Blackhawk Technical College
Associate Degree Radiography Program

Outcomes and Assessment
for the Class of 2022

Cohort Group

2020-2022

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. Affective Evaluation #11: *Efficient planning and management of time (prioritizes work, adapts to changing workload and completes assignments on time)* **Changed Clinical 5 to Trajecsys: 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 5	1.Clinical 2, 3 & 5 End of Semester	1. All radiography faculty	• Clinical 2: 3.14 • Clinical 3: 3.33 • Clinical 5: 4.47*
	2. Clinical Competency Form/Unsuccessful Competency Form 3. Repeat record	2. Less than 10% of unsuccessful competency attempts due to critical thinking/problem solving issues for 100% of students 3. Benchmark being established	2.Clinical 2 & 3 End of Semester 3.Clinical 5 End of semester	2. All radiography faculty 3. All radiography faculty	• Clinical 2: 18.9 % (7 of 37) • Clinical 3: 15.3% (2 of 13) • Clinical 5: N/A
	4. BTC Core Ability Rubric: Solve Problems Efficiently rubric. 5. Emergent vs Non-Emergent reflection Clinical 6	4. 100% of students score at a level of "introductory" in all categories 5. 100% of students document an examination in which critical thinking skills were utilized to adapt to patient condition.	4.Trauma Lab: spring semester year 1 5.Spring semester year 2: Clinical 6	4. All radiography faculty 5. Clinical Radiography Faculty	• Trauma Lab: 100% • 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: 80% (12 of 15) • Spring:36% (5 of 14)
	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.Course Instructor	• Clinical 4: N/A: Data not considered valid as return to clinical placement limited patient access/independent work. • Clinical 6: 85% (11 of 13)

Action Plan: Goal 1
Outcome 5 Measurement Tool 1: Affective Evaluation: The affective behavior evaluations done at midterm and final of each semester remain to be a good tool. Even though the vendor changed from Dataarc to Trajecsys the Likert scale of 1-5 did not change and faculty kept the categories consistent using strongly agree, agree, neutral, disagree and strongly disagree. Where most of our student's struggle is adaptability when it comes to critical thinking. We were given more flexibility with Trajecsys to revise our evaluations and customize them to our program as well as align them with the ARRT code of ethics. Our critical thinking category is aligned with statements 4,5 and 7. Also with our new form comments must be added by evaluators which gives us specific details which will be helpful during our midterm and final advising. Students who score less than a 3 our monitored more closely. We advise all students who score below a 3 to come to open lab sessions. We also review any unsuccessful competencies and try to determine if there is a specific area that we can target to try to improve those scores. If students consistently get a score lower than three, they may be put on a plan for success. 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 and stress the importance of being in their comments. Benchmarks will be monitored and adjusted as collected data indicates.
Outcome 5 Measurement Tool 2: Clinical Competency/ Unsuccessful Competency Form: Unsuccessful competency rate calculated by dividing successful attempts divided by total competency attempts. The benchmark was not met for clinical 2 or 3. The program needs to look at changing the benchmark. Students in clinical 2 and 3 tend to score lower on all activities involving critical thinking. Typically, through observation and experience critical thinking skills improve. It is important for faculty to track this data, so we can work with students on how to improve their radiographic procedures and improve critical thinking skills of how to alter the exam due to the patient's condition. The program will change the benchmark to all students who fail competency due to critical thinking will determine a resolution of how to pass next attempt. Before completion of the program students will review past failed attempts at competency and show successful demonstration to program faculty. Demonstration will not need to be completed on all failed attempts but procedures that had multiple failed attempts. In discussion with students and review of competencies at their site we have noticed a substantial increase in exams being done portably. We have added using the portable in more labs, but students struggle from adapting to being shown of how a procedure is done in the room compared to how exams are performed at clinical. We have discussed with students the importance of performing the examinations using the proper equipment when possible. We are hopeful that less exams will be done portably now that our affiliates have changed their protocols with covid positive and suspected covid positive patients. Based on this information the program will implement a plan of how to complete this assessment. We have found that since Covid and making classes available through zoom we have had a decline in students coming to activities on campus. Procedures 2 instructor will look at having the seniors participate in labs with the first years and checkoff after the labs are completed on Fridays. Due to many of the seniors being finished with their competencies by clinical 6 due to allowing them to perform more that one continued competency per semester this most likely will work best for instructors and student's schedule.
Outcome 5 Measurement Tool 3: BTC Core Ability Rubric: Solve Problems Efficiently. As discussed in the action plan for class of 2021, this activity was performed in the 2 radiographic procedures courses of the 1st year. This allowed students to have more clinical experience before being assessed on critical thinking skills, and deemed acceptable if the category below Introductory. The only way a student would receive a not acceptable is if they were only able to develop an approach with assistance. After further review of how this lab was performed it would be difficult to determine the level of participation and identify those who possibly needed assistance developing an approach. During trauma lab we assess multiple goals and outcome. For this activity we had students perform group think and come up with solutions to situational questions. Additionally, the college has changed it's approach on gathering data and has allowed programs to use rubrics that are more conducive to their areas of study. Based on this information the program will • The program will be developing a replacement tool for the Core Ability Rubric for implementation Spring Semester 2023 trauma lab.

