Bakersfield College

Comprehensive Program Review

**I. Program Information:**

Program Name: Associate in Science Degree Radiologic Technology Program

Program Type: [x]  Instructional [ ]  Non-Instructional

Program Mission Statement:

The mission of the Bakersfield College Radiologic Technology Program is to promote student success by providing quality instruction for graduates to competently practice radiography at the entry level.

Program Description: Describe how the program supports the Bakersfield College Mission.

One of the three primary tenets of the Bakersfield College mission is to provide excellent learning opportunities in career and technical education for our community which permits students to thrive in a rapidly changing world.

The Radiologic Technology Program meets this primary mission by providing an educational opportunity within the Health Services Career Pathway and by program completers earning the Associate in Science degree. The program meets the critical community need in Kern County for workforce training of entry-level licensed radiologic technologists and by providing two job skill certificates in fluoroscopy and venipuncture. The college mission is reinforced in the Program’s learning outcomes and goals.

Program Learning Outcomes (PLOs)/Administrative Unit Outcomes (AUOs)—please list:

**Program Learning Goals and Outcomes:**(Goals 1-5; Learning Outcomes a,b,c, etc.)

1)      Students will be clinically competent.

a)      Students will apply positioning skills.
b)      Students will select exposure factors.
c)      Students will utilize radiation protection
d)     Students will demonstrate and employ knowledge of equipment operation.

2)      Students will develop critical thinking skills.

a)      Students will demonstrate the ability to formulate technical factors.
b)      Students will adapt standard procedures for non-routine patients.
c)      Students will demonstrate independent judgment.
d)     Students will critique images to determine diagnostic quality.

3)      Students will communicate effectively.

a)      Students will demonstrate effective communication.
b)      Students will use correct pronunciation

4)      Students will model professionalism.

a)      Students will demonstrate knowledge of professional imaging organizations.
b)      Students will summarize the value of life-long learning.
c)      Students will demonstrate work ethics.

5)      The Program will graduate entry-level radiographers.

a)      Program graduates will pass the ARRT exam on the 1st attempt.
b)      Graduates seeking employment will obtain employment within 6 months of

 graduation.
c)      Students will successfully complete each course.
d)     Students will successfully complete the program.
e)      Graduates will be satisfied with their education.
f)       Employers will be satisfied with graduate performance

***Instructional Programs only:***

1. List the degrees and Certificates of Achievement the program offers.

Degree

* + Associate in Science, Radiologic Technology

Job Skills Certificates

* + Principles of Venipuncture
	+ Principles of Fluoroscopy
1. If your program offers both an A.A. and an A.S. degree in the same subject, please explain the rationale for offering both. N/A
2. If your program offers a local degree in addition to the ADT degree, please explain the rationale for offering both. N/A

**II. Program Assessment:**

1. How did your outcomes assessment results during the past three years inform your program planning?

The two main areas of change for 2012-2013 and 2013-2014 were the inclusion of the program in the DOL TAACCCT (C6 grant) and the change in program admission prerequisites. The change in prerequisites addressed the need to decrease the attrition rate for the 24-month program to a level acceptable by the JRCERT, the program’s accreditation agency. The assessment of this change will continue to be evaluated as students’ progress through the 24-month program. The current program retention rate has been highly variable and has ranged from 8-30.4% for the past three years.

The student success strategies and embedded remediation activities learned and practiced through the DOL grant have now been formalized into program teaching and learning practices with student cohorts admitted in both 2013 and 2014. Some examples of this are student workshops that have been held on test taking strategies, improvement of memory and note taking strategies. In addition, campus-wide initiatives such as Habits of Mind have also been incorporated across the radiography curriculum through faculty learning workshops since its implementation in 2013.

1. How did your outcomes assessment results during the past three years inform your resource requests this year?

The primary resource request is the acquisition of replacement x-ray equipment for the on-campus laboratory which is the highest priority of the program. The radiographic and fluoroscopic equipment infrastructure does not meet industry standards and does not provide student engagement activities that replicate the imaging field. Course assessments have indicated that students comment and complain about how difficult the equipment is to work because multiple features of the equipment do not work. Students are frustrated with having to learn on equipment that “should” work but doesn’t work in accordance with standards outlined in the textbooks or used in clinical educational experiences. The fluoroscopic unit became non-operational in April 2014. Therefore only theory can now be taught on-campus without an accompanying lab component. This means that the adopted curriculum of the college cannot be met.

1. Describe how the program monitors and evaluates its effectiveness.

The program monitors and evaluates its effectiveness through an annual review of program operations as well as the Evaluation Plan Goals of the department. Outcomes assessment is extensively conducted at the program level for its 5 program learning goals in alignment with the college mission. The outcomes are identified in the program’s Evaluation Plan Goals document and analyzed in program meetings. Three assessment surveys are conducted on an annual basis including the Employer Survey, Graduate Survey and Program Completion (Exit) Survey. All of these outcomes are regularly reviewed by the faculty and Clinical Advisory Committee for student success and learning and provides direction to the program for any curricular updates or revisions needed to maintain programmatic accreditation as well as meet college strategic planning goals.

