Model Assessments/Sections for Program Review – 2014/2015

Rad Tech Program Assessment – Submitted by Kimberly Nickell

Trend Data Analysis from ACDV – Submitted by Kimberly Nickell

Electronics Technology Program Assessment – Submitted by Anna Agenjo

Physics & Astronomy Program Assessment – Submitted by Anna Agenjo

Nursing Mission Statement – Submitted by Kimberly Nickell

Rad Tech Model Program Assessment

**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.

**ACDV Trend Data Analysis Model**

**IV. Trend Data Analysis:**

Highlight *any significant changes* in the following metrics and discuss what such changes mean to your program.

1. Changes in student demographics (gender, age and ethnicity). None
2. Changes in enrollment (headcount, sections, course enrollment and productivity).

Due to budget decisions, the ACDV department experienced drastic section reductions (23%) from 2010-11 to 2013-14. However, our first day enrollments increased by 10.5% during this same era causing an increase in students per section of 26%. We have planned an increase of 20% for 2014-15, and based on demand based on placement data, ACDV needs to strategically increase section counts by 10% by the 2015-16 year. Research shows that developmental education students need a lower teacher- student ratio, ideally 20:1. There was a decrease in FTEF by 38%. ACDV decreased from 13 FT faculty to 8 FT faculty over the past 2 years. In addition, the next few years are going to bring an influx of students in need of basic skills instruction (80% of BC students place into1 or more basic skills courses) in addition to a higher demand at the state level to accelerate the basic skills coursework with lower units, which means we need to add many more sections of accelerated, summer bridge (student success), rural, weekend, and evening sections.

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

Success and retention rates have continued to rise since 2010-11 due in part to curriculum revisions and successes in accelerated courses.

1. Other program-specific data that reflects significant changes *(please specify or attach).* Changes in student b.
2. Other program-specific data *(please specify or attach) See section 2A and attached.*
3. The ACDV, English, Math, and ESL, along with other CTE and discipline departments on campus continue to work collaboratively in order to continue offering accelerated and linked courses for basic skills students who are in general education and CTE courses.
4. Last year the Math Department included working with ACDV as their Number One Strength in their unit plan update. “*Strength: Working with the Academic Development Department to design a fast track AC-Dev 78-50 program. We met with AC DEV and designed a fastrack class. AC DEV is hoping to try out the class this year.”*
5. We currently do not have adequate access to data to track the progression of students in order to determine the effectiveness of courses in regard to student success and retention. In order to effectively assess our program offerings, we need more Institutional Research support. We plan to meet with district IR
6. Degrees and Certificates: List the degrees and/or Certificates of Achievement awarded by the program, if applicable.

Although there are no degrees or certificates directly related to ACDV, a high number of students who started in ACDV coursework completed a wide range of degrees and certificates within 6 years of their first course in ACDV (Total Awards 09/10-13/14 = 4,511). Since 2009-10, AA awards are up by 8%, AS Awards are up by 14%, and Certificates are up by 31% for students who began their academic coursework in one or more ACDV courses.

Highlights of awards by number for ACDV students from 2010 through 2014:

AA Business 286

AA Education/General Education 578

AA/AS Social/Behavioral Science 600

AS Math/Science 262

CERT Allied Health 508

CERT Family/Consumer Education 528

CERT Industrial Technology 276

**Electronics Technology (Part of the Engineering and Industrial Technology Department)**

**Program Assessment**

**II. Program Assessment (focus on most recent year):**

1. How did your outcomes assessment results inform your program planning?

**For last year’s PR, we identified the following issues as a result of outcomes assessment measures:**

1. **The need for additional Job Skills Certificates to allow students the opportunity to focus on a specific industry sector and take targeted classes to allow them to enter employment sooner (as opposed to completing the 32 unit Certificate of Achievement). They could then take the remaining courses for the C.A. outside of their work hours. *Results:* Four Job Skills Certificates were Board-approved last year, and several dozen were issued in the spring semester (when the certificates were approved). In addition, we noticed that more of our students were taking multiple courses in our program (as evidenced by a huge increase in FTES when compared to the non-duplicated headcount).**
2. **The need to “modularize” our curriculum and revise it to allow for hybrid courses utilizing “active learning” in class rather than lecture. The benefits we anticipated would be to have more active participation by students during the course, rather than the passive lecture mode of instruction, as well as the ability to offer two different levels of a course (a “basic” and an “advanced” level) during the same instructional time. Students would take one or the other of the courses, but the courses could be offered more often, since the minimum enrollment requirement would be less for each section since they were “stacked”. *Results:* We began the revision of curriculum this year, with two professors working on the curriculum materials funded by a grant from Chevron.**

