**Bakersfield College**

**Comprehensive Program Review - 2016**

**I. Program Information:**

Program Name: **Plant Science AS**

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 BC Plant Science – AS program is a Career Technical Education (CTE) program that is designed for those students who wish to go directly to work in the local agricultural industry or transfer to a four-year institution upon graduation from BC. All of the course offerings are transferable to the CSU and/or UC system and the program also offers general education credit for three of the six major courses. The program demands all of the courses in the plant science discipline plus the general education required by local area employers for immediate work in the industry (see attached fall 2015 Advisory Board minutes). There were 7,314 jobs in Kern County in plant sciences is 2015 with an expected increase of 5.6% over the next five years and an average pay of $25 per hour *(EMSI Occupation Overview 2016)*. Most of the higher paying jobs require a bachelor’s degree in plant science. And, according to CalAgCC, there will be an 8.1% increase in plant and soil science jobs from 2013 to 2018 in California with and the average annual salary for those jobs is $53,630 (**[**www.calagcc.org**](http://www.calagcc.org)**).**

**The closest competing school with a Plant Science program is over 70 miles away at College of Sequoias (COS) in Visalia. Porterville College has a small agriculture program and we work very closely with them regarding curriculum needs within our district. We have the only plant science program in Kern County, which is the third leading county in the United States in value of agricultural production *(USDA Agricultural Statistics Summary 2012).***

Program Mission Statement:

**The mission of the Bakersfield College Agriculture Department Plant Science Program is to provide pertinent state-of-the-art education for vocational and transfer students in order to produce skilled plant science professionals for the industry, both public and private.**

|  |
| --- |
| ***Instructional Programs only:***   1. List the degrees and Certificates of Achievement the program offers   **CA, AA, AS in Plant Science**   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.   **After numerous discussions and a unanimous vote of our advisory board *(minutes, Ag Advisory Board meeting, November 2015)* and looking at data from *EMSI* *(2016)* showing that only about 2,500 of the 7,314 jobs in plant science requires a bachelor’s degree, it has been determined that we need to offer the AA (or AS-T when approved) and the AS in plant science. The AA (AS-T) is for transfer directly to baccalaureate programs and the AS contains more units in specific hands-on courses needed for the student to go directly to work in local industry. However, the job skills needed as a first-line farming supervisor (for example) include most of skills taught in GE courses, so the CA is reserved for those students who already GE certified but who need to advance their specific job skills for upward mobility, or are displaced workers from another industry.**   1. If your program offers a local degree in addition to the ADT degree, please explain the rationale for offering both.   **Once approved by the state, we will offer the AS-T in lieu of the AA in plant science.** |

**II. Progress on Program Goals, Future Goals, and Action Plans:**

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 goals, please duplicate this section.

|  |  |  |  |
| --- | --- | --- | --- |
| **Current Program Goals** | **Which institutional goals from the 2015-2018 Strategic Directions for Bakersfield College will be advanced upon completion of this goal? (select all that apply)** | **Progress on goal achievement**  **(choose one)** | **Comments** |
| **1. To obtain a new Plant Science lab containing state of the art equipment** | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | **The BC Agriculture building was simply repaired in 2014. We need new lab space with modern equipment to accommodate our growing student numbers and to be able to teach to industry standards. We are hoping that the new bond passes and we receive the $12 million apportionment as promised. However, we are not sure if $12 million will be enough to build new labs from the ground-up as is shown in the plans.** |
| **2. To increase the number of students majoring in Plant Science** | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_**9/1/16**\_\_\_\_ (Date) | **We have had a setback in our trend over the last five years of consecutive increases in the number of students majoring in plant science. The latest data from IRP shows that the number of plant science majors has dropped from 80 in 2015 to just 52 this semester (fall 2016). I believe that it is due to the drought; high school seniors are worried that there could be fewer jobs. This may be true in the future, but according EMSI it is not happening yet. We just need to get the word out that there are still jobs in local agriculture, but that it is the skilled workers that are in demand; not field laborers.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **3. Completely remodel the Plant Science program to include only an AS-T, AS, and CA.** | **1: Student Learning**  **2: Student Progression and Completion**  **3: Facilities**  **4: Oversight and Accountability**  **5: Leadership and Engagement** | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_**9/1/16**\_\_\_\_ (Date) | **Our new Plant Science AS-T has been approved by our curriculum committee and by the Board, but has not been submitted to the state pending C-ID approval of two of the courses in the degree pattern. Hopefully, the degree will be approved by Spring 2017. When accepted, the AS-T will replace our current AA degree, leaving us with the CA, AS-T, and AS degree programs.** |