1. Describe how the program engages all unit members in the self-evaluation dialogue and process.

The program engages the following individuals and groups in assessing the degree and certificate programs offered by the department:

Bi-weekly department meetings include full-time and adjunct faculty that discuss curriculum, student progression, success, and attrition. The department assessment plan is also analyzed which identifies PLO’s, individual course SLO’s and the programmatic accreditation benchmarks set for assessment for both the State of California, Department of Public Health, Radiologic Health Branch and the Joint Review Committee on Education in Radiologic Technology.

Quarterly clinical advisory committee meetings include the community partners involved with training students within the clinical environment as well as full-time and adjunct faculty members. The advisory committee meets to discuss current trends in radiology, needs of the community, revisions to the program curriculum, employment and licensure data, program success and retention.

1. Provide recent data on the measurement of the PLOs/AUOs, as well as a brief summary of findings.

The program actively assesses student success throughout the 2-year program as part of our Program Evaluation Plan. This assessment plan includes each outcome, the analysis tool and method, the expected benchmark, the responsible party for the activity, assessment results and action plan. Program outcomes continue to reflect outstanding employment and licensure data with program and accreditation benchmarks being met. For example, the job placement rate from 2009-2013 indicates a 98.7% employment rate with 75 of the 76 graduates who sought employment gaining a job. In addition, the national licensure for this same time period indicates a 95.14% first-time pass rate for the ARRT exam.

Program learning outcomes indicated that the course level learning outcomes for all six clinical education courses required revision. Faculty reviewed them in spring and summer 2014 to ensure that they were relevant and measurable. These revisions are being included in the course revisions being completed in CurricUNET in fall 2014 .

1. What have the program’s PLOs/ AUOs revealed or confirmed in the last three years?

For the past three years (2012-2014), program attrition has been highly variable from 8-30.4%. The highest attrition has been primarily due to voluntary withdrawals due to change of major and personal/financial reasons. While program faculty and the director counsel students during their months of enrollment, the faculty feels we have little control over students deciding to change their career plans once they have experienced both the didactic and clinical education portions of the curriculum. The program faculty has altered program orientation meetings which are held each spring semester prior to the start of each annual class in June. These orientations now include a discussion of the career, time commitment necessary for program study, financial aid opportunities of the college and discussion with the program director and students currently enrolled in the program. The program also includes the ASRT website on the program brochure and college website with reference made to the ASRT career videos. This information encourages a review of imaging careers with this website. The program is planning to hold an on-campus open house in the radiography lab for the colleges’ declared majors, with emphasis on including special population groups, that would include student and community radiographers to discuss the rigors of school and the profession.

The program will continue to monitor the program completion rate. The program believes that the orientation meetings, pre-program open house and student success workshops will assist students in making more informed decisions on the career of radiography and in succeeding in course work especially in the first year of the program when attrition is the highest.

1. *If applicable*, list other information, data feedback or metrics to assess the program’s effectiveness (e.g., surveys, job placement, transfer rates, output measurements).

Multiple measures are utilized to gather feedback to assess the program’s effectiveness. The program annually conducts three assessment surveys: 1) The program completion survey completed by students finishing the Associate in Science degree annually each May; 2) The graduate survey conducted one year post graduation each summer; and 3) the employer survey conducted one year post graduation each summer. All of these surveys are discussed with full time and adjunct faculty and the program advisory committee. In addition, the summaries of these surveys are posted in the on-campus radiology laboratory for currently enrolled students to read and review.

Program effectiveness is also analyzed by the program tracking licensure exam rates with the American Registry of Radiologic Technologists, job placement rates and program completion rate. To ensure transparency, this data is published on the BC website under the Radiologic Technology Program department listing and is also shared and analyzed with the same group of individuals as the annual surveys which includes program faculty and the advisory committee.

1. Discuss the strengths of your program.

The program has a wide breadth of clinical education agencies that partner with the college to provide quality opportunities for student engagement and learning in the clinical environment. Opportunities for learning include acute care hospitals, radiology and orthopedic offices. In the past 3 years, the program has actively increased the number of affiliated agencies from 9 to 11 within the Bakersfield and Delano, CA regions. This has enabled the program to maintain its target enrollment of 24 students admitted annually while maintaining the 1:1 technologist-to-student teaching ratio in the clinical environment where staffing has been reduced at some of the agencies.