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

We increased our benchmark for passing percentage from 75% to 80 % on fall Y1 image analysis exam. This is the third year in a row that the benchmarks were not met and It appears that students struggled with return to on-campus testing as test scores across the curriculum dropped as compared to when examination were delivered remotely. The second semester test saw the biggest drop-in pass rate, also attributed to not only online testing, but the college's continued desire to allow students to attend classes remotely. This has had the biggest impact on the radiographic procedures courses, as the instructor would regularly take students from the classroom into the adjoining labs to demonstrate positioning and make phantom exposures; learning opportunities missed by students attending class remotely

Based on this information the program will

- Return to more mandatory face-to face class attendance for lecture and open lab sessions.
- Request support and availability to use the ALC and virtual cadaver Radiographic Procedures.

Outcome 1 Measurement Tool 2 Repeat Log:

While collecting information from the unsuccessful competency forms has provided a wealth of information for use in assessment of the goals and outcomes of the program - primarily in the early clinical semesters – 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.

To assure with good compliance, the semiannual clinical preceptors meeting reviews specific policy related to direct/indirect supervision as well as repeated radiographs. The program has additionally developed posters outlining these policies using JRCERT specific language that are posted at all clinical affiliates, developed a Clinical Preceptor Handbook, and is in the processing of developing instructional videos for new staff/preceptors outlining policies and procedures related to these topics.

Based on this information the program will

- Continue to collect data from repeat log and intervene as appropriate.
- Continue to review policies related to supervision and repeats at CP meeting.
- Continue to develop instructional materials to aid new staff/CPs in program policies and procedures

