Cañada College

Radiologic Technology

Program Review - Comprehensive Review

2023 - 2024

Program Context

1. Mission

Share how your program contributes to the College or fits into the College's Mission. For example, what other academic programs and student/academic services does your program engage with? Examples of student/academic services include the Learning Center, Library, STEM Center, SparkPoint, Dream Center, etc. Another example, how does your program fit into any of the College's plans (such as Equity, Technology, Strategic Enrollment, etc.)? If your program has a mission statement, you may include it here.

The mission of the radiologic technology program fits perfectly into the college's mission by providing quality education to individuals who seek a career in medical imaging. Program graduates become essential components of the health care team and active contributors to our communities.

Radiologic technology students are engaged with possibly all service area offered by Cañada College. For example, radiologic technology students take program's prerequisites from departments such as: English, Biology, Chemistry, Communications, Mathematics, Social Sciences, Ethnic Studies, and Fitness and Wellness. In addition, they utilize the Library, Learning Center, Admission and Records, Financial Aid, Veterans Center, Disability Resource Center, School Nurse, EOPS, etc.

2. Articulation

Are there changes in curriculum or degree requirements at high schools or 4-year institutions that may impact your program? If so, describe the changes and your efforts to accommodate them. If no changes have occurred, please write "no known changes."

The Radiologic Technology Program has an articulation agreement with California State University Northridge (CSUN), the only public university in California offering a Bachelor's degree in Radiologic Technology.

For many years the program has had as a prerequisite Intermediate Algebra (MATH 120) and since this course in not offered by our district anymore the program is now requiring any transfer level math course higher than intermediate algebra.

Our plan is to work in the next few weeks with the curriculum committee to officially change the math requirment, which affects the program requirements.

3. Community & Labor Needs

Are there changes in community needs, employment needs, technology, licensing, or accreditation that may affect your program? If so, describe these changes and your efforts to accommodate them. If no changes have occurred, please write "no known changes". CTE programs: identify the dates of your most recent advisory group meeting and describe your advisory group's recommendations for your program.

Community Needs: In addition to the aging population in San Mateo County and the country as a whole, we are seeing an increased need for medical care.

Employment needs: Since Covid 19 high numbers of medical personnel (including radiologic technologists) have left the field. With the majority of facilities reporting staffing shortages we see an increased demand for staff.

Although hospitals will remain the main employer of radiologic technologists, a number of jobs will be in physicians' offices and in imaging centers. Employment in these healthcare settings is expected to

increase because of the continued shift towards outpatient care whenever possible. Many facilities have expanded, for example Kaiser Redwood City (KRWC), Sutter Health, Palo Alto Medical Foundation (PAMF) and University of California San Francisco (UCSF) have added new outpatient facilities in our area. Adding to this is the fact that outpatient care remains encouraged by third-party payers as a cost-saving measure and is made possible by technological advances, such as less expensive equipment, which allow for more procedures to be done outside of hospitals.

Technology: Health care and specifically imaging technologies have evolved dramatically the last few years, changing from analog film to digital systems. This evolution affects how and what we teach our students. In order to stay current, our faculty maintain CE requirements, attend conferences and seminars. In addition, most members of our faculty continue work in the health care setting, where they are exposed to new technologies, new equipment and overall new trends.

Licensing and Accreditation: In Sept 2019 the program was awarded an 8-year accreditation by the Joint Review Committee on Education in Radiologic Technology (JCERT).

The program is also licensed by the California Department of Public Health, Radiologic Health Branch and this is a year to year licensing, with a physical school and clinical sites inspection every 3 or 4 years.

Advisory Committee: The program has scheduled our next advisory committee meeting for 10/31/2023 and as part of the agenda we will discuss community and labor needs.

Looking Back

4. Curricular changes

List any significant changes that have occurred over the prior years in your program's curricular offerings, scheduling, or mode of delivery. For decisions made by your department, explain the rationale for these changes. If applicable, how have state policy changes affected your curricular offerings?