The experience of the faculty is a great strength of the program and one of the primary reasons for student success. 100% of program graduates in 2012, 2013 and 2014 rated the quality of faculty lectures and presentations as excellent or good on the Program Completion Survey. There are three full-time program faculty members that range in teaching experience from 12-34 years. Faculty are experienced in teaching to a diverse student population as well as with equipment in the x-ray lab that does not currently meet operational and regulatory standards. Faculty are able with this experience to do work-arounds with equipment in order to explain concepts to students. Faculty continue to maintain currency in the professional radiography discipline and employ relevant education in emerging x-ray technologies including digital imaging. With the implementation of C6 grant and other campus-wide initiatives such as Habits of Mind, faculty are regularly including student success strategies, including a significant amount of embedded remediation activities into the lecture and lab environment.

The licensure pass rates with the American Registry of Radiologic Technologists remain consistently excellent. Eighty-seven (87) examinees have passed the exam on the first attempt for the 5-year period of 2009-2013 with a mean pass rate of 95.14%. College results continue to remain slightly higher than the national mean for this percentage.

The Program continues to provide education in fluoroscopy, an advanced imaging modality license necessary for employment. All of the 2012 and 2013 graduates who applied for the State of California fluoroscopy permit earned the permit (100%). This is one area of concern for future performance as the on-campus fluoroscopic unit is broken and not reparable.

1. Discuss areas for improvement in your program.

The annual Employer and Graduate surveys continue to indicate that the community is requesting life-long learning opportunities in medical imaging and radiography following graduation. Comments have included continuing education courses for renewal of licenses as well as program development in specialty areas such as computed tomography and magnetic resonance imaging.

The development of leaders within the radiography program and career has been an informal process within academic and clinical education courses. Student engagement opportunities have been tied to faculty initiatives rather than curricular strands throughout the two-year program. Leadership projects need to be expanded and more formalized across the radiography curriculum.

Within 2 years, two-thirds of the faculty will be retiring which will leave the program with faculty members who are less experienced. These less experienced individuals will not have the ability to work with x-ray laboratory equipment that does not meet regulatory working standards. This could rapidly decrease student success and program outcomes due to the non-fully functioning x-ray equipment.

1. *If applicable*, describe any unplanned events that impacted your program.

The radiography lab has two x-ray machines capable of producing radiation. One unit is 27+ years old and is the unit used to teach in both the AS Degree radiography program as well as the fluoroscopic Job Skills Certificate program. The fluoroscopic part of this equipment broke in April 2014 and is not reparable. The direct impact is that laboratory experiments that demonstrate fluoroscopic concepts cannot be performed with the on-campus laboratory. This directly impacts the ability of students to learn how to operate fluoroscopy units in a teaching environment as well as to practice and demonstrate the safety considerations in this imaging technique. This negatively affects both the first and second year of the program curriculum.

As reported in the 2013 annual program review, the second x-ray unit is 19 years old and did not have a working collimator. The repair of this unit took almost one year as parts were not readily available. Instructors were not able to teach to the correct standards the principles of positioning with the collimator and competency based education required by programmatic accreditation standards. The unit was repaired in late fall 2013 but it broke again in September 2014. The collimator now does not rotate into certain positions which makes the unit partially operational for the positioning and principles laboratory courses taught. Both of the x-ray units located in the on-campus laboratory are “end-of-product-line” and parts are no longer manufactured. The majority of parts also cannot be purchased when replacement is necessary.

Both of the x-ray units in the laboratory need to be immediately replaced as the regulations in State CCR, Title 17 are not being met. When the State Radiologic Health Branch inspects the college equipment, the college will have 30 days to correct the equipment or take the equipment out of service. It is imperative that laboratory practice be safely accomplished while ensuring that employer expectations for student education and training can also be met.

**III. Resource Analysis:**

1. Human Resources
2. If you are requesting any additional positions, explain briefly how the additional positions will contribute to increased student success. (Faculty Request form; Classified Request form)

The program is not requesting faculty replacement positions for 2015-2016 but will be requesting two replacement positions for 2016-2017 as two faculty retirements are anticipated in summer and/or fall 2016. These two retirements represent 2/3 of the full-time faculty within the AS Degree Program. The faculty is proactively mentoring individuals on how to qualify for instructor positions at the college and will continue to develop strategies for identifying qualified applicants for faculty positions in the future.

1. Professional Development (Professional Development form)
2. Describe briefly the effectiveness of the professional development your program has been engaged with (either providing or attending) during the last cycle, focusing on how it contributed to student success.

Program faculty have participated in professional development workshops and opportunities on-campus as well as off-campus by attending radiography education professional meetings. The radiography professional meetings have provided effective opportunities to gain knowledge on the revised State and national standards in radiology in 2013 and to maintain competency in radiologic technology education standards. On-campus development has included participating in student success initiatives including Habits of Mind, reading apprenticeship and others. Faculty have implemented multiple strategies learned in these professional development activities and made them best practices within the radiography course work which promotes student success.