GOAL 2: DEMONSTRATE EFFECTIVE COMMUNICATION					
Outcomes	**Measurement Tool**	**Benchmark**	**Timeframe**	**Responsible Party**	**Results**
OUTCOME 3: PROVIDE QUALITY PATIENT CARE	1. Clinical 2 & 3: Dataaarc Affective Evaluation #8: *Appropriately interacts with patients (courteous, thoughtful, empathetic, displays patience and non-judgmental)*	1. Average score of 4 or better: *1-5 scale*	1. Clinical 2 & 3 End of Semester	• All radiography faculty	• Clinical 2: 3.72 • Clinical 3: 3.75
	2. Clinical 5: 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*	2. Average score of 4 or better: *1-5 scale*	2. Clinical 4 End of Semester	• All radiography faculty	• Clinical 5: 4.4
	3. Clinical Competency Form/Unsuccessful Competency Form	3. Less than 10% of unsuccessful competency attempts identified in Patient Preparation and History category for 100% of students	3. Clinical 2, 3 & 5 End of Semester	• All radiography faculty	• Clinical 2: 0% (0 of 37) • Clinical 3: 0% (0 of 13) • Clinical 5: 0% (0 of 1)
	4. Procedures 1: Communication Lab Procedures 1 intoxicated/uncooperative patient using BTC Work Effectively in Teams rubric.	4. All students will receive a score of 3 (average) or better)	4. Radiographic Procedures 1	• All radiography faculty	• Procedures 1: 100% (16 of 16)
	5. Procedures 2: Trauma lab using BTC Work Effectively in teams from Core Abilities rubric.	5. All students will receive a score of introductory or higher: *all categories except conflict resolution.*	5. Radiographic Procedures 1	• All radiography faculty	• Procedures 2: 100% (14 of 14)
OUTCOME 4: MODEL PROFESSIONAL AND ETHICAL BEHAVIOR CONSISTENT WITH THE A.R.R.T. CODE OF ETHICS	1. Clinical 2 & 3: Dataarc Affective Evaluation #10: Communicates effectively within the healthcare setting (communicates appropriate information, applies confidentiality, uses appropriate medical terminology)	1. Average score of 3 or better: 1-5 scale	1. Clinical 2 & 3 End of Semester	• All radiography faculty	• Clinical 2: 3.68 • Clinical 3: 3.86
	2. Clinical 5: Trajecsys: Acts as agent through observation and communication, concise in manner and instructions, uses appropriate medical terminology, Communicates appropriate information	2. Average score of 3 or better: 1-5 scale	2. Clinical 2 & 3 End of Semester	• All radiography faculty	• Clinical 5: 4.47
	3. Professionalism in the Classroom Rubric Statement 3: *Communicates effectively within the classroom setting (communicates appropriate information, applies confidentiality, used appropriate medical terminology*	4. 100% of students attain an average score of 4 or better: 1-5 scale	3. Spring Y1 & Spring Y2 (midterm)	• Course instructors	• Fall Y1: 77 % (13 of 17) • Spring Y2: 100% (13 of 13)

Action Plan: Goal 2
Outcome 3: Measurement Tool 1: Affective Evaluation Statement # 8 13 of the 18 students in this cohort completed the program with students choosing to withdrawal for a variety of reasons. Fall and spring semesters of the first year saw the most attrition which may be related to the lower scores in communication. Although the program has added labs specific to communication skills, the scores for this cohort did not meet the benchmark. Some students who received low scores seemed disinterested and did not put full effort into effectively communicating with staff and patients. Additionally, during clinical visits staff often discussed that students are quiet and shy, and unfortunately some students who do not engaged in some of the department drama would receive a low score in communication. We have discussed in advisory and as well at clinical that we ask students to focus on patient care when at clinicals and not get involved with negative discussions. Although only 2 students that did not complete for academic reasons, both struggled in multiple areas of affective behaviors and were put on probation due to low scores, as well as anecdotal information from clinical affiliates that nearly resulted in the removal of one of these students. Tool 2 shows that the students did not struggle with communication when performing examinations with patients, but clinical preceptors scored them lower in this category due to their disinterest in the program and or communication in general. As scores nearly met the benchmark, so it will remain unchanged for the next year and reevaluate. The new evaluation category for effective communication is more specific and asks the preceptors to evaluate appropriate medical terminology which students struggle with since removing medical terminology as suggestive elective for program petition. Based on this information the program will: • Replace the BTC core abilities rubric with a tool that better addresses specific program criteria. • Continue to grow the Medical Imaging club, increasing the level of professional and community involvement of the radiography studen
Outcome 3 Measurement Tool 2 Competency/Unsuccessful Competency Forms The benchmark was met. 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 on the examination. Based on this information, the program will: • Continue staff training for better use of both competency and unsuccessful competency forms through the CE approved CI/Technologist training. However, we continue see that new technologist are the most lenient on passing students on competencies. • Continued emphasis on the importance of completion of the unsuccessful competency form, including training of students and staff. • Continue to emphasize communication skills as a vital part of clinical competency assessment.
Outcome 3 Measurement Tool 3: Communication Lab Guide and Work Effectively in Teams rubric The college adopted rubrics for College Wide Core Abilities. We used the rubric work effectively in teams and used the statement for communication. This tool was effective in assessing communication between team members, but the college often revises rubrics, making consistent assessment difficult. After using the document for a year, it was decided to develop an evaluation tool that more closely evaluated students in the simulated radiography setting. This tool will be implemented for the class of 2023 for Radiographic Procedures 1 & 2. Based on this information the program will: • Continue to use the trauma laboratory rubric to assess a variety of student knowledge and skills, including communication. • Develop a better assessment tool for the evaluation of communication skills in the lab setting.

