**Bakersfield College**

**Program Review – Annual Update**

**I. Program Information:**

Program Name:  **Animal Science AS Degree:**

Program Type: x 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 Agriculture Department is a Career Technical Education (CTE) department. Therefore, our certificate programs align us with one of the core missions of Bakersfield College, and that is to supply trained individuals to work in vocational jobs of regional agricultural businesses. Agricultural supervisory level jobs have increased about 4% in Kern County and in California. This is the highest percentage growth of any major occupational category. These jobs require a minimum of an associate degree and two years of experience.**

Program Mission Statement: **The mission of the Bakersfield College Agriculture Department including The Animal Science program is to provide pertinent state-of-the-art education for vocational and transfer students in order to produce skilled agricultural and natural resource professionals for the industry, both public and private. This is in accordance with the college mission to respond to student and community needs with efficiency and flexibility and with the BC institutional level learning outcomes, i.e. to demonstrate knowledge and abilities in a chosen area of study**.

**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.

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| **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. Ensure student success at all levels in the classroom and lab activity.
 | x 1: Student Learning x 2: Student Progression and Completion ☐ 3: Facilities ☐ 4: Oversight and Accountability x 5: Leadership and Engagement  | ☐ Completed: \_\_\_\_\_\_\_\_\_\_ (Date) x Revised: \_8/21/2016\_\_\_ (Date)**x** Ongoing: \_8/21/2016\_\_\_ (Date) | This program goal is current and ongoing.  |
| 2. Review and revise degree, certificate, and course offerings as needed to balance workplace needs with student career success | x 1: Student Learning x 2: Student Progression and Completion ☐ 3: Facilities x 4: Oversight and Accountability ☐ 5: Leadership and Engagement  | ☐ Completed: \_\_\_\_\_\_\_\_\_\_ (Date) x Revised: \_8/21/2016\_\_\_\_\_ (Date)**x** Ongoing: \_8/21/2016\_\_\_\_\_\_ (Date) | Ag advisory committee for BC agriculture department stress the need for qualified graduates with knowledge and skill in the subject of animal science.  |
| 3. Hire a full-time Veterinarian Technician Instructor to teach vet-tech class course load.  | x 1: Student Learning x 2: Student Progression and Completion ☐ 3: Facilities x 4: Oversight and Accountability x 5: Leadership and Engagement  | ☐ Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_ (Date)**x** Ongoing: \_8/21/2016\_\_\_ (Date) | This need is important to the continuation of the program as it relates to current trends in the animal science industry. |

1. List new or revised goals (if applicable)

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| **New/Replacement Program Goal** | **Which institutional goals will be advanced upon completion of this goal? (select all that apply)** | **Anticipated Results** |
| **Acquire instructional supplies and materials needed to ensure viable and relevant instruction**  | ☐ 1: Student Learning x 2: Student Progression and Completion x 3: Facilities x 4: Oversight and Accountability ☐ 5: Leadership and Engagement  | **continue purchasing supplies needed for classroom and laboratory instruction, maintenance of livestock facilities and maintenance of instructional facilities.** |

**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). **In the area of gender we have had a 1% increase in females from 79% in 2015b to 80% in 2016 and a 1% decrease in males from 21% in 2015 to 20% in 2016. The impacts of this change to the program can affect the numbers of males and females that continue to choose animal science as a major in the future. In the category of age for 19 and younger the animal science program went from 34% in 2015 t0 45% in 2016. This is a benchmark for the number of students coming directly out of high school. This can be a positive change for us as we continue to develop our outreach program and the needs of animal science skills in the industry. The only significant change in ethnicity we have experienced is with h hispanic population increasing 5% from 2015 to 2016. This change can provide challenges when identifying english language learners in animal science and finding new ways to meet their academic language barriers.**
2. Changes in enrollment (headcount, sections, course enrollment and productivity). **Overall course enrollment in the major has increased to 226 students in 2015. This data recommends the number of sections continue to increase that are offered. This also restricts instructional time in laboratory enrollment as it challenges faculty to teach larger groups of students. Course enrollment we show a 775 student enrollment for 20115-2016. By census date we show 774 students enrolled in animal science. Our students per section data has an average of 34 students per section. College wide the student enrollment for 2015-2016 is 31 students per section. This increase in animal science continues to add need for current instructional technology and facilities.**
3. Success and retention for face-to-face, as well as online/distance courses. **No online distance courses offered at this time in animal science.**
4. Other program-specific data that reflects significant changes *(please specify or attach).* All Student Affairs and Administrative Services should respond**. In the animal science program the retention rate for 2015-2016 is 93%. Our success rate is 74%. college wide retention is 88% and success is 71%.**

**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. **The animal science students come from varied backgrounds, and their interest range from animal production to public relations in animal agriculture. The strength that this offers is an increase from last year in transferring students to four year universities majoring in animal science. There has also been a significant improvement in recruiting and growing the program**.
2. Describe *any significant changes* in your program’s weaknesses since last year. **The animal science department has been able to survive and offer a quality education even though funding district wide has been minimal. The program is in need of more monies to enhance curriculum development and instructional strategies in laboratory practices and career skill development. the need for another instructor is evident because of the dual enrollment, as the high school programs come on board, it will become difficult to maintain an elevated program at BC if I will need to teach classes off site.**
3. If applicable, describe any unplanned events that affected your program. **Funding resources lost in 2015 affected the program negatively when attempting to provide career hands on training in many necessary skill development that must be utilized by the students in the animal science program. The lack of VTEA funding for 2016 will continue to offset instruction in lab procedures and general instructional areas which require equipment and disposable materials of lab practices. The animal science program is one of five programs in the department of agriculture that does not receive an operational budget through GUE money. The staff has requested funding for the last three years and continues to receive zero funding resources. The problem is 90% of sections offered in animal science are lab classes. These classes require instructional materials and resources which must be purchased and supplied annually.**

