

Bakersfield College

Program Review – Annual Update 2015

I. Program Information:

Program Name: Construction Technology

Program Type: Instructional Student Affairs Administrative Service

Bakersfield College Mission: Bakersfield College provides opportunities for students from diverse economic, cultural, and educational backgrounds to attain Associate and Baccalaureate degrees and certificates, workplace skills, and preparation for transfer. Our rigorous and supportive learning environment fosters students' abilities to think critically, communicate effectively, and demonstrate competencies and skills in order to engage productively in their communities and the world.

Describe how the program supports the Bakersfield College Mission:

Career and Technical Education: Students have the opportunity to obtain a Certificate of Achievement or an Associate of Science degree. These involved students select these courses from the Construction Technology area and/or from the various related departmental programs (Industrial Drawing, Architecture, Wood Technology and Industrial Technology). Many students from other disciplines (i.e. architecture, wood working and etc.) also take various construction courses to enhance their related professional growth.

Transfer: Introduction to Construction and Estimating, Print Reading & Scheduling courses are transferable. Furthermore many transferring students in the architecture, industrial drawing, construction management and wood working programs find that the various construction courses and related construction experience complements their personal professional growth.

Basic skill: The construction program recognizes that many of the involved students are deficient in basic math, reading, writing and workforce preparation skills. Recognizing this, much of the instruction is self-paced and modularized. Students needing further basic skill support are encouraged to seek support from services within the college.

Program Mission Statement:

The construction program supports the many diverse construction occupations within the County of Kern's five main construction sectors (Residential, commercial, industrial, heavy civil and environmental construction sectors). Because of Kern County's rising need for skilled construction personnel, the Construction Technology program is dedicated to provide involved students with the opportunity to develop skills and knowledge for enter into these construction sectors. Emphasis is placed on blending technical skill development with practical lab exercises.

The construction program and related staff strive to offer relevant, current and student centered instruction. Instructors are also sensitive to the diversity of our students, their educational needs, and their career goals. To accommodate our diverse student population, much of the instruction is modularized, interactive and self-paced. The construction staff is also sensitive in assisting each student to define their specific career goal.

II. Progress on Program Goals:

A. List the program's current goals. For each goal (minimum of 2 goals), discuss progress and changes. If the program is addressing more than two (2) goals, please duplicate this section.

Program 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
1. Develop instructional training units.	<input type="checkbox"/> 1: Student Learning <input type="checkbox"/> 2: Student Progression and Completion <input checked="" type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	<input checked="" type="checkbox"/> Completed: <u>May 2015</u> (Date) <input type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	
2. Improve student retention	<input type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	

B. List new or revised goals (if applicable)

New/Replacement Program Goal	Which institutional goals will be advanced upon completion of this goal? (select all that apply)	Anticipated Results
Revise program curriculum to focus on construction management.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	Development of a construction management program to prepare students for careers as construction supervisors and project managers. This program will share resources with the architecture and woodworking programs.

III. Trend Data Analysis:

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

- A. Changes in student demographics (gender, age and ethnicity).

No significant changes over the past three years.

- B. Changes in enrollment (headcount, sections, course enrollment and productivity).

The unduplicated headcount showed stability last year with a value of 68 (was 67 in 2013 and 77 in 2012). In 2014-15 there were 39 declared majors in the program with a five-year average of 42. 2014 saw an increase in first-day enrollment from 86 in 2013 to 103 in 2014. Students per section remained steady at 22. These values show an improved trend meaning that that student interest in the construction program is hopefully on the increase.

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

The 2014 retention rate was 62% and the success rate was 53%. These were well below the college-wide retention and success rates of 86% and 69%. The 2013 retention rate for the construction program was 79%. The drop in the retention rate could have been due to a combination of two factors. The core construction classes, CNST B50A "Residential Construction I" and B50B "Residential Construction II" are each worth 7 units, requiring a significant portion of a student's course load. Last year financial aid policies became much stricter. As students realized that they were not passing the course, or lost interest, they most likely dropped rather than incurring financial penalties for failing a class.

- D. Changes in the achievement gap and disproportionate impact (Equity).

20-29 year-olds are the largest age group in the construction program (43% last year) yet are 17% below the college average success rate for the same age group (66%). African Americans are the ethnic group with the most significant success gap, achieving 32% in the program versus 49% college-wide. As stated in section "C" above, the financial aid policies and high-unit-value for two main courses could have negatively impacted this student group.

- E. Other program-specific data that reflects significant changes (*please specify or attach*). All Student Affairs and Administrative Services should respond.

IV. Program Assessment (focus on most recent year):

- A. How did your outcomes assessment results inform your program planning?

The program level outcomes need to be revised. Although students were gaining the technical skills and safety knowledge required for employment, employers would prefer to hire BC construction students as construction managers, requiring a higher level of critical thinking and problem-solving skills.