No significant changes have occurred in the program's curricular offerings, scheduling or mode of delivery in the last two years; however, due to impacts of Covid 19 over the past 4 years, changes were made to course schedule and delivery. This was done to accommodate our student's needs and ensure their success in the program. As of Fall 2022 we have shifted back to the standar course schedule.

5A. Progress Report - IPC Feedback

Provide your responses to all recommendations received in your last program review cycle.

See 6A

5B. Progress Report - Prior Program Goals

Provide a summary of the progress you have made on the program goals identified in your last program review.

Objective #1: To find ways to support students who are in danger of performing at or below "C" level (75%).

We have been working with students who are struggling in their clinical or didactic courses, to be part of the tutoring sessions that have been arranged twice per week. Students who are having difficulties in the clinical setting are required to meet with the Clinical Coordinator once a week to verify progress. Those struggling in didactic courses meet with the Program Director once a week to figure out strategies and to verify if these strategies are effective. We will report a more comprehensive summary upon return to normal program schedule.

Objective #2: Maximize use of new equipment. Program faculty will work on developing new courses in fluoroscopy designed to prepare x-ray technologist and physician assistants to sit for the state examination.

Due to Covid-19 and imposed schedule changes we have not been able to work on this objective.

Objective #3: Reach out to groups who are underrepresented in the Radiologic Technology Program. Program officials will seek the help and advice of the Cañada College Outreach Program, to find different ways to reach out to the underrepresented communities. The program holds two information meetings per year. We will like

to hold one of these information meetings at the Cañada Menlo Park Site which is closer to East Palo Alto, Belle Haven, and North Fair Oaks.

Because of the limitations created by Covid-19 we have not been able to work on this objective.

6A. Impact of Resource Applications

Describe the impact to date of previously requested new resources (assignment, equipment, facilities, research, funding) including both resource requests that were approved and not approved. What impact have these resources had on your program and measures of student success? What have you been unable to accomplish due to resource requests that were not approved?

With the addition of our updated radiographic class room with two live radiographic room students are able to image phatoms and perform labratory testing enhancing their understanding of positioning, technical factors, radiation production, quality control and radiation safety.

The purchase of the Radiographic phantom allowed our students to practice radiographic positionig during covid

They

- maintained proper social distancing
- employed positioning skills.
- produce real time radiographs
- analyze images
- pass RADT 410/420 while being removed from clinical practice.

6B. Impact of Staffing Changes

Describe the impact on your program of any changes within the last program review cycle in staffing levels (for example, the addition, loss or reassignment of faculty/staff). If no changes have occurred please write "not applicable."

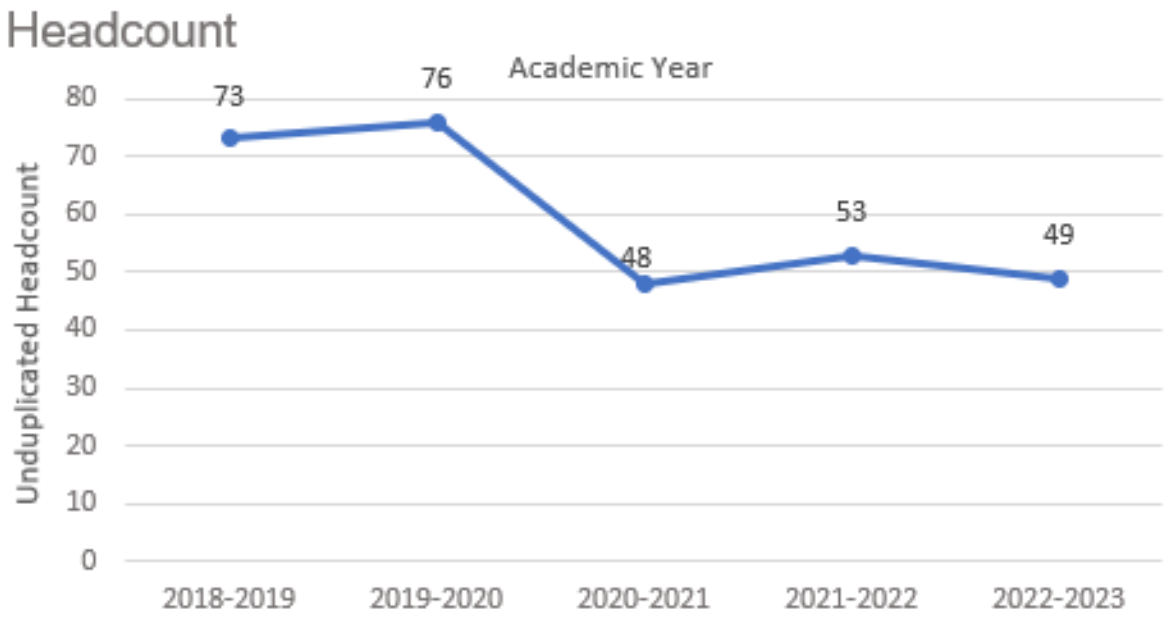
Since 2019 the demands of the clerical position have increases significantly. Since 2020 our we have had 3 cohorts (normally 2) in clinic simultaneously which has required additional onboarding. In addition, our clinical sites have increased their onboarding requirements thereby increasing the load on our administrative assistant. There have been instances of students start dates delayed due to incomplete onboarding packets. As it stands our Administrative Assistant is available three 6 hour days per week and often works to assist outside of her hours as students may not be able to reach her during her shifts. Expanding these hours to a minimum of 24 per week, 4-6 hour days would improve the situation.

