



Plant Science Program Review



Modesto Junior College

Plant Science Program Review

2017

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Program Overview

Instructions

Supplemental information, links to previous reviews, and dashboards can be accessed from the review, please ensure your pop-up blocker is turned off, or use Ctrl-Click to bypass it.

Please review each question below, following the prompts and links given in the help text. Additional help, and a list of frequently asked questions is available on the [Program Review Instructions](#) page.

Program Overview

Please list program awards that are under this department according to the college catalog. Next to each program award listed;

- Please denote if it should be included here, or should be listed elsewhere.
- Answer yes or no, if the program has external regulations
- Additional lines, if needed, may be added by typing the tab key while in the last cell
- Any additional notes can be added in the box below the table

[\[addl help\]](#)

Program Awards	Include in Review (yes/no)	External Regulations (yes/no)
Crop Science		
Fruit Science		

Response and follow-up to previous program reviews

On the [Curricunet website](#), please locate your department and the previous program review. After reviewing, please complete the following questions;

Briefly describe the activities and accomplishments of the department since the last program review.

As evident by the data this is a program within the Division that continues to grow at a steady pace. Fill rates are impressive, retention is well above the college average, as is success rate which made a significant jump this past year. The Plant Science program is meeting a very strong industry demand for students trained in plant production here in the Central Valley.

The Plant Science program is in constant need of equipment and technology upgrading. I do believe that the authors of the review could do a better job of informing the readers of the review about the need for, and the expected outcomes that will result from having these needs met.

We disagree with the recommendation based on our belief that each requirement request is critical to the mission of preparing students to utilize state of the art equipment in use by local industry. Lack of current technology is detrimental to the employment prospects of our graduates.

The Plant Science program hosts CA FFA Field Day and other CA FFA activities throughout the state and continues developing the Beckwith Laboratory to better serve student vocational training needs via hosting industry sponsored workshops.

The Mission of Modesto Junior College

MJC is committed to transforming lives through programs and services informed by the latest scholarship of teaching and learning. We provide a dynamic, innovative, undergraduate educational environment for the ever-changing populations and workforce needs of our regional community. We facilitate lifelong learning through the development of intellect, creativity, character, and abilities that shape students into thoughtful, culturally aware, engaged citizens.

Provide a brief overview of the program and how it contributes to accomplishing the Mission of Modesto Junior College. (Overview Suggestions: How consistent is the program with the institutional mission, vision, core values and/or goals? How are aspects of the institutional mission addressed within the program? Is the program critical to the pursuit of the institutional mission?)

The mission of the Plant Science Program is to prepare students to solve soil, water and plant related plant production using state of the art technology and sustainable management practices.

The California Central Valley annually produces 25% of the nation's food. Given the importance of this industry to the local and state economy, MJC offers a diversity of agricultural programs to meet the community's training and employment needs. The MJC Plant Science Program is a comprehensive, hands-on curriculum designed to prepare students for entry level employment in one of the many fields of plant science. Additionally, the program provides the opportunity for students to prepare to transfer to CSU/UC Plant Science programs and to offer continuing education for people currently employed in the plant science industry.

Student Achievement and Completion

College Goal for Student Achievement

Increase Scorecard Completion Rate for Degree and Transfer

The College has a primary aspirational goal of increasing the Completion rate from 43% to 53% on the **CCCCO Scorecard Completion Rate for Degree and Transfer** [\[view\]](#) by 2022. The completion rates in the Scorecard refers to the percentage of degree, certificate and/or transfer-seeking students tracked for six years who completed a **degree, certificate, or transfer-related outcomes (60 transfer units)**.

As you answer the questions below, please consider how your program is helping the college complete this aspirational goal of increasing the MJC Degree, Certificate, and Transfer Completion rate by 10% on the CCCCCO Scorecard by 2022.

Success

The following questions refer to data from the Department Success Rates Dashboard. Use the filters to examine both departmental and course level data. Charts will be included for the record by Research and Planning once the review is submitted.