Outcome 4 Measurement Tool 1: Affective Evaluation Statement 10

Although this benchmark was met, as was indicated earlier, 2 students did not complete the program for reasons largely related to professional behavior at clinical, as evidenced by the scores on the affective behavior evaluation. As has been noted in previous assessment documents, students that enter the program with difficulties conducting themselves professionally in the classroom, laboratory, and clinical setting are not typically successful changing those behaviors. The program will however, continue to evaluate and instill these behaviors in students.

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.

Outcome 4 Measurement Tool 2: Professionalism in the Classroom Rubric Statement 3

This tool implemented for the class of 2019 used for the assessment of modeling professionalism, specifically professional communication. Done as a blind assessment at mid-term by multiple faculty in a variety of classroom and laboratory activities, the assessment is rather than a “snapshot” of a particular day in the classroom, each instructor makes a more global assessment of types of activities – group work, lab experiments, open and formal procedures laboratories – to complete the rubric on each student. The completed rubrics for each student are compiled and an average score is identified. This information is shared with the student as part of mid-term counseling.

The benchmark was not met for the fall semester of year 1 but was met at 100% for the spring semester. As has been previously documented, 2 students that were unsuccessful in the program were so owing to issues in affective behaviors related to communication. After these students left the program the benchmark of 100% was met.

Based on this information the program will:

- Continue to use the professionalism in the classroom rubric as a method of assessing professional communication skills will continue to be used and evaluated.
- Maintain the aspiration benchmark of 100% for the foreseeable future.

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: 85% (204 of 240) • Semester 3: N/A* • Semester 5: 99% (429 of 430)
	2. Lab Rubric	2. All students successfully complete 75% of laboratory competency attempts on first attempt	2. End of Semester Fall Y1 & Spring Y1	2. Course instructors	• Fall Y1: 92% (141 of 153) • Spring Y1: 86% (49 of 56)
	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.	3. All semesters that students are on probation	3. All radiography faculty	• Fall Y1: 100% (3 of 3) • Spring Y1: 0% (0 of 1) • Summer Y2: 0% (0 of 1) • Fall Y2: N/A • Spring Y2: N/A
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 & 5 End of Semester	1. All radiography faculty	• Clin 2: 0.6% (2 of 36) • Clin 3: 1.5% (2 of 13) • Clin 5: 0% (0 of 1)
	2. Clinical radiation safety policy infractions	2. 10% or less students incurring clinical infractions for radiation safety issues.	2. Clinical 2, 4 & 6 End of Semester	2. All radiography faculty	• Clin 2: 50% (2 of 4) • Clin 4: 100% (2 of 2) • Clin 6: N/A

Action Plan: Goal 3

Outcome 1: Measurement Tool 1 Competency/Unsuccessful Competency Forms

Unsuccessful competency rate calculated by dividing successful competency attempts by total competency attempts:

- Semester 2: 85% (204 of 240)
- Semester 3: N/A*
- Semester 5: 99% (429 of 430)

Benchmarks were met for semesters 2 & 5. We were unable to accurately calculate for semester 3 as most attrition for the class of 2022 occurred at various points of this semester and accurate numbers of attempted and successful comps were not available. This criterion will be evaluated for the class of 2023 to determine if a better way to track this data or a different evaluation can be derived.

Based on this information, the program will:

- Either determine a better way to assure that the calculation of the rate of unsuccessful clinical competency attempts is either made more accurate or find a replacement for this evaluation.
- As by the 5th and 6th clinical semesters, students are approaching completion of clinical competency requirements for graduation, the number of unsuccessful competency attempts is not large enough to derive useful data from (1 unsuccessful competency attempt in clinical 5). The program will look at data collected for repeated radiographs in the final 2 semesters prior to graduation.