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 must include an **action plan**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Future Goals** | **Which institutional goals from the 2015-2018 Strategic Directions for Bakersfield College will be advanced upon completion of this goal? (select all that apply)** | **Action Plan** | **Timeline for Completion** | **Lead person for this goal** |
| **1. To obtain a new Plant Science lab containing state of the art equipment** | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | **1) Now working as part of the *Writer’s Guild* toward the November 8th ballot simply disseminating information only about the bond and how it pertains to the Ag Program. We hope to get one publication with the *Kern County Valley Ag Voice* in a few weeks.**  **2) Set-up meetings with representatives of the *Kern County Farm Bureau* and the *Kern Ag Foundation* to make them aware of the coming bond and what it means to the BC Ag Department.** | **1) Sept. 15, 2016**  **2) Oct. 15, 2016** | **Greg Cluff**  **Bill Kelly**  **Greg Cluff**  **Bill Kelly** |
| **2. To increase the number of students majoring in Plant Science** | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | **1) Document why students have left the program via e-mails to students who have dropped off the list of majors in the last year. I have the list of 22 who did not graduate who are not now listed as plant science majors. I have e-mailed all of them once and am in the process of a second round of e-mails.**  **2) The action plan will depend upon the results of #1 above. If students have left because of fear of job reductions because of the drought, they need to be educated as to the fact that the industry is actually still growing and needs trained plant scientists more than ever because of the drought (EMSI 2016)** | **1) Sept. 10, 2016**  **2) June 1, 2017** | **Greg Cluff**  **Greg Cluff** |
| **3. Completely remodel the Plant Science program to include only an AS-T, AS, and CA.** | **1: Student Learning**  **2: Student Progression and Completion**  **3: Facilities**  **4: Oversight and Accountability**  **5: Leadership and Engagement** | **1) Get all courses listed in the Plant Science AS-T plan through the state C-ID approval process.**  **2) Submit the revised AS-T to the state for approval.**  **3) Once the AS-T is approved, delete the current AA degree program.** | **1) Nov. 1 2016**  **2) Dec. 1, 2016**  **3) May 1, 2017** | **Greg Cluff**  **Lindsay Ono** |

**III. 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).

**1. Gender: 53% male, 47% female – no significant change over last four years**

**2. Age: 16% <=19, 67% 20-29, 10% 30-39, 7% >=40 – very little change over the last four years**

**3. Ethnicity: 3% African American, 0% Native American, 3% Asian, 63% Hispanic, 27% White – major increase in Hispanic and decrease in White over**

**last four years, no significant change in others**

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

**1. Headcount: increased 22% from 2014-15 to 2015-16, from 272 to 332**

**2. Sections: supposedly increased from 9 to 11 from 2014-15 to 2015-16. However, I only know of an increase of one section.**

**3. Course Enrollment: census day enrollment increased 26% from 2014-15 to 2015-16 from 305 to 385. FTES increased 23% from 53 to 65 in the same**

**time period.**

**4. Productivity: (FTES/FTEF) decreased from 18.3 to 18.0 from 2014-15 to 2015-16 because of a slight increase in FTEF.**

1. Changes in achievement gap and disproportionate impact.

**There is no significant difference in retention and success across ethnicities, except for that of African Americans. African Americans had an 84% retention rate and a 68% success rate for 2014-15, which is about 10% lower for both in comparison to the other ethnicities.**

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

**There has been a slight increase in the overall success and retention rates over the last five years at 66% to 69% and 83% to 87%, respectively. This slight increase is found in both on-line and face-to-face classes, however on-line success and retention rates still lag behind the face-to-face rates by about 8%.**

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

**CA – 2, 1, 0**

**AA – 1, 2, 1**

**AS – 5, 6, 4**

**Total – 8, 9, 5**

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

**Completion of educational plan has increased from 71% to 95% in last five years.**

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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Full Name of Degree or Certificate | 2011- 2012 | 2012- 2013 | 2013- 2014 | 2014- 2015 | 2015- 2016 | Total |
| **Plant Science CA** | **0** | **3** | **2** | **1** | **0** | **6** |
| **Plant Science AA** | **1** | **0** | **1** | **2** | **1** | **5** |
| **Plant Science AS** | **0** | **2** | **5** | **6** | **4** | **17** |