**This year, we were able to look at two different cohorts of students in our program: our general-population students, and those who are part of the C6 grant. C6 students had additional assistance such as academic skills workshops, a dedicated advisor, a lower headcount in those courses, additional workshops on employment preparation, the use of WorkKeys testing in math and gathering information to allow C6 students the opportunities to get additional help and remedial action for deficient areas, and a few other advantages such as field trips to local employers and others. In addition, our faculty members were observed by Academic Development faculty, and suggestions for teaching strategies to incorporate into our classes were given.  
  
The challenge in comparing data and results was that the C6 program focused on only one educational goal: to earn a Job Skills Certificate in Manufacturing Automation. The general population of students had many different goals: to take a class or two for employment advancement, four different Job Skills Certificates to choose from, a Certificate of Achievement and possibly an Associate’s degree, or perhaps taking a basic Electronics class for personal interest or as an elective in another Engineering and Industrial Technology program. Therefore, “completion” and each student’s definition of educational “success” varied between students. It was not as simple as looking at the success rates of a class as a whole. In fact, KCCD “Coursebook” data only allowed us to look at classes, not sections. However, we looked at class-level results over time, and found some interesting trends:**

* **The withdrawal rate for ELET B1 dropped to 16% last year (compared to the high of 24% in a previous year), meaning the retention rate was the highest in the past five years. This also corresponded with one of the largest enrollment in this course in the past five years (181 students at census date).**
* **The success rate for ELET B1 students only varied slightly from year to year (between 59.0% to 62.1%), but there were different combinations of instructors (full-time and adjunct) with various teaching experience. About six years ago, we revised our common course materials for the class, and the curriculum has been fairly consistent throughout the past five years. The fairly consistent success rate despite the variance of instructors shows that our curriculum is an important element for student success.**
* **The C6 courses that were included were ELET B1, B4, B5, B55a, B56, and B70. Last year’s success and retention percentages were compared with the five-year average. Gains in the success percentage were noted in B5, B55a, B56, and B70, and were between 5.28% and 7.65%. Gains in the retention percentage were noted in B56 and B70. Most of the remaining courses had only modest declines in retention rates. Since retention percentages normally fluctuate from year to year, we do not feel this is need for concern.**
* **It was apparent to us that collecting better SLO and PLO data is important to determine the reason for the success indicator improvement, so we can get a better picture as to the positive gains by outcome and be able to expand the techniques and methods we feel were responsible for the gains.**

1. How did your outcomes assessment results inform your resource requests?

**In the past five years, we have seen an overall increase in student success. When we consider the changes that have taken place during this time, we can see that there are five different possible causes:**

1. **We increased our stock of equipment and new, relevant technology throughout our program’s courses.**
2. **We utilized the C6 “guiding principles” and made use of resources available to students and our own instructional methods, including the professional development each of us received.**
3. **We offered more sections of classes, and were able to offer more daytime classes as well. We were able to add a third full-time faculty member to our program last fall.**
4. **We maximized the use of our facilities, and changed course content to move from 4-unit, two days per week classes for all courses to mostly 3-unit, one day per week courses.**
5. **Most sections of our courses use Moodle to deliver instructional resources to our students.**

**This year’s resource request are focused on improving these efforts, but are mainly focused on increasing student access to our program and its courses. Although SLO’s and PLO’s are not focused on industry needs and labor market data, the need for our program to grow is well supported by that type of data. A CTE instructional program can have outstanding SLO and PLO data, but this is not beneficial to the community and ultimately to the student if the job market is poor.**

1. Instructional Programs only**:** How do course level student learning outcomes align with program learning outcomes?

**We are not sure what you are looking for with regards to this question. In your handbook, there was simply a vague re-statement of the above question. Do you want a table that cross-references this, or a narrative? We looked on your committee website and didn’t see anything that answers this question.**

**Our attempt at answering this question is: Our program consists of eleven different courses, and each course has its own SLO’s that distill the course outlines into measurable knowledge, skills, and competencies that the students should demonstrate in order to be considered a successful student. Our PLO’s are more global skills and abilities that a person who completes our program should have attained.**