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

Based on this information, the program will increase the benchmark to 80%. This reflects the success of the items identified above.

Outcome 1: Policy Infractions Data Sheet

This was a new assessment for the class of 2023. Faculty began tracking all policy infractions – typically clinical infractions – with this cohort. We were then able to look at the number of students receiving infractions or placed on probation for issues of professionalism as these students are required to complete a plan for success and submit biweekly reflections. With this closer monitoring and meeting with students, with the goal of removing students from probationary status at6 the first availability – typically 8 weeks – and successfully complete the program.

Of the 2 students that were not removed from probation at the first opportunity, one remained on for an additional 8 weeks and ultimately graduated while the second ultimately fails clinical for continued acts of unprofessionalism and policy violation.

Based on this information, the program will continue tracking this information. As a new assessment, data will be tracked for at least 3 years to assess the usefulness of this evaluation and thew appropriateness of the benckmark

Outcome 2: Measurement Tool 1 Competency/Unsuccessful Competency Forms

All unsuccessful competency attempt forms are evaluated by program faculty to determine the most appropriate reason for the competency being failed. Prior to this process the data was not as accurate as data wis either missing or too many unsuccessful attempts were being attributed to positioning error, which was not always the best response. Through training of staff and CPs, this data is more complete and accurate.

Although still too many of these infractions are attributed to imaging error – wrong side, wrong part, etc. – the total rate of unsuccessful competencies directly related to radiation safety infractions is low.

Based on this information, the program will continue to use data collected by the unsuccessful competency form for assessment of radiation safety practices during clinical competency attempt, as this tool has shown to provide a wealth of information for program assessment. The program will however continue to look for ways to improve the quality of this data through continued information and training.

Outcome 2: Measurement Tool 2: Radiation Safety Policy Infractions
Although the benchmark for this evaluation wan not met for 2 of 3 semesters, the rate of clinical infractions remains low for those semesters: 6 in total. As this is an acceptable level for 32 weeks of clinical education in the first year, 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.

GOAL 4: DEMONSTRATE DIVERSE AND INCLUSIVE PRACTICES					
Outcomes	**Measurement Tool**	**Benchmark**	**Timeframe**	**Responsible Party**	**Results**
OUTCOME 3: PROVIDE QUALITY PATIENT CARE	1. DATAARC Affective Behavior Evaluation Tool; used in its entirety: Clinical 2 & 3 2. Trajecsys evaluation: Diverse and Inclusive Practices category: Clinical 5	1. All students will meet and maintain an score of 3 in all categories	1. Mid-Term and End of semester	1. Faculty assigned to specific clinical course	• Clinical 2: 76% (13 of 17) • Clinical 3: 93% (13 of 14) • Clinical 5: 100% (13 of 13)
	3. 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: 85% (11 of 13)
OUTCOME 4: MODEL PROFESSIONAL AND ETHICAL BEHAVIOR CONSISTENT WITH THE A.R.R.T. CODE OF ETHICS	1. Affective Evaluation #1: *Professional appearance (cleanliness, grooming and proper attire)*	1. Average score of 3 on 1-5 scale	1. Clinical 2 & 3 End of Semester DATAARC 2. Clinical 5 N/A	1. All radiography faculty	• Clinical 2: 4.6 0 • Clinical 3: 4.72 • Clinical 5: N/A; Not collected, Trajecsys does not collect data re: appearance.
	2. Affective Evaluation #9: *Conducts himself/herself in an ethical and professional manner (displays integrity, sincere and applies discretion.*	2. Average score of 3 on 1-5 scale	3. Clinical 2 & 3 End of Semester 4. Clinical 5 N/A	2. All radiography faculty	• Clinical 2: 3.59 • Clinical 3: 3.85 • Clinical 5: N/A
	3. Professionalism in the Classroom Rubric	3. All students score of 75% of possible (19 of 25)	5. Mid-term Fall & Spring Y1 & 2	3. All radiography faculty	• Fall Y1: 71% (12 of 17) • Spring Y1: 60% (9/15) • Fall Y2: N/A • Spring Y2: 100% (13 of 13)