**We have traditionally awarded more AS degrees than any other through the years. Notice that there are relatively few AA degrees granted over the years compared to AS degrees. Traditionally, the AA has been for transfer only, while the AS has been for transfer or for direct employment after graduation. Obviously, the students like to keep their options open.**

**A cursory look at the data above indicates that the number of CA awards is decreasing. This may be a glitch in the data or a continuing trend, we will see. If it is a continuing trend, it could indicate that employers and/or students want the GE component of the degrees and we will terminate the CA (if that is possible for a CTE program).**

**Our target is simply to increase the number of AS and AS-T degrees in the future. Given the number of plant science majors now (~55), we should graduate about one-third of those (~17) each year. We are way behind that number now.**

**IV. Program Assessment:**

Use attached **Assessment Report Form Comprehensive Tab**

1. Discuss your program’s strengths.

**1) The number of students taking courses in the program has increased moderately almost each year for the last five years. Because we have been in**

**the process of getting many of our courses GE certified for CSU transfer, the number of students is expected to continue to grow. We have a**

**strong interaction with the local high schools that have agriculture programs and those programs are growing more rapidly than ours. Although**

**many of the students from those programs opt not to continue their education in agriculture or go directly to four-year institutions, the number**

**that we receive from their programs still continues to grow.**

**2) We had 95% of our students complete their educational plan in 2014-15 compared to 75% for the college as a whole. This is probably due to the fact**

**that we heavily promote our introductory Agri B1 courses where students must complete the plans to pass the course.**

**3) Program FTES is higher than it has ever been at 65 and productivity is at 18.0, above the college average of 17.4 for 2015-16.**

1. Discuss your program’s weaknesses.

**1) According to the latest data from Admissions and Records, we have had a reduction in plant science majors from fall 2015 to fall 2016. This has**

**happened after five straight years of increases in the number of majors. I think there are two possible causes for this: 1) The drought has many**

**high school seniors incorrectly believing that local agriculture jobs are decreasing, and 2) There is a general belief in the high schools that BC does**

**not support its agriculture program, as evidenced by a lack of facilities, equipment, and supplies as compared to their high school agriculture**

**programs. This disparity between our program and the high school programs has become much more apparent in the last few years as the high**

**school programs have received a huge influx of funding from new VTEA initiatives and in general funding from the high school districts. Local high**

**school agriculture programs have an annual materials and supply budget of $20,000 while our whole agriculture department receives only $6,000**

**and serves at least three times the number of students as the largest high school program . The plant science program at BC only receives $1,000**

**per year for all materials and supplies to operate the classes and the Ag Farm Laboratory. This is a huge weakness.**

**2) We only graduate (CA+AA+AS) about six students a year and we should be graduating about 17 students a year given the number of students**

**majoring in plant science. However, we have some students who move on to four-year institutions or get a job without graduating at all. Our only**

**evidence for this at this point comes from data from some California universities with four year agriculture programs that have matriculated our**

**plant science students that do not have degrees; they are GE certified with about 12 units of agriculture classes. We really need hard data from**

**our universities regarding this issue. These students should be counted as “successes” for the plant science program and for BC in general. At any**

**rate, I have started personal e-mail communications with my plant science students wherein I relate to them the importance for them to obtain a**

**degree or certificate at BC before they leave.**

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

**Obviously, the drought has changed the outlook of the local high-school students regarding the future of local job growth in agriculture and plant science in particular. We believe this is one main reason for the recent reduction in plant science majors.**

**V. Resource Analysis:** 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.

**1) We desperately need an Agricultural Technician for the Ag Farm Lab. The lab cannot be kept in good condition simply by using the students in the courses or a student worker anymore because those personnel cannot legally drive heavy equipment like tractors anymore according to the KCCD. The position does not have to be full-time, but should be at least 20 hours per week. The person in that position must be able to repair farm machinery and irrigation systems, and be able to prepare and spray pesticides. At this time, broken machinery and a poorly cared for farm are causing two things: 1) BC to have a poor reputation in the agricultural community regarding the health of the plant science program, and 2) The necessity of reducing or eliminating the time spent teaching some of the more important SLOs needed to be in compliance for the C-ID for some courses, especially courses with field labs because of the extra time spent preparing for those labs.**

**No new plant science faculty positions are being requested at this time except that we are hunting for one adjunct plant science teacher to teach mandatory dual enrollment courses offered only at the *Wonderful Academy* in Delano this coming spring semester (2017). We are working with our dual enrollment grant coordinator and the *Wonderful Academy* personnel to find someone for the position. However, the Wonderful Company plans on teaching more classes of plant science in the future, so eventually we may need a new full-time plant science professor.**

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.