Since 2020 we have seen a decrease in our adjunct pool and have had difficulty finding qualified candidates.

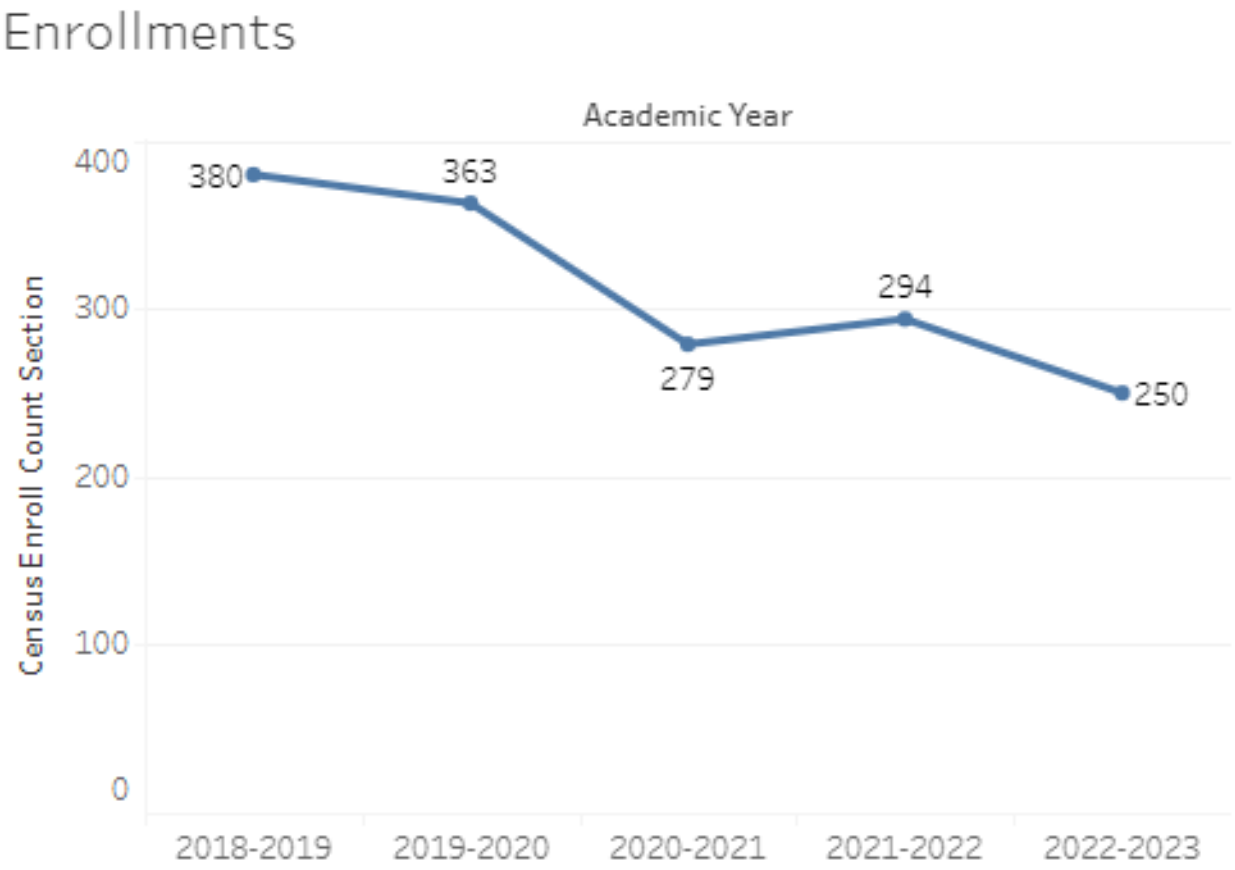
Current State of the Program

7A. Enrollment Trends

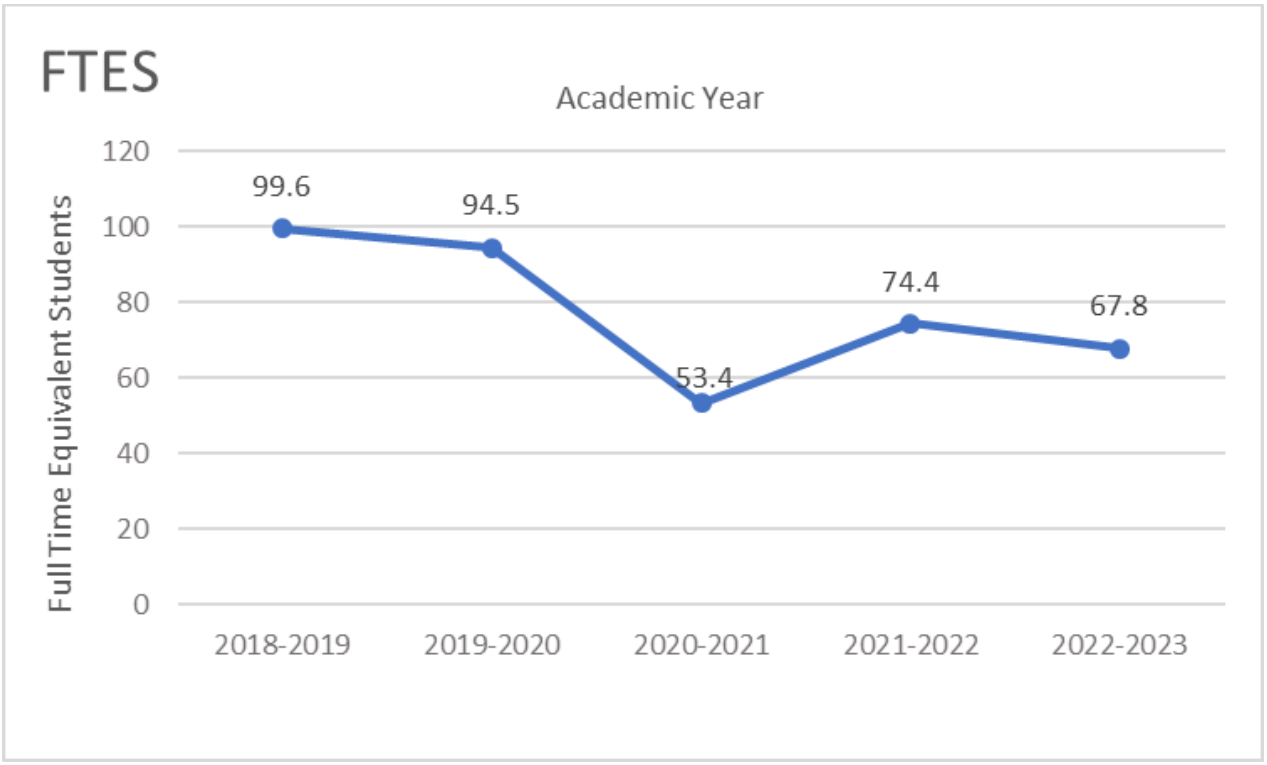
Use the data provided by PRIE to examine your enrollments by department or courses. Describe trends in headcount, FTES, and load. If applicable, describe any other enrollment data that is relevant to your program.