Action Plan: Goal 4
Outcome 3 Measurement Tool 1: DATAARC Affective Behavior Evaluation Tool; used in its entirety. The program transitioned from DATAARC to Trajecsys midway through the class of 2022. The collected data reflects information from both tools. While to DATAARC tool provided useful information related to professionalism including diverse and inclusive practices, the Trajecsys product allowed the program to better construct the evaluation tool. The program built the assessment criteria to reflect the ARRT code of ethics. In semester 2, 4 of 17 students evaluated did not reach the benchmark. Perhaps not surprisingly, 3 of these 4 students left the program shortly after this semester, all having struggled with meeting professionalism standards in clinical placements. In semester 3, 1 of 14 students did not meet the benchmark. This the remaining student not meeting the benchmark from the previous semester. This student did not continue following this semester, again for recurrent violation of clinical policy. Recognizing that a benchmark of 3 or better in all categories was probably unrealistic, it was still deemed appropriate to track issues and address with students as part of formal in informal counseling sessions. Additionally, as scores less than 3 were expected, especially in the first clinical semester, the program made the decision to only address these scores in clinical 2 at the time of mid-term counseling. Only in the instances of a pattern of low scores (end of semester or subsequent semester) would result in more aggressive strategies – probation, plan for success, referral to counselor – begin to be utilized. Additionally, the program has experienced a relatively high rate of turnover in those CI positions. 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 and field trip to RSNA. 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). The benchmark was met for this in the fall semester but not for the spring. Most club activities are related to paying for registration and lodging at the WSRT/WAERT spring symposium. Two students in the class of 2022 elected to not attend the conference, although they did participate in club activities that made funding for this conference possible. This annual conference provides several educational seminars related to transition to the workforce, ARRT examination preparation, and increasingly, Diversity and inclusiveness. 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.
Outcome 3 Measurement Tool 1 Affective Evaluation #1; Professional Appearance: Year 1 of this cohort was the last to be evaluated using the DATAARC tool, which specifically spoke to professional appearance. With the transition to the Trajecsys evaluation tool, the decision to align evaluation criteria to the ARRT Code of Ethics, the program decided to stop evaluating students on appearance at clinical and incorporate the Trajecsys statement: The Registered Technologist practices ethical conduct appropriate to the profession and protects the patient’s right to quality radiologic technology care. Based on this information, the program will: • Transition from evaluation of professional appearance to a broader evaluation of professionalism at clinical.

Outcome 4 Measurement Tool 2 Affective Evaluation #9; Conducts self in a professional manner.
With the transition again from DATAARC to Trajecsys evaluation tools the evaluation was only utilized for the 2nd and 3rd clinical semesters of the first year. The Benchmark for each semester was met.

The transition of the Trajecsys tool - again based on the ARRT code of ethics – will be used in the future for evaluation in clinical 5. Owing to the time period for transition to this new tool, an evaluation was not completed for Clinical 5 for the class of 2022. The program will revise evaluation criteria for assessment of the class of 2023.

Bases on this information the program will

- Evaluate the new Trajecsys assessment tool to define the best statements/benchmarks to use in the evaluation of demonstrating diverse and inclusive practices

Outcome 5 Measurement Tool 3: Professionalism in the Classroom Rubric
As previously identified, BTC has developed a number of rubrics for assessment of 3 of the college-wide Core Abilities. All programs are required to use these rubrics not only for program-level assessment, but data is collected for college-wide assessment for HLC accreditation. The program used this rubric for the class of 2022.

The benchmark was not met for fall and spring semesters of year1. As has been previously identified, 4 students did not progress into the second year of the program related to professionalism/policy infractions at clinical. Unfortunately, these same behaviors were evident in the classroom as well.

Assessment was not performed for fall of the second year. This was largely due to the program continuing transition from remote instruction back to face-to-face, coupled with the transition from DATAARC to the Trajecsys tool.