**1) We regularly attend the state and regional California Agriculture Teachers Association (CATA) conferences where we plan statewide**

**agricultural curriculum, especially the new AS-T degrees, and work on standardizing course content so that courses can be easily**

**transferred from the CCs to the universities.**

**2) We regularly attend flex week activities and other FLEX related symposiums and seminars and workgroups offered at the college, including**

**those related to student success such as “Student Pathways”, “MIH”, and “Equity”.**

**3) We regularly attend CTE meetings to help us meet our “core indicators” such as student success, retention, and employment.**

**4) I was a member of the MIH group as a Data Coach and presented the results of a study regarding attendance vs. student success in spring**

**FLEX week of 2015.**

1. What professional development opportunities and contributions can your program make to the college in the future?

**1) We will periodically volunteer to make presentations during FLEX week regarding our efforts at enhancing student success.**

**2) I will rejoin the Data Coach team as soon as my term as Ag Department Chair ends.**

1. Facilities:
2. How have facilities’ maintenance, repair or updating affected your program in the past year as it relates to student success?

**We have had no updates in facilities in the past year. The Agriculture building was repaired two years ago, but still has problems with a leaking roof and still needs repairs to cabinets and new countertops in every room. We are short of classrooms, labs, and the proper equipment in those rooms to accommodate the number of plant science students in our courses each year. Unlike BC chemistry, physics, and biology, our plant science labs must hold at least 32 students each in rather cramped and sometimes dangerous conditions. We do not have enough equipment, supplies (like slides), or even electrical outlets for each student to have their own microscope and other lab paraphernalia.**

**Tours of other community college programs in the San Joaquin Valley (COS, Reedley, and Modesto JC) showed us that those institutions have up to date plant science labs and soil science labs stocked with the necessary equipment and supplies to teach the modern concepts of those sciences. Also, COS and Reedley have less plant science students than BC.**

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

**Any program, especially an applied science program, needs to have state-of-the-art facilities and equipment to train students for the modern industry of that science. Much of what is learned in plant science education is via a hands-on experience that must go way beyond the classroom. The following are some examples for plant science:**

**1) In order to do chemical analysis of soils, we need centralized soil water extractors that run on high vacuum that are built into the**

**classroom and large lab benches with electrical power and vacuum piping (suction) to each bench.**

**2) In order for students to work safely in labs, there needs to be room for them to move from station to station to use and gather equipment**

**without literally running into or tripping over each other.**

**3) In order to have students learn to grow crops, we need enough land for them to plant those crops. We only have about three acres of**

**arable land at the Ag Farm Lab and the long term plans for the farm area include reducing that acreage for campus buildings. We can’t have**

**that small land area reduced any and continue with the necessary hands-on program required by the C-IDs for the plant science courses.**

**4) Our greenhouses need to be completely rebuilt to meet the educational standards required for both the plant science and horticulture**

**degrees. Modern greenhouses used by industry are completely programmable with automatic watering systems, air-conditioning, heating,**

**LED lighting, venting systems, humidity adjustment, and some with CO2 enhancement.**

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?

**The single most important new piece of technology that was acquired for the plant science program is our new microscope camera. This is a wonderful piece of equipment that allows us to show the students either photos or video of samples placed under any microscope. It is used in almost every Crops B5 (Plant Science) lab and in other horticulture labs. It allows the instructor to view and project videos of plant cells and tissues in real time and to discuss the form and functions of those tissues. It also allows the instructor to better help individual students with drawings of those cells and tissues. I have noticed a significant increase in the grades for the lab exercises and even in those portions of tests dealing with plant morphology and anatomy. Other than the new microscope, we have not received any significant new technology or equipment in the last year.**

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

**I have three equipment requests for the following year:**

**1) A complete set of bio-climatological measuring equipment for one of the mandated labs (C-ID) for my new Crops B5 course**

**2) A new bus for the department for transportation of students for my NRES B1 course and for other field trips for the college in general.**

**3) Until a new building with up-to-date labs is built, we need another set of soil water extractors for the Soil B1 lab. The extractors will allow for**