1. How do the program learning outcomes align with Institutional Learning Outcomes?

**The Institutional Learning Outcomes for BC were only recently developed; years after our Program Learning Outcomes were developed. Our ILO’s are:**

1. **Think critically and evaluate sources and information for validity and usefulness.**
2. **Communicate effectively in both written and oral forms.**
3. **Demonstrate competency in a field of knowledge or with job-related skills.**
4. **Engage productively in all levels of society—interpersonal, community, the state and nation, and the world.**

**Our program’s PLO’s are:**

1. **Students will demonstrate proficiency in technical skills and safety principles required for industrial employment.**
2. **Students will demonstrate problem solving skills used in industrial design and product development.**
3. **Students will demonstrate a deep understanding of the core material required for transfer to a four year university degree program or for certification in the department programs.**

**Note that PLO #2 has been revised since it was originally written, but we are under the impression that we cannot change it now that it has been stated. Our PLO #2 could be re-written as “Students will demonstrate problem solving skills that are desirable for technical employees in the industries in which we train students.”**

**BC ILO #1 corresponds in some way to all three PLO’s, since problem-solving and critical thinking is woven through our courses.**

**BC ILO #2 is developed in courses specific to written and oral communication, but in some of our courses, there are written and orally-communicated projects assigned.**

**BC ILO #3 corresponds in some way to all three PLO’s, especially once the SLO’s for the individual courses in the program are examined.**

**BC ILO #4, to us in a CTE program, is intended to create an employable, productive member of society. Each of our PLO’s are meant to emphasize the overall skill areas for employment in the industry sectors for which we prepare students.**

**Physics and Astronomy Program Assessment**

**II. Program Assessment (focus on most recent year):**

1. How did your outcomes assessment results inform your program planning? **Astronomy:** Data from assessment of the SLOs in the astronomy courses is posted in Curricunet. The data do not show any need to modify astronomy course offerings. The outcomes assessment data do show a need to increase in-class instruction on lunar phases in the Solar System Astronomy B3 course and Physics of the Cosmos Astronomy B1 course, so a new set of worksheets was developed. It is too soon to evaluate the effectiveness of the new curriculum for lunar phases. Retention rates in the Solar System course are higher than for the Physics of the Cosmos course (+14% in Spring 2014, +3.5% in Fall 2013, +27.3% in Spring 2013, +0.3% in Fall 2012, +12.1% in Spring 2012, & +10.9% in Fall 2011). Success rates in Astronomy B3 course are higher than for the Astronomy B1 course (+20.7% in Spring 14, +3.5% in Fall13, +26.8% in Spr13, +2.7% in Fall12, +5% in Spr12, & +12.1% in Fall 2011). Besides the more tangible (less abstract) subject matter, the Solar System class has been using a sophisticated interactive online homework system through Pearson Higher Education that enables homework to be assigned *and graded* before every class lecture. This forces the Solar System students to remain focused on the course content. The Physics of the Cosmos students are now using the online homework system starting Fall 2014. For the planetarium outreach part of our program, the continued rave reviews, repeat visits by K12 schools year-after-year, and very rapid selling out of planetarium evening shows illustrate the need to continue our planetarium offerings. The Planetarium is also a draw for the NON-science major students to enroll in the astronomy classes. **Physics:** Assessment results from physics course SLO’s indicates students in all physics courses (and especially in courses in the calculus-based sequence) rate extremely well in showing proficiency in critical thinking exercises such as qualitative and quantitative synthesis problems. Data collected also shows that knowledge of and appropriate use of conservation laws to accomplish problem solving is very evident in student assignments and evaluations. Areas of weaknesses in course SLO’s includes a less than satisfactory ability to communicate technical information in a fashion understandable to an educated reader in critical writing assignments as are placed in the lab component of the course. Another weakness seems to be a slightly lower than hoped for attention to units and uncertainties associated with observations and physical quantities dealt with in the lab portion of the course. These two mentioned weaknesses can be remedied somewhat, we believe, by stand-alone exercises in the lab during the first portion of the semester that emphasize and reinforce this learning.
2. How did your outcomes assessment results inform your resource requests? **Astronomy:** assessment of our SLOs did not necessitate resource requests beyond the normal red pens and staples requests needed for evaluating assignments. We had a technology request for a new SciDome system based on the age of the system (system is now 8 years old). Physics: Slightly reflected in course SLO’s but more directly concluded from anecdotal evidence supplied by students, simulations used in the last two courses in the calculus-based physics sequence and the last course in the trig-based physics sequence were deemed to be less than engaging by a fraction of the students in the course (although many others argued otherwise). It has been determined to either revise those simulations to make them more engaging (probably by source selection) or to request the purchase of more expensive lab equipment, the lack of which was the reason that we resorted to simulations. **Physics:** A noticeable weakness shown in the assessment of one of the SLO’s used in both the PHYS B4B and PHYS B2B courses was interpreted as being due to the diluted involvement of students in laboratory activities in exercises in which limited equipment necessitated working in larger than normal lab teams. Additional apparatus has been requested for those lab experiments that are involved in hopes that it will make a difference.
3. Instructional Programs only**:** How do course level student learning outcomes align with program learning outcomes? **Physics:** Physics courses have fairly specific and detailed course SLO’s that are not nearly as aligned to the program SLO’s as they are with the SLO’s listed in the C-ID descriptors for those C-ID course with which ours articulate. **Astronomy:** Astronomy courses have broadly-defined SLOs that mesh closely with the program SLOs. Each Astronomy course stands on its own---they are not part of a sequence, so they achieve the same SLOs through different content. The mapping of course SLOs to PLOs to ILOs is shown in the following mapping.

