

# Plant Science Crop Science Fruit Science Soil Science

## 2019 Program Review

### MJC Program Review 2019

Modesto Junior College's Program Review process is divided into 3 sections:

- Program Analysis (SWOT Analysis)
- Goal Setting and Activities
- Resource Request

### Program Analysis

#### Internal Strengths

##### **1. What strengths does the analysis of student data reveal?**

Approximately 79 percent of our students are retained from term to term which is only 1 percent below the regional average Approximately 37.74 percent of the students we serve are Hispanic Approximately 56.6 percent of the students we serve are White, non-Hispanic 100 percent of our students are employed after one year 73 percent of the program completers transferred

##### **2. Are there specific aspects of the program that are exemplary or could serve as a model?**

Dedicated full/part-time faculty and staff Hands on learning approach to instruction Staff meets with each student for advising in addition to the MJC councilors Perform outreach and develop marketing materials for the program Maintain an advisory committee Network with local farmers as much as possible Membership in state California Agriculture Teachers Associations Conduct student work groups to get feedback on course offerings and subject matter.

##### **3. What do others see as the program's strengths?**

Organized, well-oiled program that offers courses in a manner in which the students can complete their degree in four semesters if followed correctly Hands on skills-based learning majority of course content can be applied to what is occurring in industry Collaboration between full-time faculty and Adjunct faculty Good relationships with part-time faculty

#### **4. How well are students meeting program learning outcomes, skills, or competencies; and how are they relevant to careers in your discipline or industries for which you help prepare students?**

The students are meeting the PLO at a high rate. All the skills learned in our program are relevant to the industry, since an advisory committee annually reviews the curriculum to ensure that it does. Students have the opportunity to become qualified to take the Pest Control Advisors test within a four semesters if they follow the advising guideline that is handed out each semester. Satisfaction with student knowledge expressed by companies that hire our students. In addition to feedback from the university instructors in the plant science discipline area.

### **Internal Weaknesses**

#### **5. What gaps are observed by reviewing the student data?**

The data that is collected for A.S. Degree recipients does not match how many students actually earn a degree.

#### **6. What disproportionate gaps need to be addressed?**

There is only a 20% gap between our Hispanic and White, non-Hispanic students. That is a small gap, but it can be worked on to make it even smaller. No Living wage data was available. Employment after a year upon exiting post-secondary education in our area (100%) and is higher than the college average (74%).

#### **7. What are areas in which the program could improve? (curriculum, scheduling, modality, other?)**

Data showed that the Plant Science Program was the only program in the Agriculture Division to fill all its course offerings with higher than capacity set numbers, it would be helpful to hire an additional Plant Science Instructor. Scheduling start times on both East and West Campuses to be uniform and matched would help with success rates.

#### **8. Where are there gaps in the program on how students are meeting learning outcomes, skills, or competencies?**

Each student is unique and might encounter personal problems which does not allow them to finish the course or take the PLO assessment. Advising, making sure the students know when the courses are being offered since they are currently offered on an every other year basis.

### **External Opportunities**

#### **9. Where are potential opportunities for expansion, improvement, or new program development?**

Technology is always changing in the plant science area. We need to stay current with all the trends that are now becoming the new industry standards. Develop new courses as the

advisory committee see the industry is calling for from their employees  
Develop greater pool of adjunct faculty to support program offerings

**10. What are some industry or disciplinary trends that could enhance the program?**

The use of drones to conduct field inspection for weed control, insect control, and production estimates Engage local employers to recognize value of A.S degrees

**External Threats**

**11. How are changing resources, technology, employer, or transfer requirements affecting the program’s ability to serve students?**

Ongoing funding to support technology requirements is imperative for our program, so the moratorium on capital outlay expenditure would be nice if it was lifted from the plant science laboratory trust sites The ability/opportunity to showcase our program on-campus/off-campus can have a positive

**12. What are some current industry or disciplinary trends that could have a negative impact on the program?**

Salary depends on the individual person since a large percentage of the companies use a commission base salary method Salary data does not account for benefit/retirement packages offered by school districts and government entities

**13. What other obstacles does the program face?**

We are basically a one person department with a good adjunct pool but within the next three to four years staff members will be retiring Uncertain use of funding that is generated by the Plant Science laboratory trust in which the administration is limiting areas in which funds can be spent Administration not recognizing the Beckwith Farm Laboratory as a vital tool in the instruction process and not a commercial farming operation  
The lack of communication on the part of the operations manager who feels that he does not have to consultate with the instructors in regards to the Beckwith Farm Laboratory.  
Lack of support from the administration for the current Plant Science Advisory Committee

**Goal Setting and Activities**

**Goals**

Program Goal	Mission Alignment	Area of Focus
Increase the number of students that successfully complete AS Degree in Crop Science by 5 percent	Programs / Services based on Scholarship of Teaching and Learning	Student Support
Increase the number of students that complete an AS Degree in Fruit Science by 5 percent	Programs / Services based on Scholarship of Teaching and Learning	Student Support

Research and evaluate the potential to offer a course of how drones are used in Fruit and Crop production	Innovative Education	Professional Development
New course offerings to promote access, and completion of an AS Degree and qualification to take the PCA exam	Innovative Education	Program Design
Continue to offer up-to-date instruction on common workplace technology	Workforce Needs	Professional Development

## Activities

Activities	In Support of Goal #	Outcome or Deliverable
Develop a packet that will assist students when enrolling and developing their educational plans.	Goal #2	Increase the number of students who complete an AS degree
Create additional course offerings and restructure current courses to meet alternative student scheduling demands	Goal #3	Develop and build additional course offerings to provide training for industry needs.
Revisit program curriculum and outcomes to provide relevant learning related to industry needs	Goal #5	NA

## Resource Requests

Category	Request	Activity #	Estimated Cost
Prof. Devel.	CATA/CAPCA and Other conferences related to subject area	1	3000
Equipment	Sprayer Calibration Testing Equipment	3	10000
Equipment	2. Spot on Sprayer Calibrator	3	2500
Equipment	3. Leaf Pressure Bomb 4. Row Crop Cultivator 5. 30 HP Tractor 6. Hay Baler 7. 3-pt. Planting Drill 8. GPS & GIS Technology 9. Swather 10. Cold Boxes 11. Chipper 12. Self-Propelled Weed Sprayer 13. Direct Drive Air-O-Fan Sprayer	3	691000
Technology	1. Ongoing annual cost Weather Station and drone software	2	30000
Personnel	1. Additional full-time faculty member	3	110000
Facilities	1. Replant Alfalfa Field	3	3000
Facilities	2. Maintain classrooms and laboratories for technology and course needs	3	25000

Facilities	3. Repair Trellis System in Vineyard 4. Irrigation Pipeline and Valves at Beckwith 5. Storage Racking 6. Enology Building	3	295000
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