
GOAL 5: DEMONSTRATE PROFESSIONAL USE OF RELEVANT TECHNOLOGY

PROGRAM OUTCOMES

OUTCOME 1: CARRYOUT THE PRODUCTION AND EVALUATION OF RADIOGRAPHIC IMAGES
OUTCOME 2: PRACTICE RADIATION SAFETY PRINCIPLES
OUTCOME 3: PROVIDE QUALITY PATIENT CARE
OUTCOME 4: MODEL PROFESSIONAL AND ETHICAL BEHAVIOR CONSISTENT WITH THE A.R.R.T. CODE OF ETHICS
OUTCOME 5: APPLY CRITICAL THINKING AND PROBLEM SOLVING SKILLS IN THE PRACTICE OF DIAGNOSTIC RADIOGRAPHY

GOAL 1: DEMONSTRATE CRITICAL THINKING					
Outcomes	**Measurement Tool**	**Benchmark**	**Timeframe**	**Responsible Party**	**Results**
OUTCOME 5: APPLY CRITICAL THINKING AND PROBLEM SOLVING SKILLS IN THE PRACTICE OF DIAGNOSTIC RADIOGRAPHY	1. Trajecsys End of Semester Eval: Assesses situations and adapts to patient's ability, employs non-routine procedures and techniques appropriately, uses equipment and positioning devices appropriately	1. Average score of 3 on 1-5 scale for Clinical 2 & 3; Average score of 4 on 1-5 scale for Clinical 6	1. Clinical 2, 3 & 6 End of Semester	1. All radiography faculty	• Clinical 2: 3.4 • Clinical 3: 3.9 • Clinical 6: 4.7
	2. Clinical Competency Form/Unsuccessful Competency Form	2. Less than 10% of unsuccessful competency attempts due to critical thinking/problem solving issues for 100% of students	2. Clinical 2 & 3 End of Semester	2. All radiography faculty	• Clinical 2: 8% (2 of 25) • Clinical 3: 15.3% (4 of 9)
	3. Repeat Log	3. Less than 10% of repeats due to critical thinking/problem solving for 100% of students	3. Clinical 6 End of Semester	3. Clinical radiography faculty	• Clinical 6: N/A
	4. BTC Core Ability Rubric: Solve Problems Efficiently rubric.	4. 100% of students score at a level of "introductory" in all categories	4. Trauma Lab: spring semester year 1	4. All radiography faculty	• Trauma Lab: 100%
	5. Emergent vs Non-Emergent reflection Clinical 6	5. 100% of students document an examination in which critical thinking skills were utilized to adapt to patient condition.	5. Spring semester year 2: Clinical 6	5. Clinical Radiography faculty	• Emergent vs not Emergent Reflection: 100%
OUTCOME 1: CARRYOUT THE PRODUCTION AND EVALUATION OF RADIOGRAPHIC IMAGES	1. End of Semester Image Evaluation Tests	1. All students pass image evaluation examinations: $\geq$ 80%	1. End of Semester Fall & Spring Y1	1. Course Instructor	• Fall: 88% (14 of 16) • Spring: 94% (15 of 16)
	2. Repeat Log	2. 100% of students will identify a reason for every exam that a repeat projection was necessary	2. Clinical 4 and 6	2. Clinical Radiography faculty	• Clinical 4: 100% (13 of 13) • Clinical 6: 100% (13 of 13)

Action Plan: Goal 1

Outcome 5 Measurement Tool 1: Affective Evaluation- Demonstrate Critical Thinking

The new evaluation system of Trajecsys has been a very good tool for tracking core abilities/affective behaviors of our students. As discussed in the 2020-2022 assessment plan, the critical thinking category uses the standards of 4,5, and 7 of the ARRT code of ethics. Most of the preceptor's comments praise students for their adaptability to the patient's situations. Students scores progressed through clinical 2,3, and 6. In clinical 2, the average score for critical thinking was a 3.4 out of a 5-point Likert scale. By clinical 6, this score increased to 4.7; a result we might predict as student program longevity is positively correlated to exam adaptation.

All students and faculty review their affective evaluations at midterm and final. Now that we have reduced the number of categories to five, the assessments have become more clear and clinical preceptors are providing better examples- which makes the students score feel the score is less subjective.

Since we have seen plenty of staff changes since Covid, we have made an extra effort to send detailed e-mails with instructions about the importance of filling out accurate evaluations. BTC staff sends out a reminder one to two weeks before midterm with instructions. Stressed in the email is the importance of including specific examples. We have noticed that students seem to struggle with constructive criticism. We have heard many students describe wanting to be "perfect." We assure them that this is a two-year learning process, and our system allows for mistakes - if students reflect and learn to improve. We have continued to implement more labs where critical thinking is challenged by patient scenarios or more traumatic injury. The students seem to enjoy these changes in labs.

Based on this information the program will continue to use the Trajecsys affective evaluations as a tool for assessing critical thinking. Instructors will provide information to preceptors by e-mail one week before evaluations are do giving instructions of how to fill out the new evaluations. Benchmarks will be monitored and adjusted as collected data indicates.