1. Provide rationale for future professional development opportunities and contributions that your program can make.

Professional development is necessary for faculty to remain current in the medical imaging technologies as well as the regulatory requirements for radiography licensure. In addition, the faculty and director must be informed of changes to programmatic accreditation standards by both the State and national agencies. Both regular and nontraditional learners will benefit from faculty maintaining compliance for accreditation and licensure and to ensure that the curriculum meets industry standards. This will enable students to transition from the classroom and clinical environment to work. Information and practices learned in professional meetings are regularly disseminated to the program’s clinical partners during advisory meetings.

1. Facilities (M&O requests can be submitted by completing the [M&O Request form](https://committees.kccd.edu/sites/committees.kccd.edu/files/Copy%20of%2012%20M%26O%20Needs%20Workbook%2012-13%20APR.xlsx).)
	1. Assess the effectiveness of the facilities used by your program in meeting college strategic goals.

From last year’s APR, M&O has corrected two areas in the x-ray lab, MS-21, including changing the lighting options and replacing the vertical blinds. These changes have provided proper lighting conditions for student experiments and discussions as well as providing a safe working environment to move around in the x-ray lab. This has contributed to student success as well as providing a proper infrastructure that supports the correct viewing of computerized x-ray images that mimics local hospitals and imaging centers.

* 1. Justify your facilities and M & O request.

BC Goals include facilities and infrastructure which specifies improvement and general maintenance.

The M&O request for 2014-2015 include multiple requests from the past 4 years of program reviews. They include painting of MS-21 and the Allied Health office area, carpet replacement for MS-54 and repair of the math-science elevator. While painting is aesthetic these labs and classrooms have not been painted for approximately 10 years for MS-21 lab and 19 years for the Allied Health office area. Painting of aging facilities fits the college strategic goal for maintaining its infrastructure and by providing an external motivator for positive student and faculty engagement in a facility that is both clean and safe to utilize.

Safety concerns exist in two areas including MS-54 and the MS elevator. The carpet in MS-54 has been taped together for over 5+ years and poses a regular tripping hazard. The carpet continues to pull up. The desktops are loose in MS-54 and move when students utilize them. This poses a safety concern as the desks may easily fail. In addition, the elevator has an unsafe floor which poses a tripping hazard.

1. Technology (Technology requests can be made by filling out the [ISIT Request form](http://www.bakersfieldcollege.edu/irp/Annual%20Program%20Reviews/2012-13/13%20ISIT%20Priority%20Workbook%2012-13.xlsx).)
2. Has your program received new or repurposed technology in this 3-year cycle?
	1. If yes, discuss the assessment of its effectiveness as it relates to student, program, or administrative outcomes.

The program purchased a new computed radiography imaging system with Perkins funding in May 2013. This addition to the lab has enhanced student learning opportunities by enabling students to have more individual access to digital image processing standards rather than completing most work in a group setting on a single computerized image processing unit. This has assisted students in meeting their own individual learning style.

* 1. If no, what technology could play a contributing factor in future student success and outcomes for your program? How would you evaluate the effectiveness of this technology?
1. Discuss the effectiveness of technology used in your area to meet [college strategic goals](http://www.bakersfieldcollege.edu/collegecouncil/BAKERSFIELD%20COLLEGE%20STRATEGIC%20FOCUS%202013-14.pdf).

The addition of two computed radiography image processing units in 2009 and 2013 helps students meet the college’s strategic goal for student success as this type of x-ray image processing system matches the technology used in the radiography community. This has been a first step in meeting industry standards in image processing. The next step is mission critical and includes x-ray equipment replacement that matches the digital imaging environment in hospitals and imaging centers. The two x-ray units installed within the instructional x-ray lab located in MS-21 do not meet this standard. The program has reported in the past several program reviews that the radiographic x-ray unit has been limited in its capacity to work because of its collimator-to-x-ray beam light delineation. This was broke for almost one-year. Although the 19 year-old unit was repaired last year this same device is once again in need of repair and parts are currently not available for permanent repair. The second x-ray unit is a radiographic and fluoroscopic unit which is 27+ years old. This unit has been “end-of-product line” since 1999. The fluoroscopy portion of this unit broke in April 2014 and it cannot be repaired according to the service engineer. This will severely limit the ability to teach the required laboratory curriculum in fluoroscopy and the Job Skills Certificate in Fluoroscopy.

Program faculty are restricted in the teaching of competency based standards required by programmatic accreditation agencies as well as meet employer/industry expectations. Student satisfaction with how the x-ray equipment is working diminishes each semester and student complaints and frustration have increased as the x-ray unit does not work in accordance with correct safety standards.

1. Does your program need new or repurposed technology to support student success? Justify your ISIT Technology Request and your vision for meeting student, program, or administrative unit outcomes for this next 3-year cycle.

New replacement x-ray equipment is immediately necessary as college strategic goals of educating students for a modern workforce cannot be met with dated and aging equipment. Equipment can no longer be sufficiently repaired and perform all of the functions necessary for proper movement to practice imaging procedures and perform lab experiments safely and accurately. Educational accreditation standards require curricular offerings and labs to meet industry standards which support student completion of the program and competency.

