**Bakersfield College**

**Program Review – Annual Update**

**I. Program Information:**

Program Name: Computer Science (AS-T)

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:

The Computer Science (AS-T) 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. The Computer Science (AS-T) Program meets the College’s core mission areas by providing career and technical education and transfer courses. The program supports career and technical education by offering courses, and providing training, that are highly sought after by employers. By design, the AS-T degree allows students to seamlessly transfer to a CSU Computer Science program without the need to take additional lower division courses.

Program Mission Statement:

The Associate in Science in Computer Science for Transfer degree (AS-T in Computer Science) is designed to provide students a clear transfer pathway to the CSU computer science major and completion of the computer science baccalaureate degree, to grant guaranteed admission to a CSU to a similar major, with junior standing, and the ability to complete their remaining requirements within 60 semester or 90 quarter units. Students will take courses in computer science and related fields that will provide the theoretical and practical knowledge necessary to work in a variety of computer related fields such as Software Engineering, Computer Engineering, Computer Systems Analysis, Network Engineering, Cloud Computing, Mobile Application Development, Computer Support, Computer Information Systems, Database Administration, Network Security, and Web Development.

**II. Progress on Program Goals:**

1. 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. We plan to discuss and coordinate assessments and best practices. | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | Still working on this. With the addition of a third instructor that is teaching the CS ADT courses, this goal is even more important. |
| 2. | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) |  |

1. 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** |
|  | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement |  |

**III. 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).

No demographic data breakdown has been provided for the AS-T program. Note that half of the classes required for the AD-T are not in the Computer Science department. Students in other programs also take these courses, so no definitive answer to this question is possible, given the available data.

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

We now have 4 instructors that teach one or more CS AS-T courses. As a result, we are teaching every course, every semester. That makes it easier for students to take the courses they need to graduate in two years. In addition, we endeavor to schedule our classes so that they do not conflict with the Physics and Math courses that the CS student must take to complete the CS AS-T degree. We increased the number of sections by about 83% and enrollment has increased by about 54%. I think we have reached the saturation point for the number of sections we offer. Only by increasing demand by getting the word out about the attractiveness of a career in CS will we need more sections.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course ID | Course Title | Fall 2015 | | | | | Fall 2016 | | | | |
| Sections | Current Enrollmt | Students/ Section | Waitlist Enrollmt | Current FTES | Sections | Current Enrollmt | Students/ Section | Waitlist Enrollmt | Current FTES |
| COMPB10 | Intro to Progrm Method/Python | 1 | 33 | 33 | 0 | 3.5 | 2 | 62 | 31 | 0 | 6.5 |
| COMPB11 | Progrmming Concepts & Method I | 4 | 125 | 31 | 0 | 13.1 | 5 | 129 | 26 | 0 | 13.6 |
| COMPB12 | Programming Concpts & Methd II |  |  |  |  |  | 2 | 55 | 28 | 0 | 5.8 |
| COMPB13 | Computer Architecture & Organi | 1 | 32 | 32 | 0 | 3.4 | 1 | 22 | 22 | 0 | 2.3 |
| COMPB14 | Discrete Structures |  |  |  |  |  | 1 | 24 | 24 | 0 | 2.5 |
|  | Totals | 6 | 190 |  |  |  | 11 | 292 |  |  |  |

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

There are no online/distance courses in this program. As shown in the chart on the right, with one exception (probably attributable to grading style of new instructor), there are no significant changes in the success rates for the computer science classes that comprise the CS AS-T degree.

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

N/A

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

Use attached **Assessment Report Form AU Tab**

1. Describe *any significant changes* in your program’s strengths since last year.

We have added a fourth instructor, which allows us to make more sections available to students.

1. Describe *any significant changes* in your program’s weaknesses since last year.

Because of a reduction in the Supplemental Instruction program, we now have only one SI Leader for five sections of COMP B11, which makes it more difficult to provide students with valuable in-class one-on-one help with hands-on practice programming.

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

The reduction in SI support was unplanned and was announced mid-summer.

**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>

1. Human Resources and Professional Development:
2. 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.
3. Professional Development:
4. 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.

Instructors constantly improve their skills (on their own) in order to stay up to date with the latest developments.

1. What professional development opportunities and contributions can your program make to the college in the future? Unknown.
2. Facilities:
3. How have facilities’ maintenance, repair or updating affected your program in the past year as it relates to student success?

Some computers have been broken since the beginning of the Fall 2015 semester, which makes it difficult for each student to be able to use a computer when the class is full. Also, it can take a long time for students to be able to log in and be ready to work – that can necessitate work-arounds that are not ideal. Much of this has been corrected, so that at the beginning of this semester (Fall 2016) the log-in delay is much improved. (NOTE: Today (9/19), we experienced login delays, reminiscent of previous problems.)

1. How will your Facilities Request for next year contribute to student success? Unknown.

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? Unknown.
2. How will your new or repurposed classroom, office technology and/or equipment request contribute to student success?

We have a brand new computer lab (B5), which we have needed for a long time. The new lab allow us to teach more sections, at times that students need them.

1. Discuss the effectiveness of technology used in your area to meet college strategic goals.

We make full use of in-class computers, projectors, software (compilers, assemblers). In addition, we have a virtual server at the district office that we are using for the COMP B13 class (Computer Architecture and Organization).

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

**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.

I would like to see the SI program return to the way it was in 15/16. It was a win on many fronts:

* Students got one-on-one immediate feedback on in-class hands-on practice.
* Students could attend weekly sessions to augment class time and reinforce concepts learned in class.
* Students who became SI leaders got valuable experience that not only increased their grasp of the material, but helped them become organized leaders.

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

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

Curricular Review Form **(Instructional Programs Required)**

[Certificate Form](http://committees.kccd.edu/bc/committee/programreview) **(CTE Programs** **Required)**

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

Professional Development Form  [ISIT Form](http://committees.kccd.edu/bc/committee/programreview)  [Facilities Form](http://committees.kccd.edu/bc/committee/programreview) (Includes Equipment)

Other: **Assessment Report Form**