Locate your department success rates on the [Success Rate Data Dashboard](#) and consider your department success rates trends over time, especially the last two years. Also, consider the data detailing the variance of success rate of courses across sections. Are these rates what you expected? Are there any large gaps? Is there anything surprising about the data? What do you see in the data?

Do not have enough data to see if the students completed the course or stopped attending and not dropping. The second largest group is performing 18% lower than the highest group.

Enrollments trends in the Plant Science program indicate that maximum growth has been achieved at current staffing levels while retention and success rates steadily improve. All enrollment trend data for the program exceed college wide data. The primary question that arises from analyzing the fill rate data is 'Can current staff levels continue to provide quality instruction given the increased class sizes necessary to meet student demand?'

What is your set goal for success? Do your department and individual course rates meet this goal?

Plant Science classes are hands-on in nature and the majority of courses include labs. It is difficult to find qualified adjunct instructors willing to teach lab classes during the day and this reflected in the program's faculty staffing trends and is radically different from the college-wide data. All classes taught by adjunct faculty are night classes.

Presently, the program is delivered via one full-time faculty sharing the teaching load two full-time instructors who teach one to two PLSC courses each year (all instructors have responsibilities in other programs and teach overloads in order to deliver the courses needed by students to complete their education during a 4-semester cycle) with one instructor being responsible for the program in general and managing the school farms. This situation has created undue hardship and stress for all instructors involved and affects the overall quality of classroom instruction. We recommend that a 50% dedicated Plant Science position be hired to reduce the overload situation, bring more consistency to the program, and increase student success. Additionally, with approximately 85 acres of permanent and annual crops, a plant science field technician is needed to assist in laboratory set-up, assist with student supervision, maintain equipment, manage crops, and manage irrigation, harvest, cultural practices, and pest management on the year-round laboratory facilities. Therefore, we also recommend that the department hire a 50% Plant Science Field Technician to serve this need.

In summary, although the department contributes less than 1 FTEF to the program, it generates higher fill rates, retention, and FTES than the college wide average.

If your rates for success are lower than your goals, what are your plans to improve them?

It is 3.3% higher at the present time.

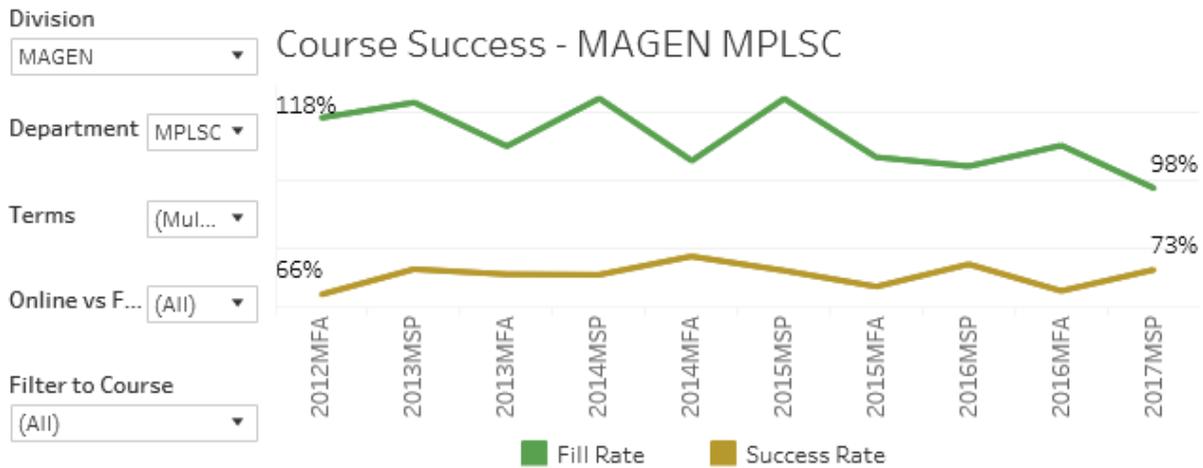
Locate your department equity rates on the [Success Rate Data Dashboard](#) (by pressing on the equity tab). Examine these rates, disaggregated by ethnicity and gender, over the last two years. If there are differences in success across groups, how do you plan on addressing issues of student equity? In other words, how do you plan on closing achievement gaps across student populations?