The request for replacement of the instructional computer in MS-54 and the computer for the program director is necessary to interface properly with the college and allied health servers to ensure a modern instructional environment for the delivery of student learning in the classroom and preparation for learning in the office setting.

1. Budget (Changes to the budget allocation can be requested using the [Budget Change Request Form](http://committees.kccd.edu/bc/committee/programreview)).

If you are requesting any additional funding, explain briefly how it will contribute to increased student success.

Student success and outcomes will diminish if the x-ray equipment is not replaced while student satisfaction, as demonstrated on our course evaluations and Program Completion Survey, is diminishing with the number of equipment complaints increasing. The replacement of specific technology/equipment for CTE programs is not addressed on a campus-wide basis. The college needs to prioritize funding mechanisms for the continuation of CTE programs including radiologic technology. An estimate of $100,000 is needed for a portable fluoroscopy x-ray unit with a total of $250,000 needed to fund replacement equipment.

**IV. Trend Data Analysis:**

Review the data provided by Institutional Research. Provide an analysis of program data throughout the last three years, including:

* 1. Changes in student demographics (gender, age and ethnicity).

Program demographics remained stable from 2011-2012 to 2012-2013 but changed in 2013-2014. Female population was 74-75% from 2011-2013 and lowered to 60% in 2013-2014. The male population was stable with 25-26 % for 2011-2012 and 2012-2013. The male population increased to 40% in 2013-2014. The demographics for the program consistently demonstrate a somewhat disproportionate rate compared with the college, with male program students varying from 20% to 40%. College-wide population indicates 55% female and 45% male which indicates that the program varies from these statistics by 5%.

Program demographics regarding age varied only slightly within the last three years. The age demographics of the program indicate the age of the radiography student is higher than the regular BC student. The highest population of students at the college is the 20-29 age range (52%). This is also the highest population of program students ranging between 51-70% for the past 3 years. One major difference in program statistics vs. college statistics is that the program has 0% of its student population from age 19 & under while the college average for the past year is 25%. Another major difference in program vs. college statistics is that the program has an older age population for the past three years with 23-38% of students in the 30-39 age range while the college average for 2013-2014 is only 13%. The most likely rationale for this is that the program has 1 year of prerequisites to complete prior to applying for program entry as well as a 1-2 year wait list to enter the program.

Program ethnicity mirrors the college trend with Hispanics/Latinos representing the largest group of students. This population has varied from 36-61% in the past 3 years with the college at 62% for 2013-2014. The program has demonstrated a drop in the percentage of white students from 52% to 28% over the past 3 years. The percent of white students for 2013-2014 for the program (28%) was closer to the college demographics with 24%. The African American population enrolled in the program has varied from 0-5% in the past 5 years compared with a college-wide participation of 5% in 2013-2014. The Asian/Filipino/Pacific Islander population has varied from 2-11% for the program while the college participate rate was 4% last year. The program needs to continue to engage with the college educational advisors/counselors, special population groups on campus (Veteran’s, African American males, SGA and others) to explore the radiography career while also continuing to participate in outreach activities with the CTE open house to high school students and various career days.

* 1. Changes in enrollment (headcount, sections, course enrollment, and productivity).

Program enrollment remained stable from 2009-2014 on its number of sections (18 or 19) and number of students/section (varied only 18-21) for face-to face classes. There are no on-line courses for the program.

The program demonstrated an increase in productivity for the last three years from 14.5 FTES/FTEF in 2011-2012 to 15.0 FTES/FTEF in 2012-2013 and to 15.7 FTES/FTEF in 2013-2014. This represents an 8.3% increase in productivity for the program over the past three years. Although improvement has been demonstrated by the program, the program falls below the college wide mean for traditional face-to-face classes of 17.1 FTES/FTEF (2013-3014). Overall, program costs fall below the State apportionment allotted for FTES for a smaller program that is State regulated by a low faculty-to-student ratio in laboratory science course sections.

* 1. Success and retention for face-to-face as well as online/distance courses.

Success and retention rates continue to remain excellent and significantly above college-wide statistics. Course retention was 97-100% for the past three years while college retention for face-to-face courses varied from 84-87% for the same time period. Program success also remains excellent with 95-99% success for the past three years while college success was lower with 68-70% for the same time period. There are no online/distance program courses.

* 1. Degrees and certificates awarded (three-year trend data for each degree and/or certificate awarded).

Number of completions (awards) from our college 2011-2014 (three years)

AS Degrees = 57

The trend data reported by the college is correct in the number of degrees awarded.

Venipuncture Job Skills Certificates = 57 Certificates

Fluoroscopy Job Skills Certificates = 57 Certificates

The trend data reported by the college for both job skills certificates is incorrect as the data is only reported for one-year, 2013-2014, for venipuncture. The aggregate total was only reported in 2012-2013 and certificates were not reported in 2011-2012. The correct total is 57 certificates each for both job skills categories. Admissions & Records has corrected the data collection in this area and it now appears that the trend data will be accurate moving forward.