Headcount in Radiologic Technology was down 32.9% in 2022-2023 (49 students) compared to 2018-2019 (73 students). Headcount increase slightly before it declined dramatically in 2020-2021 and remained around that level through the most recent academic year.

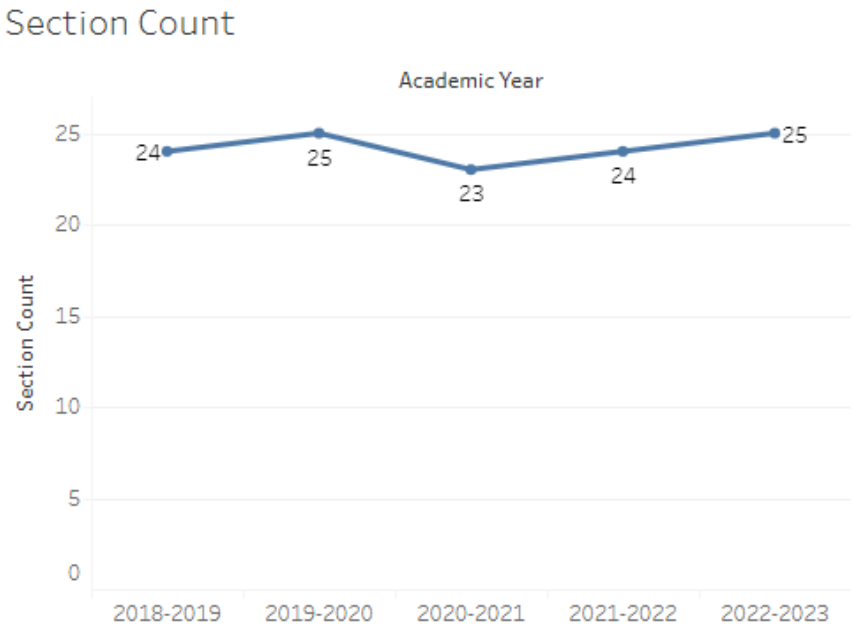


Enrollment in Radiologic Technology was down 34.2% in 2022-2023 compared to five years ago in 2018-2019. Radiologic Technology enrollment started at a five-year high in 2018-2019 with 380 enrollments and decreased to a five-year low of 250 enrollments in 2022-2023.