|  |  |  |
| --- | --- | --- |
| **Course SLO** | **Program Learning Outcome** | **Institutional Learning Outcome** |
| Demonstrate a correct understanding of the cause of a given phenomenon, the physical nature of a given object, and the properties and processes of a habitable world [this is the "what we know" SLO] | Demonstrate a knowledge of and recognize the processes that explain natural phenomena | I. Think critically and evaluate sources and information for validity and usefulness.  II Communicate clearly and effectively in both written and oral forms *[we focus on written form]*  III. Demonstrate competency in a field of knowledge or with job-related skills. |
| Describe the scientific method, give the evidence for an explanation and describe the technique(s) used in determining either the property of something, how it interacts with its environment, or its origin and history [this is the "how we know" SLO] | Apply the methodologies of science when approaching a problem | I. Think critically and evaluate sources and information for validity and usefulness.  II Communicate clearly and effectively in both written and oral forms *[we focus on written form]*  III. Demonstrate competency in a field of knowledge or with job-related skills. |
| Solve word problems and apply concepts to new situations not given in the book or in lecture using logical, deductive reasoning. | Apply logical quantitative and qualitative reasoning in solving problems or analyzing arguments | I. Think critically and evaluate sources and information for validity and usefulness.  II Communicate clearly and effectively in both written and oral forms *[we focus on written form]*  III. Demonstrate competency in a field of knowledge or with job-related skills. |
| Use a computer to locate information on the internet. |  | I. Think critically and evaluate sources and information for validity and usefulness.  III. Demonstrate competency in a field of knowledge or with job-related skills. |

Nursing Mission Statement, Description & Support of College Mission Model Example:

Program Mission Statement:

The mission of the Associate Degree Nursing (RN) Program is to prepare entry-level registered nurses as providers and managers of care across the health/illness continuum and as members within the profession. Graduate nurses will collaborate with members of the health care team, be effective communicators, be politically aware, and demonstrate a commitment to life-long learning. Upon completion of the program, graduate RN’s will meet the standards of competency as required by the California Board of Registered Nursing (CCR, Title 16, Division 14, Article 4, Section 1443.5.

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

The Registered Nursing Program, as an integral part of Bakersfield College, supports the mission, core values and vision of the College by providing high quality education to our socially and ethnically diverse students.

**Support for the Core Mission: Workplace Skills**

As a Career and Technical Education (CTE) Program, the RN program supports the core mission by offering academic and vocational education to prepare men and women for careers in Nursing. Registered Nursing remains a high-wage, high-growth, high- demand occupation. Our advisory boards indicate the vacancy rate and turnover rate for nurses is equal to what BC, CSUB, or the proprietary agencies can provide and recommend that we maintain our current enrollment levels for the Registered Nursing (RN) Program. The 2013-2030 supply and demand forecasts for the RN workforce are based on data from the 2012 California Board of Registered Nursing (BRN) Survey, the US Bureau of Health Professionals 2008 National Sample Survey of RN’s, and data extracted from the BRN license records. This data indicates that the California RN supply is forecasted to match demand over the next 20 years if RN graduations remain stable and state to state migration does not significantly change. (Data extracted from <http://futurehealth.ucsf.edu/supplydemand/dashboard.html>)