The gap is between white and Hispanics. I will research teaching pedagogy that has shown success with Hispanic populations.

If distance education is offered, consider any gaps between distance education and face-to-face courses. Do these rates differ? If so, how do you plan on closing the achievement gaps between distance education and face-to-face courses?

N/A

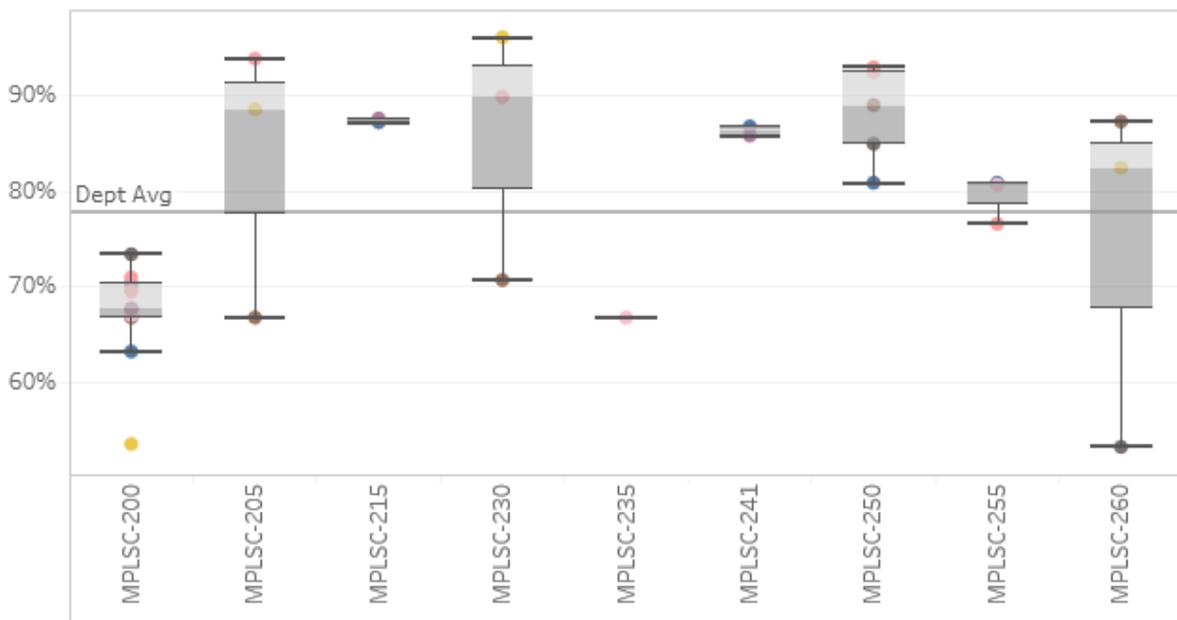
Course Success



Course Success and Fill

Season		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Census	FALL	231	187	222	267	226
	SPRING	209	211	232	177	166
Capacity	FALL	195	170	210	250	205
	SPRING	170	170	187	170	170
Fill Rate	FALL	118%	110%	106%	107%	110%
	SPRING	123%	124%	124%	104%	98%
Successful	FALL	153	135	172	183	152
	SPRING	154	152	170	133	122
Success Rate	FALL	66%	72%	77%	69%	67%
	SPRING	74%	72%	73%	75%	73%

Course Success Rates for Selected Terms - Dots represent sections, box central distribution