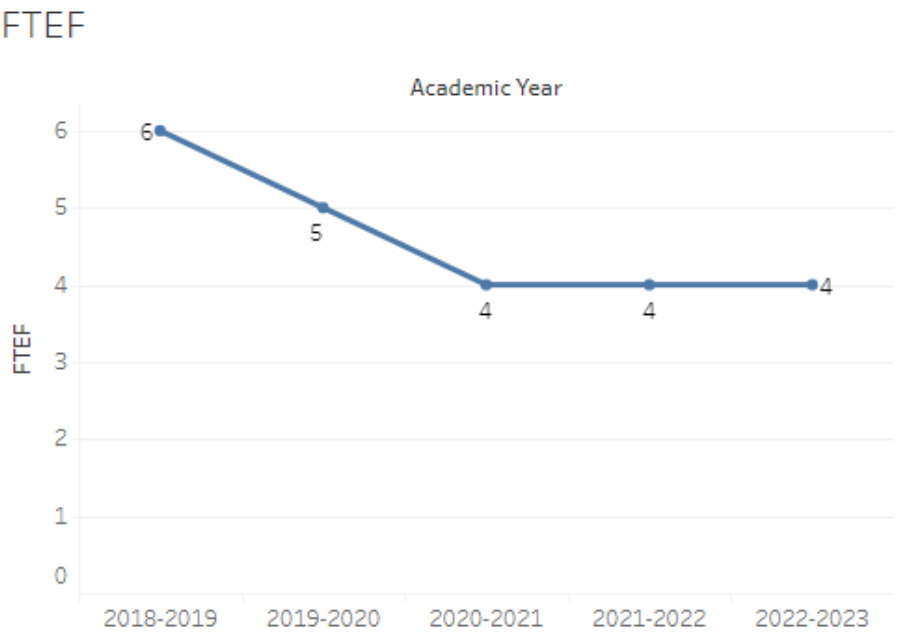


Radiologic Technology - Comprehensive Review

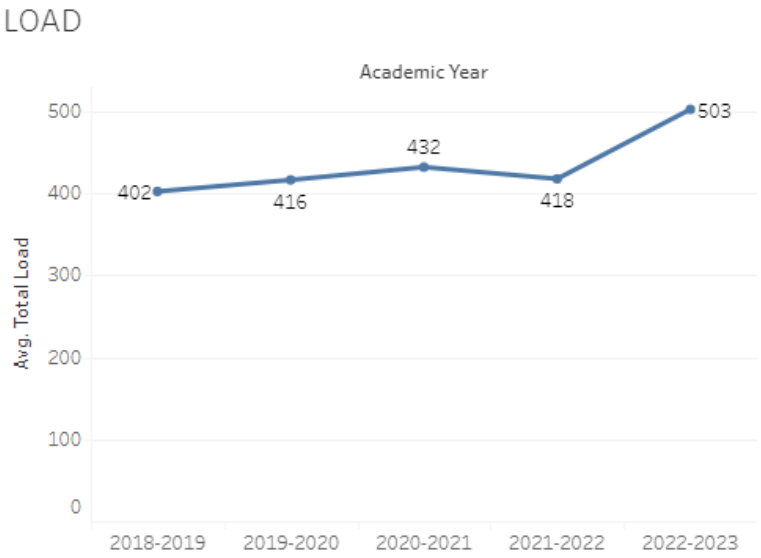
Full-time equivalent students (FTES) in Radiologic Technology was down 31.9% in the most recent academic year (2022-2023) compared to five years ago (2018-2019), a decrease of 31.8 FTES.



The number of sections offered in Radiologic Technology ranged from 23 sections to 25 sections, remaining fairly stable over the last five academic years.



The number of full-time equivalent faculty (FTEF) in Radiologic Technology went from 6 in 2018-2019, down to 5 FTEF the following year, and then 4 FTEF for the next three academic years.



Load in Radiologic Technology fluctuated slightly over the last five academic years with a low of 402 in 2018-2019 and a high of 503 in 2022-2023.

7B. Significant Changes in Your Program

Have there been any significant changes in enrollment trends or course offerings? For example, has there been a significant increase or drop in FTES or Load? If applicable, consider trends in class cancellation rates and how it might have affected your course offerings. If needed, consider how the pattern of course offerings (times/days/duration/delivery mode/number of sections) affected your enrollment?

Our enrollment is limited by the number of students that can be placed in each clinical site. These numbers are limited by the JCERT and the facility management.

Due to Covid our cohorts' graduations have been delayed further impacting our acceptance numbers. Student's graduations were delayed one full semester resulting a limited clinical capacity for the incoming cohorts.

Prior to the pandemic, our average cohort size was 20 students. In the 20-21 academic year, the cohort size was limited to 15 students. As noted above, this number was determined based on the number of available clinical sites. Similarly in academic years 21-22 and 22-23, the cohorts were limited to 12 students each. In 23-24 the program accepted 15 students.

7C. Planning for Your Program

What changes could be implemented, including changes to course scheduling (times/days/duration/delivery mode/number of sections), curriculum, marketing, and articulation of pathways that might improve these trends? If applicable, include plans for faculty recruitment and faculty training. NOTE: If other sources of data are used, please upload these documents or provide URLs.

This year, we have increased the number of spots offered to incoming students, with an incoming cohort approaching the pre-pandemic average. We anticipate a return to a 20 student cohort in Academic Year 24-25.

One possible solution to increase load would be to increase the number of continuing education courses we offer. We already offer mammography as a continuing education course and we will work on developing a fluoroscopy course for physician assistants, who are required by the state of California to be license in fluoroscopy.