Outcome 5 Measurement Tool 2 & 3: Clinical Competency/ Unsuccessful Competency Form:

Unsuccessful competency rate calculated by dividing successful attempts divided by total competency attempts.

The benchmark was met for clinical 2; however, we had a 15.3% rate of unsuccessful comps due to critical thinking. The program continues to review unsuccessful competencies throughout the semester and have been practicing exams where students have failed on more than one attempt due to the same issue. We have noticed that many of the exams that are failed in clinical 2 are due to mistakes with equipment. This is a different category, and as noted in 20-22 assessment plan, this could be due to exams being done portably, and our labs are done in the room for checkoff.

The comments made on the unsuccessful competency form in clinical 3 are more specific to the patient's condition. Examples include: "It was difficult," "It was a tough exam", or "Patient uncooperative". This is good data, and we would hope that students are attempting on patients that are less routine. The program will look at changing the benchmark to be more reflective of learning from the failed competency by instituting an activity in the clinical course that has the student reflect on how to be better prepared. It may be unrealistic to have a 10% fail rate in clinical 2 and 3. We had discussed changing the benchmark, but we may need to change the wording to "100 percent of students that fail an exam due to critical thinking will analyze and determine a solution of how they could have altered the exam to be successful in their competency. A reflection could be added with the submission of their failed competencies. The students are asked to turn in their failed competencies the next class day, but we may want to change the policy to have them keep their brown sheets in their competency binders until they have reviewed them with faculty to ensure they understand how to be best prepared if a similar exam arises.

* Repeat Log was replaced for Clinical 5 and timeframe of Clinical 6 was determined moving into Assessment Plan 22-24, as students are comping off early and in the last four years we have collected less than 10 unsuccessful competency forms in Clinical 5 and 6. In the class of 2019 we had 12 unsuccessful competencies in semester 5. This number has decreased even more significantly now that we allow the students to comp one continued ahead each semester since covid. The program has determined that the repeat logs give much more data in clinical 5 and 6 and this will be the new tool for clinical 5 and 6. As stated in the 20-22 assessment plan, as students reach the final 2 semesters prior to graduation this data has diminishing value as students are nearing completion of clinical competency and very few competency attempts are unsuccessful. For these last 2 clinical semester, the program switched to collecting data from the unsuccessful competency form. This form was originally created to document that any radiographic procedure being performed by a student does so under the direct supervision of a staff radiographer. As stated, a larger quantity of useful data is collected from this form, assisting the program identify students/examinations/facilities experiencing increased repeat rate, allowing for intervention such as remediation.

Based on this information the program will
- Develop a more defined form to submit with repeat log that allow the students to reflect on their repeats.
- During clinical visits make a more concentrated effort to check repeat logs to make sure students accountable for filling out paperwork

Blackhawk Technical College
Radiography Program

Program Assessment Plan
Class of 2023

Outcome 5 Measurement Tool 4: BTC Core Ability Rubric: Solve Problems Efficiently.

This tool was only used in the spring of year 1 and then phased out as discussed in the 20-22 assessment plan. We developed a new tool, and which is discussed below.

Outcome 5 Measurement Tool 5: Emergent vs Non-Emergent Reflection

All students will write a reflection of adapting to an exam by reflecting on the difference between an emergent and non-emergent exam. After reading their reflections it is evident that students can problem solve and apply critical thinking to alter their exam. Many of them discussed every category from setting up the room and preparing for the exam, to positioning changes and even how they may have to communicate differently to the patient's altered status.

Based on this information the program will
- Continue to monitor the reflections to see if they are accurate for assessing critical thinking.

Outcome 1 Measurement Tool 1: End of Semester Image Evaluation Exams.

Even though all students did not pass we increased from 80% to 88%, meaning only one student did not pass. Additionally, we increased the most with spring y1 exam in Radiographic Procedures 2 from a 36% pass rate to 94%. Starting in the fall of 2021, we were able to bring students back into the classroom. All image analysis critique was available on video, as well as weekly Friday quizzes before checkoff, making students accountable for memorizing all pertinent anatomy.
The increase in spring y1 in Radiographic Procedures 2 was most significant. The instructor started utilizing the virtual cadaver much more than before. Students also visited the ALC frequently with the course instructor, which provided dedicated time to work with the cadaver. The instructor also revised the exam and removed infrequently used skull projections and procedures not being performed routinely at affiliates such as IVP's.

Based on this information the program will
- Continue in class testing instead of on-line.
- Request support and availability to use the ALC and virtual cadaver for Radiographic Procedures 1 and 2 .