* 1. Other program-specific data (please specify or attach).

The State of California, Employment Development Department ([www.labormarketinfo.edd](http://www.labormarketinfo.edd)) projects an “outlook or demand” increase of 23.8% from 2010-2020 (from 17,200 to 21,300) for radiologic technologists in California. This data indicates a high demand career. EMSI data reports a 16.1% job growth rate projection from 2012-2017 within Kern County.

The career of radiologic technology is a high wage career. BLS indicates that the May 2012 mean hourly wage for California was $33.94 with an annual wage of $70,590 for radiologic technologists. This data differs slightly from EMSI data which indicates a $29.98 median hourly wage.

The employment rate for the May 2013 graduates was outstanding at 100%. This is defined by the JRCERT, the programmatic accreditation agency, which specifies employment within the first 12-months following graduation for the graduates who are seeking work. This employment rate does not include students who transfer to continue their education or those who do not seek employment.

* 1. List degrees and certificates awarded (three-year trend data for each degree and certificate awarded). Include targets (goal numbers) for the next three years.

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| --- | --- | --- | --- | --- | --- | --- |
| **Degree or Certificate** | **2011-2012** | **2012-****2013** | **2013-****2014** | **2014-****2015** | **2015-****2016** | **2016-****2017** |
| Associate in Science Degree- Radiologic Technology | 18 | 16 | 23 | 17 | 20 | 20 |
| Principles of Venipuncture Job Skills Certificate | 18\* | 16 | 23 | 17 | 20 | 20 |
| Principles of Fluoroscopy Job Skills Certificate | 18\* | 16 | 23 | 17 | 20 | 20 |
| \*Not captured in College Trend Data; Program Records Indicate Total |  |  |  |  |  |  |

**V. Progress on Previously Established Program Goals, Future Goals and Action Plans:**

1. List the program’s goals from the previous Program Review. For each goal, please discuss progress and changes. If the program is addressing more than two (2) goals, please duplicate this section.

|  |  |  |  |
| --- | --- | --- | --- |
| **Previously Established Goal** *(state goal)* | **Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal?****(select all that apply)** | **Progress on goal achievement****(Choose one)** | **Comments****(if applicable)** |
| KCCD was awarded grant funds through the Central California Community College Committed to Change (C6) that supported the development of a Computed Tomography Course.  | [x]  1: Student Success [ ]  2: Communication [ ]  3: Facilities & Infrastructure [ ]  4: Oversight & Accountability [ ]  5: Integration [x]  6: Professional Development | [x]  Completed: Fall 2013 (Date) [ ]  Revised: \_\_\_\_\_\_\_\_\_\_\_ (Date)*(*state revised goal) | SPST B201 was offered in spring 2014. An adjunct instructor was identified and the course was offered in the evening to both currently enrolled radiologic technology students and licensed technologists working in the community.  |
| Implement New Prerequisites with February 2013 student application period. Evaluate 24-month program retention with 2013-2015 student cohort. | [x]  1: Student Success [ ]  2: Communication [ ]  3: Facilities & Infrastructure [ ]  4: Oversight & Accountability [ ]  5: Integration [ ]  6: Professional Development | [ ]  Completed: \_\_\_\_\_\_\_\_ (Date) [x]  Revised: \_\_\_\_\_\_\_\_\_\_\_ (Date)*(*state revised goal) | On-going goal. Will be evaluated completely following the completion of the 2013-2015 cohort. Results to date indicate retention at 74% for the 24-month program. |

1. List the program’s goals for the next three years. Ensure that stated goals are specific and measurable. State how each program goal supports the College’s strategic goals. Each program goal must include an action plan.

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| --- | --- | --- | --- |
| **Future Goal** | **Action Plan** | **Lead person for this goal** | **Timeline for Completion:** |
| 1. X-Ray Equipment replacement; radiographic/fluoroscopic unit(s)
 | Work with Foundation for resource allocation and fund raising; work with KCCD grant writer to identify grant resources; request GUOO1 funding | Program Director & Faculty | 2014-2015 and on-going |
| **Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal? (select all that apply)** |
| **[x]  1: Student Success [ ]  2: Communication** **[x]  3: Facilities & Infrastructure [ ]  4: Oversight & Accountability [ ]  5: Integration [ ]  6: Professional Development** |
| **Future Goal** | **Action Plan** | **Lead person for this goal** | **Timeline for Completion:** |
| 1. Continuing Programmatic Accreditation with JRCERT
 | Complete Self-Study Report with input from full-time and adjunct faculty, community partners and student assessments; Review Program Operations and Compliance Matters related to JRCERT 1/1/2014 Revised Standards | Program Director & Faculty | 2015-2016 Self-Study Report Completion;2016-2017 Site Visit |
| **Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal? (select all that apply)** |
| **[x]  1: Student Success** **[x]  2: Communication [ ]  3: Facilities & Infrastructure** **[x]  4: Oversight & Accountability [ ]  5: Integration [ ]  6: Professional Development** |
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| --- | --- | --- | --- |
| **Future Goal** | **Action Plan** | **Lead person for this goal** | **Timeline for Completion:** |
| 1. Development of Computed Tomography Program
 | Work with Community Partners to quantify need and develop community clinical education internships and develop appropriate curriculum; explore both face-to-face and on-line delivery for lecture | Program Director, Faculty and Community Partners | 2014-2016 Curriculum Development and Approval2017-2018 CT Program Starts |
| **Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal? (select all that apply)** |
| **[x]  1: Student Success [x]  2: Communication [ ]  3: Facilities & Infrastructure**  **[x]  4: Oversight & Accountability [ ]  5: Integration [ ]  6: Professional Development** |