8A. Access & Completion

Describe the student completion and success rate in your courses and/or program using the data provided by PRIE. Look at your course offerings, in the last program review cycle was it possible for a student to complete

your certificates or degrees while only completing courses at Cañada College? How can the college help you improve student completion and success? What changes could be made?

The overall success rate in Radiologic Technology remained fairly stable over the last five academic years, with a low of 93% and a high of 98%. Overall withdraw rates in Radiologic Technology were very low, ranging from 0% to 2%.

Course success rates in Radiologic Technology ranged from a minimum of 87% in RADT 400 to a maximum of 100% in multiple RADT courses. Course withdraw rates in Radiologic Technology ranged from a max of 6% in RADT 470 to a minimum of 0% for the majority of the other RADT classes offered in the last five academic years.

8B. Student Equity

One of the goals of the College's Student Equity plan is to close the performance gaps for disproportionately impacted students. Use the data provided by PRIE that indicates which groups are experiencing a disproportionate impact in your program. Which gaps are most important for improving outcomes in your program? How can the college help you address these gaps? What changes could be made?

Access

Access is an indicator of what student subgroups are enrolling in courses, based on unique student counts. Enrollment data revealed one student subgroup was underrepresented in Radiologic Technology classes compared to the college-wide population (see Table 1). The proportion of students in Radiologic Technology with a unit load considered 'less than part-time' (fewer than 6 units) was 42.7 percentage points lower than the proportion of 'less than part-time' students enrolled college-wide.*

Table 1.

Student Subgroup	Gap
Unit load - Less than part-time (less than 6 units)	-42.7

* This information is not applicable, this program does not have any part time students.

Success

Success is the rate at which different student subgroups pass courses and is based on enrollments. The success rate for different subgroups in Radiologic Technology was compared to the overall success rate in Radiologic Technology. No disproportionate impact was found for success in Radiologic Technology.

Withdraws

Withdraws is the rate at which a student withdraws from a course, with higher numbers being worse, as they indicate greater withdraw rates. The withdraw rates for subgroups in Radiologic Technology was compared to the overall withdraw rate for the program. No disproportionate impact was found for withdraws in Radiologic Technology.

Students are accepted into the Radiologic Technology Program through an online application process. The number of affiliated clinical sites (hospitals) and the number of students each clinical site can take at any given time determines the number of students accepted into the program. From the application, only age can be identified from official transcripts that must be reviewed for prerequisites. Students are not identified by ethnicity during the course of the program.

1.Historically we have had a very low number of African American and Pacific Islander applying to the program. It is possible that we need to do more outreach in these populations.

2. It appears there is no difference between gender's success and retention rate over a five-year period. This is not an area that needs to be addressed

3. Success rate and retention rate have been very stable for years. The program typically accepts 20 students per year and we lose one or two students. Program completion rate for the year 2021 was 82.2%. Job placement rate in the last five years (2017-2021) has been 100%. The National Exam passing rate for the last five years (2017-2021) has been 97.7%

The Radiologic Technology curriculum is offered during the daytime only.In 2022 RADT 470 (mammography) was converted to an afternoon course which meets the needs of the majority of our students enabling them to take this course. This course remains open to all licensed technologists.

8C. Completion – Success Online

The college has a goal of improving success in online courses. Using the data provided by PRIE, what significant gaps do you see in success between online/hybrid and non-online courses? What changes could be made to reduce these gaps? If your program does not offer online/hybrid courses, please write "not applicable".

Not applicable

9A. SLO Assessment - Compliance

Are all active courses being systematically assessed over a three-year cycle? Refer to the Program's /Department's Three-Year Assessment Plan and describe how the plan is completed across sections and over time.

Yes, all courses are systematically assess. Each course is assess at least once in a three year cycle by the teacher of record. The radiologic technology program has a set curriculum and each accepted class (cohort) moves through courses in a systematic way. So it is important and of great value to assess the effectiveness of each course. In addition, The radiologic technology program is a Career and Technical Education program and all curriculum must be updated every two years.