GOAL 2: DEMONSTRATE EFFECTIVE COMMUNICATION					
Outcomes	**Measurement Tool**	**Benchmark**	**Timeframe**	**Responsible Party**	**Results**
OUTCOME 3: PROVIDE QUALITY PATIENT CARE	1. Trajecsys: Acts as agent through observation and communication, concise in manner and instructions, uses appropriate medical terminology, Communicates appropriate information	1. Average score of 3 or better: 1-5 scale	1. Clinical 2, 3, & 6 End of Semester	• All radiography faculty	• Clinical 2: 3.8 • Clinical 3: 4.2 • Clinical 6: 4.8
	2. Clinical Competency Form/Unsuccessful Competency Form 3. Repeat Log	2. Less than 10% of unsuccessful competency attempts identified in Patient Preparation and History category for 100% of students 3. Less than 10% of repeats due to ineffective communication 100% of students	1. Clinical 2 & 3 End of Semester 3. Clinical 6	• All radiography faculty	• Clinical 2: 0% (0 of 25) • Clinical 3: 0% (0 of 9) • Clinical 6: N/A
	4. A. Communication Lab Procedures 1 intoxicated patient : Communicates in a concise manner to teams while comforting patient and educates them of exam that is being performed. B. Communication Lab Procedures 2 hearing impaired patient:	4.A. All students will receive a score of 3 (average) or better) 4.B. All students will receive a score of 75% or higher by completing at least 6 of the 8 categories of how to better communicate with hearing impaired patient.	4A. Rad Procedures 1: A Intoxicated Patient 4B. Rad Procedures 1: B Hearing impaired patient	• All radiography faculty • All radiography faculty	• Procedures 1: 100% (16 of 16) • Procedures 1: 57% (9 of 16)
OUTCOME 4: MODEL PROFESSIONAL AND ETHICAL BEHAVIOR CONSISTENT WITH THE A.R.R.T. CODE OF ETHICS	1. Trajecsys: Demonstrates professional work behavior, responds to patient's needs, continually strives to improve knowledge by participating in educational activities, shares knowledge, accepts constructive criticism and investigates new and all aspects of professional practice	1. Average score of 4 or better: *1-5 scale*	2. Clinical 2, 3, & 6 End of Semester	• All radiography faculty	• Clinical 2: 3.8 • Clinical 3: 3.9 • Clinical 5: 4.9
	2. All students who have a radiation safety infraction will self-report by the end of the day the event occurred.	2. 100% of students will self-report	1. Entirety of the program	• All radiography faculty	1 of 2

Action Plan: Goal 2

Outcome 3: Measurement Tool 1: Affective Evaluation- Demonstrate Effective Communication

With the new Trajecsys evaluation system, we implemented statement 6 from the ARRT code of ethics "acts as agent through observation and communication" into our BTC core ability to demonstrate effective communication and outcome 3 to provide quality patient care. In all three semesters the benchmark was met. The scores increased from clinical 2 to 6 which is a good indicator that our students are being measured properly by clinical staff and their communication improves throughout the program. The average for clinical 6 was a 4.8. If a student receives below a 3 in any category of the affective evaluation in subsequent semesters, they are put on a "Plan for Success." The student identifies goals and comes up with strategies to improve their affective scores. It is very difficult for students to change affective behaviors, but this at least gives faculty the documentation to ask for assistance from student resources. The program will examine asking the student counselor/case manager to participate in midterm advising sessions with students who are on probation. The program suggests students meet with support staff from student success, but this is usually not documented in their plan or by the program. Many of our students attribute their mistakes to high anxiety. As we know college and this program can be a challenge, we are examining way to make the transition easier.

Based on this information the program will:
- Continue to use the affective evaluation to assess effective communication.
- Meet with Laura Becker who is BTC's student counselor/case manager to determine if she would be able to help students with their "plan for success," and if possible, have students utilize the free resources like headspace and BetterMynd and document that in their plan.

Outcome 3 Measurement Tool 2 & 3 Competency/Unsuccessful Competency Forms & Repeat Log

The benchmark was met. We changed the tool to the repeat log for clinical 6 and are in the process of updating the form to gather even more specific data. The program continues to stress effective communication in all aspects of lab and has added more labs which focus on patients where it may be difficult to get a full history due to conditions such as being intoxicated, hearing impaired and inability to communicate due to condition. In many of these situations the technologist will have the student do most of the positioning while they communicate and still pass the student on being competent. We have stressed with technologist and preceptors that the students need to complete the entirety of the exam to show competency. Traditionally we have used the patient preparation and history for assessing communication, but the program decided to move the statement of assure the patient is prepared for the exam, to track unnecessary repeats due to artifact. It has not been identified on the unsuccessful competency form to the extent as seen on the repeat logs of artifact being a reason for repeats. Since the requirements of shielding have changed, we use artifact to measure radiation safety. Radiographers should take the time to fully prepare the patient, so an unnecessary projection does not have to be taken. The competency form will need to be changed to better demonstrate our categories, but this will not be done until the program moves to the competency books being entered online. At that time, we will formally change the document, but as the program has not shifted to online, we will keep the wording in the categories the same with an understanding to track and analyze the data in certain goals and outcomes.

Based on this information, the program will:
- Continue staff training for better use of both competency and unsuccessful competency forms through clinical preceptor meetings.
- Implement a training during clinical 6 to address the standards of competency and transitioning into the role of being evaluated to evaluator.
- Continue to emphasize communication skills as a vital part of clinical competency assessment.
- Revise categories of competency when move to online tracking.
- Develop a training video like the training video on how to fill out evaluations to how to better assess students' competencies that can be shared with all staff including intermittent staff as we are seeing more traveling technologist at our affiliates.