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**VI. Curricular Revisions *(Instructional Programs only):***

1. Review of Course Information:
* Column A list all of the courses associated with the degree.
* Column B list the Fall term the review process will be started for ongoing compliance.
* Column C list the compliance due date.
* Column D list any changes to courses with regard to distance education.
* Column E list corresponding C-ID descriptors if available. <http://www.c-id.net/>

**\*\*Dates listed should reflect a five year cycle allowing for one year of review**

**to maintain ongoing compliance.\*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A. Course** | **B. Fall Term Review will be Submitted** | **C. Compliance Due Date** | **D. Distance Education Changes** | **E. C-ID Descriptors Available** |
| RADT B1a- Intro. to Radiologic Technology | 1/1/2018 | 1/1/2019 | n/a | n/a |
| RADT B1b- Patient Care | 11/1/2017 | 11/1/2018 | n/a | n/a |
| RADT B2a- Radiographic Anatomy & Positioning 1 | 1/1/2016 | 1/1/2017 | n/a | n/a |
| RADT B2b- Radiographic Anatomy & Positioning 2 | 12/1/2015 | 12/1/2016 | n/a | n/a |
| RADT B2c- Radiographic Anatomy & Positioning 3 | 11/1/2017 | 11/1/2018 | n/a | n/a |
| RADT B3a- Radiographic Principles 1 | 12/1/2015 | 12/1/2016 | n/a | n/a |
| RADT B3b- Radiographic Principles 2 | 1/1/2016 | 1/1/2017 | n/a | n/a |
| RADT B4a- Intro. to Clinical Education | 11/1/2017 | 11/1/2018 | n/a | n/a |
| RADT B4b- Clinical Education 1 | 11/1/2018 | 1/1/2019 | n/a | n/a |
| RADT B5- Radiation Physics | 11/1/2017 | 11/1/2018 | n/a | n/a |
| RADT B6- Clinical Education 2 | 2/1/2017 | 2/1/2018 | n/a | n/a |
| RADT B7- Clinical Education 3 | 11/2017 | 11/1/2018 | n/a | n/a |
| RADT B9a- Sectional Anatomy  | 10/1/2018 | 10/1/2018 | n/a | n/a |
| RADT B10- Clinical Education 4 | 2/1/2014 | 2/1/2015 | n/a | n/a |
| RADT B11- Radiographic Pathology | 11/1/2013 | 11/1/2014 | n/a | n/a |
| RADT B12- Radiobiology & Radiation Protection | 12/1/2015 | 12/1/2016 | n/a | n/a |
| RADT B13- Clinical Education 5 | 1/1/2017 | 1/1/2018 | n/a | n/a |
| RADT B30-Principles of Venipuncture | 2/1/2017 | 2/1/2018 | n/a | n/a |
| Program Prerequisites | 1/1/2017 | 1/1/2018 | n/a | n/a |

1. Review of Program Information:

Is the program information housed in CurricUNET accurate? (Considerations: changes in course(s) names and/or suffixes as well as additions/deletions of courses). If not, then a program modification needs to be started in CurricUNET to reflect the necessary changes. Explain the requested changes below.

AS Degree Radiologic Technology Program- The brochure of the program in CurricUNET is from 2013 and this matches the 2014-2015 catalog. However, the brochure information has been updated and a program modification will be initiated in fall 2014 to match the content in both locations. The program has been working with Web Content Editor to have the correct information included in the on-line BC catalog.

Job Skills Certificate- Principles of Venipuncture

The information in CurricUNET for the venipuncture job skills certificate is accurate.

Job Skills Certificate- Principles of Fluoroscopy

The information in CurricUNET for the fluoroscopy job skills certificate is accurate. The learning outcomes will be reviewed this year by program faculty to determine if they require revision.

Is the program and course listing information in the current catalog accurate? If not, list the requested

changes below. Catalog information should reflect what is in CurricUNET.