- B. How did your outcomes assessment results inform your resource requests? The results should support and justify resource requests.

The instructor will be retiring at the end of this year and his replacement will be requested below.

- C. How do course level student learning outcomes align with program learning outcomes? Instructional programs can combine questions C and D for one response (SLO/PLO/ILO).

The student learning outcomes do support the program learning outcomes; however, both sets of outcomes are in need of refinement to more concisely define the relationship. The current SLO's will be updated to require higher-level critical thinking skills and specific, measurable assessments. Likewise, the current PLO's are very broad in nature and will be updated to specifically define the relationship between the SLO's and the ILO's.

- D. How do the program learning outcomes or Administrative Unit Outcomes align with Institutional Learning Outcomes? All Student Affairs and Administrative Services should respond.

Pursue knowledge and evaluate its consequences: To accommodate our diverse student population, much of the instruction is modularized, interactive and self paced. Program makes every effort in blending course instruction with relevant lab activities.

Communicate clearly and effectively in both written and oral forms: In these class activities, students work individually or in a group and are required to communicate and /or express their skill and knowledge of that specific topic.

Demonstrate knowledge and abilities in a chosen area of study: On every lab activity, students are required to demonstrate skill and knowledge of the specific topic before they are allowed to move onto the next topic.

Appreciate their civic responsibilities: The construction industry is a dynamic profession that requires attention to civic responsibility, business ethics and social responsibility. Instruction and skill development activities make every effort to replicate these important responsibilities.

Institutional Learning Outcomes:

Think: Think critically and evaluate sources and information for validity and usefulness.

Communicate: Communicate effectively in both written and oral forms.

Demonstrate: Demonstrate competency in a field of knowledge or with job-related skills.

Engage: Engage productively in all levels of society – interpersonal, community, the state and the nation, and the world.

- E. Describe *any significant changes* in your program's strengths since last year.
Construction program continues to work with community and advisory members in improving curriculum and instruction.
Department leadership has been helpful to the in identifying growth opportunities for construction program.
The construction advisory committee has been refined with hopes of greater input and participation.
- F. Describe *any significant changes* in your program's weaknesses since last year.
Planning was initiated for program improvements to address the trend of low enrolled classes. These improvements will include partnering with the architecture and woodworking programs.
- G. If applicable, describe any unplanned events that affected your program.

V. Assess Your Program's Resource Needs: To request resources (staff, faculty, technology, equipment, budget, and facilities), please fill out the appropriate form. <https://committees.kccd.edu/bc/committee/programreview>

A. Human Resources and Professional Development:

1. If you are requesting any additional positions, explain briefly how the additional positions will contribute to increased student success. Include upcoming retirements or open positions that need to be filled.
2. Professional Development:

- a. Describe briefly the effectiveness of the professional development your program has been engaged in (either providing or attending) during the last year, focusing on how it contributed to student success.
- b. What professional development opportunities and contributions can your program make to the college in the future?

B. Facilities:

- 1. How have facilities' maintenance, repair or updating affected your program in the past year as it relates to student success?
- 2. How will your Facilities Request for next year contribute to student success?

C. Technology and Equipment:

- 1. Understanding that some programs teach in multiple classrooms, how has new, repurposed or existing technology or equipment affected your program in the past year as it relates to student success?
- 2. How will your new or repurposed classroom, office technology and/or equipment request contribute to student success?
- 3. Discuss the effectiveness of technology used in your area to meet college strategic goals.

D. Budget: Explain how your budget justifications will contribute to increased student success for your program.

VI. Conclusions and Findings:

Present any conclusions and findings about the program. This is an opportunity to provide a brief abstract/synopsis of your program's current circumstances and needs.

- It was determined that the construction technology program should be updated into a construction management program. Employers often find adequately trained (or trainable) construction workers outside of BC. Employers have communicated to the instructor of this program the need for personnel who can manage construction projects and supervise operations.
- The two residential construction courses, CNST B50A and B50B, are 7 units each. At 270 total classroom hours each, these courses occupy a large portion of a student's schedule. At 270 hours each, it is impossible to offer these courses for night students.
- Numbers are low for this program: the unduplicated headcount for 2014 was 68, declared majors 42, and FTES generated was 23.
- Transitioning into a construction management focus would include updating the program to increase coursework shared with the architecture program, and facilities shared with the woodworking program.

VII. Forms Checklist (place a checkmark beside the forms listed below that are submitted as part of the Annual Update):

- Best Practices Form **(Required)**
- Curricular Review Form **(Instructional Programs Required)**
- Certificate Form **(CTE Programs Required)**

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- Faculty Request Form Classified Request Form Budget Form
 - Professional Development Form ISIT Form Facilities Form (Includes Equipment)

Other: _____