Outcome 3 Measurement Tool 4: Communication Lab

Since not being mandated to use college adopted rubrics for College Wide Core Abilities, the program went back to using their own rubrics to gather more program specific data. The assessment was performed in the upper limb trauma lab, but we had two different senior students assess the scenario. One of the instructors was pulled away from the activity due to a clinical issue, so we had senior volunteers who were acting as patient's also play a role in assessment. It is difficult to have students evaluate even though they like participating and giving suggestions in these activities. We switched the accessor between groups and noticed that one of the senior students only gave 5's. Even though she put comments that would not be indicative of a lower score, she responded that she gave that score because she did not want to be mean. This was valuable information as it may be important for us to do an activity in clinical 6 to prepare our students who are graduating of how to give constructive feedback because we have found that our recent graduates work a good amount with the students in the program.

Based on this information the program will:
- Continue to add communication labs to procedures 1 and 2 to help students prepare for situations when communication may be challenging.
- When we complete situational think tank that mainly discusses altering of how to do a procedure also discuss scenarios of how the patient may be communicating and how to respond.
- Do a crisis intervention training with the students before the lab. Invite our access and accommodations team to a procedures class to discuss how to best communicate with patients who have disabilities.

Outcome 4 Measurement Tool 1: Affective Evaluation-Demonstrate Professional Work Behavior

The benchmark was not met for clinical 2 and 3 but the scores were very close to our goal of 4. BTC Radiography program decided to use communication to help measure quality patient care. The Trajecsys affective Evaluation measures demonstrating professional work behavior by using, statements 1 and 10 from the ARRT code of ethics. Accepting constructive criticism was added in this area because this is where we hear most complaints about professionalism. Students tend to explain their mistakes instead of investigating and adapting to new ways a technologist may show. We understand it can be frustrating for students to adapt to all the different ways exams can be done and we do our best to explain the importance of flexibility in the clinical environment. When we had more faculty, we would switch off instructors overseeing open lab and performing checkoffs to prepare the students to adapting to all ways of performing an exam and accepting different tips from staff, to prepare the students adapt to the clinical environment. It is important not to just focus on their communication with the patient but have good communication with the entire team to give quality patient care.

Our students were very close to meeting the benchmark with a 3.7 in clinical 2 and a 3.9 in clinical 3. It is recognized that most comments of scores lower than are 4 are due students not participating in all exams possible. Most students who are not making themselves accountable to be part of the entire process also shy away from talking with the patients. They allow the technologist to take the lead and just want to participate in the positioning aspect. This is addressed further below in the unsuccessful competency form, tool 2.

Based on this information, the program will
- Continue to use this tool as a method of assessing professionalism in the clinical setting.
- Continue to develop professionalism and communication skills in the classroom and laboratory setting.
- Research effective ways to give constructive criticism and find training of how to flip constructive criticism from a negative feeling to a positive outcome.

Outcome 4 Measurement Tool 2: Radiation Safety Infraction

The benchmark was not met. The program has recognized that some students are more willing to come forward with their mistakes than others. When a radiation infraction occurs many times, we have had students call us to notify us of their accident immediately. However, there have been times that students have not self-reported, and we hear from their clinical sites of a mistake. When the investigation occurs the student gives an excuse that they thought their preceptor was going to report the incident. We have also had them say staff told me that it was not a "big deal." We developed a policy investigation form to be used when any moderate infraction possibly occurs. This allows for a thorough investigation with all parties included to make sure that we are treating each situation and student as equitable as possible.

Based on this information the program will:
- Continue to review all policies in Clinical 1.
- Keep the information about grading and specific to infractions in each clinical syllabi and have the students sign an acknowledgement.
- Add video of the ARRT Ethics to Clinical 1 which discusses the importance of being upfront about mistakes.

GOAL 3: DEMONSTRATE PROFESSIONAL WORK BEHAVIORS					
Outcomes	Measurement Tool	Benchmark	Timeframe	Responsible Party	Results
OUTCOME 1: CARRYOUT THE PRODUCTION AND EVALUATION OF RADIOGRAPHIC IMAGES	1. Clinical Competency Form/Unsuccessful Competency Form	1. All students successfully complete 80% in clinical 2 and 85% in clinical 3 & 5 competency attempts on first attempt.	1. Clinical 2, 3 & 5 End of Semester	1. All radiography faculty	• Semester 2: 89% (180 of 205) • Semester 3: 98% (375 of 384) • Semester 5: 99% (402 of 403)
	2. Lab Rubric	2. All students successfully complete 80% of laboratory competency attempts on first attempt	2. End of Semester Fall Y1 & Spring Y1	2. Course instructors	• Fall Y1: 93% (119 of 128) • Spring Y1: 99% (119 of 120)
	3. Policy Infractions Data Sheet	3. 100% of students placed on probation for issues of professionalism complete all terms as identified in the plan for success or guidelines set at meeting between student and program director	3. All semesters that students are on probation	3. All radiography faculty	• Fall Y1: 100% (1 of 1) • Spring Y1: 50% (1 of 2) • Summer Y2: 100% (1 of 1) • Fall Y2: N/A- no students on probation • Spring Y2: 100% 1 of 1
OUTCOME 2: PRACTICE RADIATION SAFETY PRINCIPLES	1. Clinical Competency Form/Unsuccessful Competency Form	1. Less than 10% of unsuccessful competency attempts due to rad. safety issues for 100% of students.	1. Clinical 2 & 3 End of Semester	1. All radiography faculty	• Clin 2: 20% (5 of 25) • Clin 3: 0% (0 of 9)
	2. Repeat log	2. Less than 10% of repeated radiographs due to rad. Safety issues for 100% of students	2. Clinical 6 End of semester	2. All radiography faculty	• Clin 6 N/A
	3. Clinical radiation safety policy infractions	3. 10% or less students incurring clinical infractions for radiation safety issues.	3. Clinical 2, 4 & 6 End of Semester	3. All radiography faculty	• Clin 2: 100% (1 of 1) • Clin 4: 0% (0 of 0) • Clin 6: 0% (0 of 1)