The Radiologic Technology Program worked with the college’s Web Content Editor in summer 2014 to correct the on-line catalog however some changes have not yet been made. Specifically, the program brochure is out-of-date. Changes were made in summer 2014 through a catalog addendum through the Office of Academic Affairs. The original printed catalog is incorrect.

1. Student Education Plan (SEP) Pathway(s) uploaded to “Attached Files” in CurricUNET.

If applicable, SEP Pathway with CSU Breadth indicated? Yes or **No**

If applicable, SEP Pathway with IGETC indicated? Yes or **No**

If applicable, SEP Pathway with BC General Education indicated? **Yes** or No

 **\*\*Please ensure that the information housed in CurricUNET and the current catalog match. \*\***

1. If applicable, provide a description of the program’s future adoption of C-ID descriptors and Associate Degree for Transfer (ADT) or Model Curricula.

The Radiologic Technology Program maintains an articulation agreement with California State University, Northridge with their Radiation Sciences Program. CSUN is the only publicly funded state college or university with a major in radiation science technology. The articulation agreement between BC and CSUN needs to be reviewed for the Radiation Science Programs. There are no current plans for an ADT or Model Curricula. All other schools of radiologic technology are taught within the CCC system.

**VII. Faculty and Staff Engagement:**

1. Discuss how program members have engaged in institutional efforts such as committees, presentations, and departmental activities.

The faculty of the Radiologic Technology Program is actively engaged in institutional committees and departmental activities. Although the department is small with only 3 full-time and one adjunct faculty and has responsibility to our community partners in clinical education, faculty serve on the curriculum committee, academic senate, faculty chair and director council and the occupational education committee. The faculty meets every other week for a faculty meeting to discuss program and clinical education issues as well as compliance mandates required by outside accrediting agencies (both State and national). The Clinical Education Advisory committee meets twice per semester with faculty to discuss and advise the college on clinical education and the overall program. Additionally, at these advisory meetings, workshops and training are given by the faculty. Faculty also serve nationally with the Association of Collegiate Educators in Radiologic Technology (ACERT) for committees on scholarships, scholarly written presentation judging and bylaws. In addition, the director has served on sub-committees on the State educational radiography standards and fluoroscopy standards for the State Radiologic Technology Certification Committee of the Radiologic Health Branch. Additionally, the faculty attends and participates in ongoing training campus-wide initiatives such as those for student equity and success and Habits of Mind.

1. *Instruction Only*: Discuss how adjunct faculty are included in departmental training, discussions and decision-making.

Adjunct faculty members are regularly included in the daily operations of the radiologic technology program. Our current adjunct faculty member routinely attends bi-weekly faculty meetings, programmatic training workshops and clinical advisory committee meetings. Additionally she is an active participant in these workshops and activities and assists the faculty with curricular review and assessment.

**VIII. Program Funding Sources:**

Identify any non-KCCD general fund sources

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Title of Account/Grant/Categorical Funding** | **Start Date** | **End Date** | **Percentage of Program Budget Covered** | **Positions funded wholly or in part** |
| Foundation Accounts | 2207.0300 Radiologic Technology Program | On-Going | On-Going | n/a | n/a |
| Grants | n/a |  |  |  |  |
| Categorical Funding | n/a |  |  |  |  |

**IX. Conclusions and Findings:**

Present any conclusions and findings about the program.

The Radiologic Technology Program is a highly successful Associate in Science Degree program at the college which meets one of the primary missions of the California Community College Core Mission through Career and Technical Education. The career of radiography is a high demand, high wage career that serves the Kern Community College District service area by providing well qualified x-ray technologists that meet community needs. As a result, the program meets the core values of the college by fostering curiosity and critical thinking, developing ethical standards for the safe use of radiation, fostering diversity in the care of patients and a strong commitment and partnership with our medical community in training future competent radiographers.

Program outcomes remain excellent with both success and course retention exceeding college-wide performance. In addition, the program maintains excellent licensure exam results. To continue to maintain this excellence in the future while providing well trained medical imaging professionals for employment, the program’s on-campus x-ray laboratory requires immediate equipment replacement. Current equipment is broken and does not meet regulatory standards while other x-ray equipment does not reflect the digital imaging environment of the local healthcare industry. Future goals include the expansion of the program through the development and offering of a computed tomography (CT) program.

**VII. Attachments (place a checkmark beside the forms listed below that are attached):**

[ ]  [Faculty Request Form](http://committees.kccd.edu/bc/committee/programreview) [ ]  [Classified Request Form](http://committees.kccd.edu/bc/committee/programreview) [x]  [Budget Change Request Form](http://committees.kccd.edu/bc/committee/programreview)

[ ]  Professional Development [x]  [ISIT Form](http://committees.kccd.edu/bc/committee/programreview) [x]  [M & O Form](http://committees.kccd.edu/bc/committee/programreview)

[x]  [Best Practices Form](http://committees.kccd.edu/bc/committee/programreview) **(Required)** [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_