**more students to actually use the machinery and not just sit around and watch. As it is, there are only enough extractors for groups of three or**

**four students to a team. We need enough for one extractor to be available for each pair of students, so each can get the hands-on experience**

**needed to work in the soil lab industry.**

**All requests are necessary for the continued operation of those courses within state guidelines as outlined in the course C-IDs.**

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

**1. Student learning – The newest technology that is used in plant science is generally very expensive; GPS driven tractors, plant cell culture labs, gas chromatographs for soil and plant analyses, and much more. We have very little of this equipment, but we do have the cheaper versions of some of the machinery that can do the same thing and, as long as the bus holds up, we can visit businesses that do have the newest and most expensive equipment available. For example, we can at least introduce our students to plant cell culture with our small laminar air flow hood, have them use a GPS guided monitor to drive a tractor, and use a selective ion meter to measure soil fertility parameters. However, as our class sizes grow and as the industry develops more modern machinery, it is becoming harder and harder to “make-do” with what we have.**

**2. Student progression and completion – Because every one of our plant science courses have large lab components, we have only been able to adapt three of them as on-line or at least hybrid courses and we can only do this by offering optional field labs. However, those courses have been very successful; the fill rates are very good and the success rates are at 69%, which is well above the college average of 55%. Many of the on-line students are full-time workers from remote areas that could not otherwise take the courses.**

**Also, we are constant users of the *Early Alert* system and it has worked very well. About half of the students we notify of scholastic problems catch up and/or improve their grades. We hope that *Starfish* is even more successful.**

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

**The total GU budget for the BC Plant Science program is only $1,000 per year and that is supposed to cover summer courses too. Out of that comes**

**money for all of the supplies for the labs and even for repair and maintenance of the Ag Farm Lab. There is not enough money to have the supplies**

**necessary to be able to have small lab teams that are conducive to learning. We are a very “hands on” oriented program with students who need**

**that type of learning to stay engaged. We need to have lab teams of only two students, not three or four students, so that every student will have a**

**chance to use the materials and machinery that goes with it, such as soil water vacuum extractors or selective ion meter analysis or even model**

**building using paper, pipe cleaners, and tape. The list of needed supplies goes on and on.**

**VII. Faculty and Staff Engagement:**

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

**1) Committees – ISIT, FCDC, CTE, Data Coach, Mech Ag Hiring Committee, Faculty Evaluation Committees every semester**

**2) Presentations – Fall 2015 Flex Week – *Effect of Absenteeism on Course Grades at BC***

**3) Departmental Activities – Garden Fest, FFA contests, SAF dinners, Ag Advisory Board meetings, CATA meetings**

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

**Personally, I do not think that adjunct faculty participate as well as they should in departmental affairs, period. They are invited to any and all departmental training, discussions, and decision-making activities, but usually do not opt to participate because of time constraints. The few exceptions to this trend are the Ag Advisory Board dinners, SAF dinners, and Garden Fest. We would like all adjuncts to attend our weekly departmental meetings, but the 4pm Monday meeting time is makes it hard for them to get out of work in time. Maybe we should make the meeting later in the evening at least once a month.**

**VIII. 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.

**1. The Plant Science program has lost a significant number of majors (~70 to ~55) this last year after five straight years of growth. This is probably due**

**mostly to the effects the drought has had on the reputation of the industry as being a job provider. We are developing a program of outreach to**

**counteract that mostly incorrect perception .**

**2. The Plant Science program has relatively high success and retention rates that have remained stable over the last five years.**

**3. The Plant Science program has a need for more laboratory space and more equipment so each student can have better access to the tools**

**necessary to learn.**

**4. The Plant Science program is in need of a much larger and more consistent budget for supplying students with the necessary tools and expendable**

**supplies needed for hands-on labs to meet industry demands and state curricular regulations (C-IDs).**

**5. The Plant Science program is in need of an adjunct Plant Science instructor to meet the needs of the *Wonderful Academy* starting this next spring**

**semester. The Ag Department is in need of a part-time Ag Technician for the Ag Farm Laboratory in order to keep the farm area and machinery in**

**operating order so that students be can exposed to the necessary hands-on education required by the state and local industry.**

**6. The Plant Science program is developing a state mandated AS-T program which will replace this AA program and should be in place by fall 2017.**

**IX. 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)**

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

[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: Farm Equipment