Action Plan: Goal 3

Outcome 1: Measurement Tool 1 Competency/Unsuccessful Competency Forms

Successful competency rate calculated by dividing successful competency attempts by total competency attempts:
- Semester 2: 88% (180 of 205)
- Semester 3: 98% (375 of 384)
- Semester 5: 99% (429 of 430)

The benchmark was met, but as previously stated in assessment plan 2022 the program is examining a different tool. We gather an enormous amount of data from the unsuccessful competencies, but a new tool should be developed that better captures each student instead of taking the class average. I believe the new reflection log that will be submitted with failed competences and the repeat log will be better utilized for this assessment. We just developed the new tool and started having our class of 2024 use in clinical 5. The program will evaluate the data and determine benchmarks for semesters 5 and 6 for the class of 2024 from using the repeat logs and unsuccessful competency forms. We will utilize the tool for the entirety of class of 2025. We will use the category and comments specific to positioning for this assessment. Due to most unsuccessful competencies and repeats being due to positioning errors we believe our benchmark will have to be lower compared to the other categories of critical thinking and communication. The unsuccessful competency form will still be used but the data will be more specific to each student instead of using the program's average.

Based on this information, the program will:
- Change the unsuccessful competency form for our categories to better match the data we are receiving.
- The program will look at data collected for repeated radiographs in the final 2 semesters prior to graduation and use the unsuccessful competencies for the first four semesters.

Outcome 1: Measurement Tool 2: Lab Rubric

The benchmark for both semester was met and this can be attributed to a number of factors:
- Implementation of the mini comp book introducing students to the level of rigor required for competency testing prior to the start of the procedures courses
- The increased use of open laboratory sessions for students to practice and be given instruction prior to evaluation
- The use of senior radiography students for these open lab sessions assuring that someone was always available for instruction and allowing for the use of both radiography labs
- The conscious increase in rigor in all lab sessions better emulating the actual clinical competency testing experience.
- Continue to use the Anatomage Learning Center in Procedures 2 to better prepare students for checking off on procedures that they may have not observed yet in their clinical experience.

Outcome 1: Policy Infractions Data Sheet

The first year we implemented using this tool was in the assessment plan for the class of 2022. Even though we have been more diligent about tracking infractions since 2017 for radiation safety, we recently added tracking all violations higher than a minor infraction. The program believes it is a good tool to measure both performing clinical competent radiography and professional work behavior. Faculty began following all policy infractions – typically clinical infractions – with the policy investigation form to give us thorough data. This documentation allowed us to be able to look at the number of students receiving infractions or placed on probation for issues of professionalism vs mistakes with radiation safety. Students are required to complete a plan for success and submit biweekly reflections, as we realize measuring professionalism is not necessarily about the mistake but your actions to follow, we made our benchmark specific to the probation and plan for success.

Of the 2 students that were on probation from the class of 2023, one was able to be removed from probation after 8 weeks and the other remained on for an additional 8 weeks. The same student ended up going back on probation towards the end of clinical 3 and remained on probation through clinical 4. Unfortunately, this student went on probation a third time around midterm of clinical 6. They remained on probation for the rest of their time in the program. While compiling this data, we realized that we did not follow our own policy pg 56 that assigns double point's if a student goes on probation multiple times. This was the first student that this policy would have been implemented, so the program determined a better way to make sure these points are calculated correctly. At times we find students minimize their mistakes and have a failure to be accountable. We want to enforce being forthcoming and learning from poor practices. There does become a point that mistakes and failure to change bad behaviors must have a severity in consequences. The program also has recognized that students who are put on a "plan for success." see this as negative and they are being targeted. By keeping documentation of all policy and investigation forms this will allow the program to show evidence that the program is consistent with point deductions with policy infractions and being as equitable with each complaint.

Based on this information, the program will
- Continue to be diligent about making sure all students follow the terms of probation.
- Use student resources when making their goals to get assistance from college resource to help dependent on the infraction.
- Update the table on page 54 to bold double points for students who are on probation multiple times for any reason.