**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.

 **The animal science program is in dire need for additional staff including a second full-time instructor. Not only will this addition add to the strength of the department itself it will enhance student performance in the areas of animal sciences. This position needs to service the vet-tech program at BC. The vet-tech program is a growing program and the private institutions in Kern County are in the process of hiring a vet-tech coordinator for their programs, by doing this it is an indicator of the growth within this industry. The animal Science staff currently cannot teach these courses because they are tied to a state test for certification and coursework must be taught by a licensed veterinarian or vet-techs. This position is in line with not only in our institutional goals but also the CCC goals for CT**E. **Dual Enrollment will also need to be addressed, KHSD is in the process of offering a full Vet Tech program for their students. the need for a animal science instructor will benefit BC because of dual enrollment protocol.**

1. Professional Development:
2. 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. **The CATA conference at Cal Poly SLO gives all agriculture teachers in the state of California an opportunity to discuss cutting edge curriculum and to take the latest skill classes that will keep us as instructor’s current with industry and increase student success at BC.**
3. What professional development opportunities and contributions can your program make to the college in the future? **In the future the agriculture department can make contributions to the college by providing opportunities for staff to work on hand-ons curriculum and program planning within our facilities. This might include offering training in lab facilities, use of technology as it’s related to the science of agriculture and career training experience.**
4. Facilities:
5. How have facilities’ maintenance, repair or updating affected your program in the past year as it relates to student success? **In 2014-2015 the Agriculture building went under extensive maintenance for updated repairs. Equipped with smartboards and new LCD projectors, this updated technology has helped instructors engage students in a more meaningful way. The use of technology has also enhanced planning for instructors as they are able to bring 21st century data to their lectures while also tapping into multimedia presentations that meet the needs of student instruction.**
6. How will your Facilities Request for next year contribute to student success?  **The animal science program is in dire need of laboratory facilities to enhance the needed skills that must accompany the coursework. This would include; livestock facilities, reproductive labs, vet-tech training labs, x-ray equipment, ultrasound technology, and nutrition analysis labs. These are the hands on skills desired by the industry in order to hire students coming from a community college agriculture program.**

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? **No effect.**
2. How will your new or repurposed classroom, office technology and/or equipment request contribute to student success? **Instructors will be able to teach the necessary core coursework for hands on laboratory training if all facilities are equipped with state of the art training modules.**
3. Discuss the effectiveness of technology used in your area to meet college strategic goals. **The animal science program is lacking technology that is needed for lab instruction. The process of an animal science lab requires up to date technology in order to meet the demand of the industry. The animal science program has used equipment from the community by doing field trips to facilities in Kern County. The need for our own equipment is becoming more evident, because all students need the hands on education that is so crucial to a CTE program. The number one strategic goal is student success, common sense would dictate the need of modern technology.**

D. Budget: Explain how your budget justifications will contribute to increased student success for your program. **The Animal science program is the only program in the Agriculture department that receives zero funding from the college, this has been a hardship because the majority of the classes offered for the major have a lab component. The challenge is to teach the needed skills that are needed in the industry without proper materials and livestock.**

**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. **In conclusion: the BC animal science program implements the study of animal science with cutting edge content and materials. The lack of cutting edge technology is a huge roadblock for the program. The lack of GU funding for a program that needs hands on labs, is an issue that has been address for the past few years with no evel. Animal science courses emphasize hands on learning with very strong teaching strategies. Lab work for the animal science student is highly valuable for a complete well rounded education.**

**The animal science program is also in need for a new full time instructor for the Vet-Tech courses. The courses are taught in the evening at the present time with adjunct staff, to teach the courses, the instructors must be a licensed veterinarian or registered vet tech. The rationale for this increase in staff is based on Dual enrollment and the fact that KHSD is underway in build a Vet- Tech program that will be dual enrolled.**

 **The animal science program is currently positioned to meet the goals of the district, college president, and the community, by increasing course completion, degree completion, transfer, and workforce ready. The program needs for funding, lab facilities, technology, and additional staff will increase the success of our students and accomplish the goals of the district, the college president,the animal science program, and the community for a better BC.**

**The Animal Science Job Outlook and Salary Data:**

**Ag Sector 2013 Jobs 5 year New Jobs % new Growth Avg. Annual Salary**

***Support 500,088 46,522 9.3% $76,067***

***Production 382,833 720 0.2% 33,089***

***Processing 214,484 9,459 4.4% $58,717***

***Distribution 546,127 75,942 14% $46,645***

***Total 1,643,532 132,643 8.1% $53,630***

***The data used is provided by California Community College:***

***The animal science program is composed of animal production for food, fiber, recreation, and companionship. The required skills and knowledge in a variety of areas including: diet, genetics habitat, anatomy, physiology, nutrition production, behavior, health, and welfare of large, small and specialty animals. Animal Science degrees develop skills in management and production to prepare students for work in animal nutrition, reproduction, health, marketing, meats, and other areas in the livestock industry. As explained throughout the APR, the need for equipment like large animal models, to be used for reproduction and anatomy, a ultra-sound machine for meat science, live animal herds like beef, and sheep, will give the student hands on skills. To teach beef or sheep production is difficult to do without live animal labs.***