9B. SLO Assessment - Impact

Summarize the dialogue that has resulted from these course SLO assessments. What specific strategies have you implemented, or plan to implement, based upon the results of your SLO assessment?

There is an understanding among the radiologic technology faculty of the importance of SLO assessments and the picture it provides in order to improve program's performance. The first item we discoved during this assessment cycle was that some courses have too many SLOs. So we will be carefully reviewing them and see if they are still relevant. Second, with the help of the program's office assystant we will create a calendar where every semester we will have automatic reminderes to review SLOs and benchmarks at the end of each semester and third we discussed the need to find ways to connect the assessment plans for our accrediting agencies (JRCERT and the state of California, Radiation Health Branch) and assessment for school.

10 PLO Assessment

Describe your program's Program Learning Outcomes assessment plan using your Program/Department's <b>Three Year Assessment Plan<b/> Summarize the major findings of your PLO assessments. What are some improvements that have been, or can be, implemented as a result of PLO assessment?

• PLOs are assessed every year in accordance with JRCERT requirements, please see attached Assessment Plan 2020 - 2021

The assessment plan for Program Student Learning Outcomes (PSLOs) measures Program quality through the assessment of benchmarks set by the Program. The measurement of assessments indicate three possibilities: 1) positive results encourages us to continue utilizing current methodology, 2) negative results require review of curriculum, curriculum delivery, application of measuring tool, and then we look for possible solutions; and 3) results that are difficult or impossible to measure are revised, replaced or removed.

•In summary assessment results of PSLOs are good in demonstrating strengths and weaknesses of the

program.

•Other data that reveals Program performance are:

1. The Program Effectiveness Data found in the program's website. Copy is attached

2. The American Registry of Radiologic Technologists Exam Results. 2021. Attached

Items to be implemented:

1. Sampling pools have been increased when using the Clinical Competency rating Forms
2. In the first and second semester program faculty reinforced areas of radiation protection and shielding during lecture and during practical examinations.
3. Reinforce in clinical areas the setting and manipulation of radiographic technical factors
4. Adding more radiographic trauma situations to RADT 420 and the need to have an affiliation with a trauma clinical setting. Note. We are in converstaions with Valley Medical Center in Santa Clara to stablish a partnership.

Looking Ahead

Next Step: If your program is requesting resources, please go to "STEP 2: Resource Request (OPTIONAL)" and submit your specific requests there. Otherwise, this is the last prompt in the comprehensive program review form.

Supporting Information

General Supporting Documents

AnnualProgramSummaryReport (5).pdf
Assessment F-2020 - F 2021.pdf
Program Effectiveness Data 2020.docx.pdf
RADT 474 SLO review. 2023.pdf
ExamResultsReport. Class of 2021.pdf

Tables & Graphs

Attached

Non-Personnel Item (2023 - 2024)

Non-Personnel Item (2023 - 2024)

Program Requesting Resources

Radiologic Technology Program

Item Requested

3D radiographic interactive simulation. The brand is Shaderware

Item Description

Simulation training for radiographic equipment handling, receptor placement, collimation, side marker placement, exposure factor selection, control of scatter, and image quality assessment.

Program Goals this Request Supports

Radiation protection,

Status

New Request - Active

Type of Resource

Instructional Expenses (over $5,000) e.g., equipment

Cost

10,000

One-Time or Recurring Cost?

One-time Cost

Critical Question: How does this resource request support closing the equity gap?

It will provide ample time to all students to practice radiographic positioning on their own.

Critical Question: How does this resource request support Latinx and AANAPISI students?

This tool will support all students enrolled in the radiologic technology program.

Map Request to College Goals and Strategic Initiatives

Which of Cañada College's Goals does this resource request support?

Student Access, Success, and Completion,Community Connections,Accessible Infrastructure and Innovation

Which of Cañada College's Strategic Initiatives does this resource request support?

Support innovative teaching that creates more equitable and antiracist learning environments,Strengthen the college culture of continuous assessment and improvement in order to ensure all programs effectively serve students and close equity gaps,Be the best college choice for local high school students,Provide adequate access to technology