Outcome 2: Measurement Tool 1 Competency/Unsuccessful Competency Forms/Repeat Log

The benchmark was not met for clinical 2. The failed competencies were a combination of wrong technique, collimation, incorrect SID and not changing technique between exams. No data was collected for clinical 5 and 6 because only one failed comp was submitted, and neither were in this category. We also changed the tool to the repeat log and will be collecting better data moving forward in class of 2024.

Based on this information the program will
- Continue to use this tool but as indicated in goal 1 and 2 have the student reflect on how they would fix their mistake and identify what they should have done to be successful in the competency.
- Even though we did not have the class of 2023 write reflections looking at the data from their repeat log, faculty observed many students are repeating unnecessary due to artifact. The program will move failure to remove artifact to the radiation safety column while tracking unsuccessful competencies and change the form when we move to online competency tracking. Since shielding a patient is no longer a requirement this will give us a better tool to ensure our students are taking their time and securing their patients safety before exposure.

Outcome 2: Measurement Tool 2: Radiation Safety Policy Infractions

Although the benchmark for this evaluation was not met for clinical 2, the rate of clinical infractions remains low for those three semesters. As this is an acceptable level for 16 weeks of clinical education in the first semester, this evaluation will remain in place with the same benchmark.

Based on this information the program will continue to track the number of clinical infractions/probations for radiation safety violations. The benchmark will change to "10% or less students incurring clinical infractions above a minor for radiation safety issues." As we do not track minor infractions on the form, we use for our assessment plan but only in their clinical adjustments category in their clinical grade in blackboard.

GOAL 4: DEMONSTRATE DIVERSE AND INCLUSIVE PRACTICES					
Outcomes	Measurement Tool	Benchmark	Timeframe	Responsible Party	Results
OUTCOME 3: PROVIDE QUALITY PATIENT CARE	1. Trajecsys evaluation: Diverse and Inclusive Practices category: Clinical 5 *Delivers patient care and services unrestricted by concerns of personal attributes, or the nature of the disease or illness, without discrimination on the basis of race, color, creed, religion, national origin, sex, marital status, disability, sexual orientation, gender identity, veteran status, age, or any other legally protected basis.*	1. Average score of 3 on 1-5 scale for clinical 2 & 3, average score of 4 on 1-5 scale clinical 4	1. Mid-Term and End of semester	1. Faculty assigned to specific clinical course	• Clinical 2: 4.0 average • Clinical 3: 4.2 average • Clinical 5: 4.2 average
	2. Medical Imaging Club participation	2. 100% membership and participation in all required club activities.	2. All semesters enrolled in the program	2. Club advisor and Medical Imaging Club President (student)	• Clinical 5: 100% (13 of 13) • Clinical 6: 100% (13 of 13)
OUTCOME 4: MODEL PROFESSIONAL AND ETHICAL BEHAVIOR CONSISTENT WITH THE A.R.R.T. CODE OF ETHICS	1. Essay questions 12 in the patient interaction assignment about treating patients with differences 2. All students write a reflection in pathology about working with obese patients after watching the ted talk by Jamie Oliver	1. All student will write a positive reflection. on essay question 12 in patient interaction assignment	1.Clinincal Y1 2.Pathology y2	1.Course Instructor 2.Course Instructor	• Clinical 1 100% (16 of 16) • Pathology 100% (13 of 13
	3.Fall Y1: BTC Rubric: Demonstrate Diverse and Inclusive Practices statement 2; *Attempts to Interact with Various Individuals from Diverse Groups; shows Minimal to No Awareness of Own Biases.* 4.Spring Y1: Professionalism in the Classroom Rubric 5.Fall & Spring Y2: Revised Professionalism in the Classroom Rubric	1. Fall Y1: All students score of Introductory or higher in this category 2. All students score 75% (19 of 25) 3. All students score of 4 or higher on 1-5 scale: *Demonstrate Professional work behavior*	1. Mid-term Fall Y1 2. Mid-term Spring Y2 3. Mid-term Fall & Spring Y2	1. All radiography faculty 2.All radiography faculty 3.All radiography faculty	• Fall Y1: 100% (16 of 16) • Spring Y1: 60% (9/15) • Fall Y2: 92% (12 of 13) • Spring Y2: 77% (10 of 13)

Action Plan: Goal 4

Outcome 3 Measurement Tool 1: Affective Evaluation.
 Trajecsys was used for the entirety of the program for the class of 2023. This product allowed the program to better construct the evaluation tool. The program built the assessment criteria to reflect the ARRT code of ethics.

The benchmark was met in all three clinical semesters that the students were evaluated.

With the inclusion of an evaluation category specifically addressing Diverse and Inclusive Practices, many CPs have noted the difficulty of assessing these attributes in the clinical setting. This at least suggests that students are likely acting appropriately at clinical with respect to this topic and assessment of these attributes would not be difficult if students were acting inappropriately regarding this information. Additionally, College faculty and staff as well as clinical affiliates have increased the amount of staff training related to diversity and inclusive practices. The program is exploring ways to have students included in these trainings
Based on this information the program will
- Continue to use this data to collect information related to student professionalism.
- Leave the benchmark in place as we continue to collect data.
- Include students in inclusion and diversity training at the college or at clinical affiliates.
- Continue to provide training for CIs and staff technologist with the continued goal of more consistent evaluation.