In spring of the second year, the benchmark was met at 100%, attributable to the combination of attrition, return to a more normal mode of instruction, although not completely, and continued focus on professionalism in all aspects of the curriculum.

The radiography program assesses professionalism in the classroom in 4 of the 6 academic semesters; the assessment is done as a blind evaluation. The results of the assessment are provided to the student each semester as part of the mid-term counseling. Although the class of 2019 has met the benchmark of all students of the cohort reaching a 75% score on the rubric, any individual score lower than 3 (acceptable) is discussed with the student.

Bases on this information the program will

- Continue to require a standard of professionalism in classroom, laboratory, and clinical settings
- Continue to perform blind assessments of professionalism in the classroom

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	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: 33% (12 of 36) • Clinical 3: 15% (2 of 13) • Clinical 5: 0% (0 of 1)
	2. 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% (17 of 17) • 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% (18 of 18) • Procedures 2: 100% (13 of 13)
	2. Lab Rubric: Lab Preparation	2. All students will pass checkoff on 1st attempt.	2. Rad Procedures 1 & 2	2. Course Instructor	• Procedures 1: 0% (0 of 12) • Procedures 2: 85% (6 of 7)

Action Plan: Goal 5
Outcome 1 Measurement Tool 1: Clinical Competency Form/Unsuccessful Competency Form This goal was new for the class of 2022. Assuring that students are familiar and comfortable with the radiographic equipment they are using before attempting laboratory or clinical competency on radiographic procedures. As evidenced in Clinical 2 a full third (12 of 36) of the unsuccessful clinical competencies were because of preparation for the examination related radiographic equipment. This score improved in the 2nd clinical course to 15%, but still not meet the benchmark. In 5th clinical semester, only one clinical competency was unsuccessful for preparation for Exam, and it was not related to use of rad equipment. 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 competence.
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 any 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 student unsuccessful clinical competency attempts for reasons equipment competence.
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. 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, 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. One section of the rubric is related to room preparation and includes all equipment and control panel use. 0% of students in the clinical 1 course passed this assessment on the first attempt. This is attributed to the decreased access to the lab during COVID. Only half of the cohort were allowed on campus on any given day because of room/lab occupancy limits, student close contact was only allowed for periods of 15 minutes, and open lab sessions where students are given time to practice skills prior to lab competency attempts were essentially non-existent.

There was some improvement in the Radiographic Procedures 2 course. Continuing with limited lab availability, and decreased clinical involvement, students continued to build skills. It was only through the expanded recording on procedures demonstrations that were again shared on Blackboard that course outcomes and lab competencies were met. It was also determined that an evaluation tool requiring assessment of imaging technology of greater rigor was necessary.

Based on this information the program will:

- Continue the use of recording of lab sessions allowing for students to review demonstrations remotely and multiple times.
- Incorporate the clinical competency form (lab section) for documentation of lab competency in the Rad Procedures 2 course.

Blackhawk Technical College
Associate Degree Radiography Program
Graduate Completion Worksheet
Class of 2022

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
1. Genevieve Decker	X	X		X		
2. Jaylen Duesterbeck*						
3. Anna Farrington	X	X		X		
4. Kendra Gerber*						
5. Kayla Honaker	X	X		X		
6. Christina Juhl	X	X				X
7. Taylor Linse	X	X		X		
8. Jessica Lopez	X	X		X		
9. Marcia Mcguire	X	X		X		
10. Taylor McGuire						
11. Vanessa Meise	X	X		X		
12. Brianna Nightengale	X	X		X		
13. Lauren Parker	X	X		X		
14. Genee Severson	X	X		X		
15. Kelsy Smith	X	X		X		
16. Kensie Stoikes*						
17. Abby Teuscher	X	X		X		
18. Amy Thomas						

Summary: Class of 2022

Program Completion: 86% (13 of 15)
ARRT Pass Rate 1st Attempt: 100% (13 of 13)*
ARRT Pass Rate Subsequent: N/A
Placed in Field 1 Year Following Graduation: 100% 12 of 12

Summary: BTC Total & 5 Year Averages

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

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.