Outcome 3 Measurement Tool 2: Medical Imaging Club participation
With the start of the fall semester 2018 (the penultimate semester for the class of 2019) the BTC Medical Imaging Club was formed. Under the umbrella of the Student Government Association, the club receives funding for attendance at the WSRT/WAERT student educational symposium and is looking for additional funding for such activities as ASRT student membership. While these monetary benefits allow for better access to these professional activities, the primary goal of the club is to foster a sense of professional and community involvement in its members. Each academic year radiography students performed several college and community outreach activities such as Beloit community "trunk or treat", BTC winter carnival (holiday activity open to the community with games and prizes for children), assisting with college awards banquet, and spring clean-up at an area historic Site (Beckman Mill). We will move club participation to outcome 4 because club participation should not be aligned with patient care.

The benchmark was met fand all students participated in club activities and only one student did not attend spring symposium due to personal reasons.
Based on this information the
- Medical Imaging club will continue to foster professionalism as well as increase the level of college and community involvement by students of the BTC Radiography program.
- Students attend all presentations at the WAERT/WSRT spring symposium where the subject covers diversity and write a reflection.
- Move Medical Imaging Club participation to outcome 4.

Outcome 4 Measurement Tool 1&2 Reflection
The benchmark was met but the program is looking at a better tool as we just added demonstrate diverse and inclusive practices recently. Faculty did attend a workshop for Diversity and Inclusive practices, and both instructors felt the workshop to be educational so we might add that training, but it would need to be added to the budget.

Outcome 4 Measurement Tool 3,4,5: BTC Core Ability Rubric/Professionalism in Classroom Rubric/Statement used in Trajecsys Category Demonstrate Diverse and Inclusive Practices
As previously identified, BTC has developed several rubrics for assessment of the college-wide Core Abilities. All programs were required to use these rubrics not only for program-level assessment, but data is collected for college-wide assessment for HLC accreditation. These rubrics were phased out in 2022.

The benchmark was met for fall of year 1. In the spring of 2022, we were using the Trajecsys evaluation at clinicals but still using our "professionalism in the classroom" rubrics for midterm advising. The benchmark was not met for spring y1 and spring year 2 but was met for fall of year 2. The program realizes that even though this assessment measures professional work behavior it is invalid for gathering data for measuring diverse and inclusive practices. Another tool will need to be developed for class of 2024.

Based on this information the program will
- Continue to require a standard of professionalism in classroom, laboratory, and clinical settings.
- Develop a better assessment tool for this outcome and goal

GOAL 5: DEMONSTRATE PROFESSIONAL USE OF RELEVANT TECHNOLOGY					
Outcomes	**Measurement Tool**	**Benchmark**	**Timeframe**	**Responsible Party**	**Results**
OUTCOME 1: CARRYOUT THE PRODUCTION AND EVALUATION OF RADIOGRAPHIC IMAGES	1. Clinical Competency Form/Unsuccessful Competency Form 2. Repeat log- Reflection	1. Less than 10% of unsuccessful competency attempts related to Preparation for Examination/Proper Equipment use	1. Clinical 2, 3, & 4	1. All Radiography Faculty	• Clinical 2: 24% (6 of 25) • Clinical 3: 11% (1 of 9) • Clinical 6: N/A
	3. Radiographic Equipment Competency Form	2. 100% of students will successfully complete Radiographic Equipment Competency	2. Clinical 1, 2, & 5	2. Course Instructor	• Clinical 1: 100% (18 of 18) • Clinical 2: 100% (15 of 15) • Clinical 5: 100% (13 of 13)
OUTCOME 2: PRACTICE RADIATION SAFETY PRINCIPLES	1. Zoom Video: Patient History Taking	1. All students will successfully pass history taking assignment ensuring patient and radiation safety	1. Rad Procedures 1 & 2	1. Course Instructor	• Procedures 1: 100% (15 of 15) • Procedures 2: 100% (13 of 13)
	2. Lab Rubric:	2. Of the failed labs 0 of them will be due to equipment mistakes.	2. Rad Procedures 1 & 2	2. Course Instructor	• Procedures 1: 22% (2 of 9) • Procedures 2: 100% (0 of 1)

Action Plan: Goal 5

Outcome 1 Measurement Tool 1: Clinical Competency Form/Unsuccessful Competency Form

Though the scores for both clinical 2 and 3 have improved to 24% and 11% respectively, they still did not meet the benchmark. Understandably students struggled with equipment more in clinical 2. We have recognized that many students attempt competency before fully understanding equipment. We are in the process of upgrading the equipment in one of our lab rooms from a floor mount to a ceiling mounted tube. This will result in students having two rooms that will closer simulate what they see out at clinicals, hopefully resulting in increased scores in this area.

As in goal 1 and 2, for clinical 6 the tool has been changed to the repeat log with a reflection tool. The program will be analyzing how to best capture failed competencies due to poor preparation of room set up and equipment use.

Bases on this information the program will
- Increase the rigor of radiographic equipment instruction, practice, and evaluation in the Clinical Radiography 1: Introduction course, which is scheduled in the summer semester of the first year, prior to the first clinical placement.
- Tighten requirements for demonstration of equipment competency prior to performance of procedure competency at clinical.
- Require remediation for student unsuccessful clinical competency attempts for reasons equipment competency.
- Analyze data and reflections to ensure students are accountable for room checkoff.

Outcome 1 Measurement Tool 2: Radiographic Equipment Competency Form

Students are required to demonstrate on each of the 2 pieces of radiographic equipment in the college radiography lab in the summer prior to the first clinical placement. Students may not perform lab competency on procedures until having checked off on the equipment. Further, students are required to demonstrate equipment competency on every piece of radiographic equipment at the clinical placement prior to attempting clinical competency with that piece of equipment. Although the benchmark for this assessment was met at 100% each semester it was evaluated, data from the prior assessment demonstrated that students were unsuccessful in subsequent lab and clinical competency attempts for reasons of equipment knowledge and manipulation. This demonstrates that the current requirements are inadequately thorough and stringent

Bases on this information the program will
- Increase the rigor of radiographic equipment instruction, practice, and evaluation in the Clinical Radiography 1: Introduction course, which is scheduled in the summer semester of the first year, prior to the first clinical placement.
- Tighten requirements for demonstration of equipment competency prior to performance of procedure competency at clinical.
- Require remediation for students who fail clinical competency attempts for reasons of equipment competence.
- Gather resources of manuals and instructions for specific equipment.
- Student's will re-checkoff on rooms after they return from break between clinical 2&3 as well as clinical 4&5.

Outcome 1 Measurement Tool 1 Zoom Video: Patient History Taking

Students complete and submit for evaluation a video of a simulated patient interview and history. As an assessment of use of relevant technology, this provided students experience uploading videos to the college's course manage software (Blackboard), at a time when most classes were still being delivered virtually for the class of 2022. This also allowed students the opportunity to review not only their own performance of this skill, but also those of classmates. Remediation of these skills became easier as the course instructor could review the video with the students. The program will keep this as a tool, as it has been found effective to demonstrate history taking and to make sure all students are asking questions pertinent to radiation safety. Due to the success of this new tool, it was also be implemented in Procedures 2 to assess students comfortability in explaining exams and asking uncomfortable questions with someone from outside of their class.

Based on this information the program will:
- Increase the use of recording and submission of history taking videos as part of the Procedures 1 and 2 courses.
- Expand the use of video equipment to other laboratory evaluations.

Outcome 2 Measurement Tool 2: Lab Rubric Lab Preparation

The lab rubric is used to evaluate simulated competency in the laboratory sessions associated with Radiographic Procedures 1 & 2. In class of 2022, we looked at each specific reason a student failed a lab competency and it was identified of the 12 students who failed it was due to not using the equipment properly. We continued to use this assessment for class of 2023.
The benchmark was not met as 22%, which is 2 of the 9 failed labs was due to improper use of equipment. Both of these were the students failing to align the bucky/IR with the central ray.
Based on this information the program will:

- Continue to track failed labs.
- Allow students to make up a total of two failed labs at midterm and final to ensure students have learned from their mistakes.
- Encourage students to use all equipment at clinicals and not only comp in one room as we know that some sites have equipment that the bucky and central ray automatically align to each other.

Name	Complete Program 2 Y.	Passed ARRT 1st Attempt	Passed ARRT Subsequent	Placed in Field Within 1 Year	Placed in Field Subsequent	Not Actively Seeking Employment
	Blackhawk Technical College **Associate Degree Radiography Program** **Graduate Completion Worksheet** **Class of 2023**					
1.	X	X				
2.	X	X				
3.	X	X				
4.	X	X				
5.	X					
6.						
7						
8						
9.	X	X				
10	X	X				
11.						
12.	X	X				
13.						
14.	X	X				
15	X	X				
	X	X				
17.	X	X				
18.	X	X				

Summary: Class of 2022	Summary: BTC Total & 5 Year Averages
Program Completion: 100% (13 of 13)* ARRT Pass Rate 1st Attempt: 92% (12 of 13) ARRT Pass Rate Subsequent: N/A Placed in Field 1 Year Following Graduation:	Program Completion 5 Year Average: 85% 72 of 85 ARRT 1st Attempt 5 year Average: 93% 67 of 72 ARRT Pass Rate Subsequent 5 year Average: 99% 71 of 72 Placed in Field 1 Year Following Graduation 5 Year Average:

Notes * No attrition for academic reasons

Consistent with JRCERT Policy, the BTC Radiography Program Considers a Graduate "Not Actively Seeking Employment" if:

- Fails to communicate with program officials regarding employment status after multiple attempts,
- Is unwilling to seek employment that requires relocation,
- Is unwilling to accept employment due to salary or hours,
- Is on active military duty, and/or
- Is continuing education.