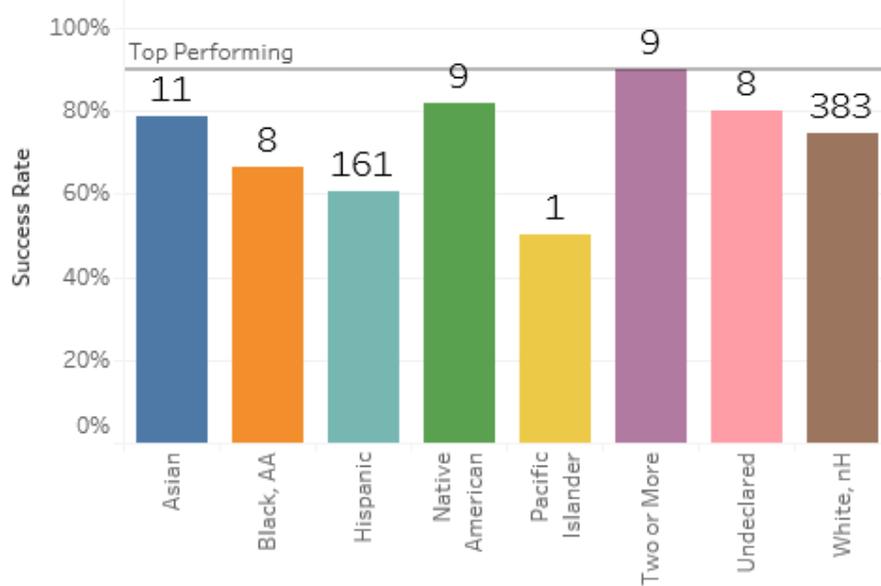


Course Success Rates by Ethnicity, Gender, and Modality

Divison: MAGEN
 Department: MPLSC
 Academic Year: (Multiple values)
 Term: (All)

Filter to a division and/or department - individual courses can be unselected to view similar courses together. Select chart elements to filter other charts to same, e.g. Pick Asian success bar to see Asian gender and Asian modality. Select again to clear.

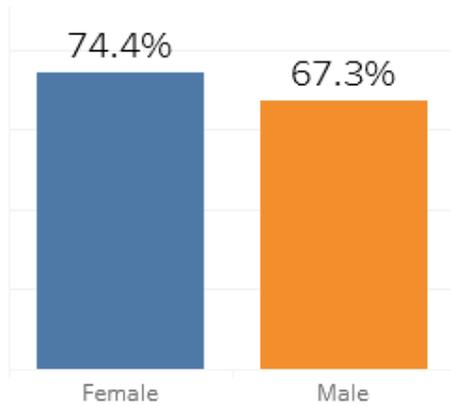
Ethnicity for 2015-2016 & 2016-2017 MAGEN MPLSC



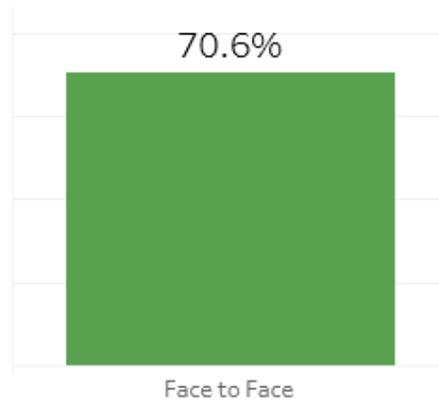
Course Name

- (All)
- MPLSC-200
- MPLSC-205
- MPLSC-215
- MPLSC-230
- MPLSC-235
- MPLSC-241
- MPLSC-250
- MPLSC-255
- MPLSC-260
- MPLSC-299A

Gender



Modality



Conferred Award Trends

Review the [Program Awards Dashboard](#), using the drop-down filters to focus the analysis on your department. Starting with identifying the year, please supply degrees and certificates awarded. These charts will be attached by Research and Planning before being posted publicly.

What is your set goal for degrees and certificates awarded? Do your rates meet this goal?

The goal is 20 degrees a year. Currently we are 2 under the goal, 18 per year.

If your rates for degrees and certificates awarded are lower than your goals, what are your plans to improve them?

Hold a workshop on how to fill out the application for graduation.

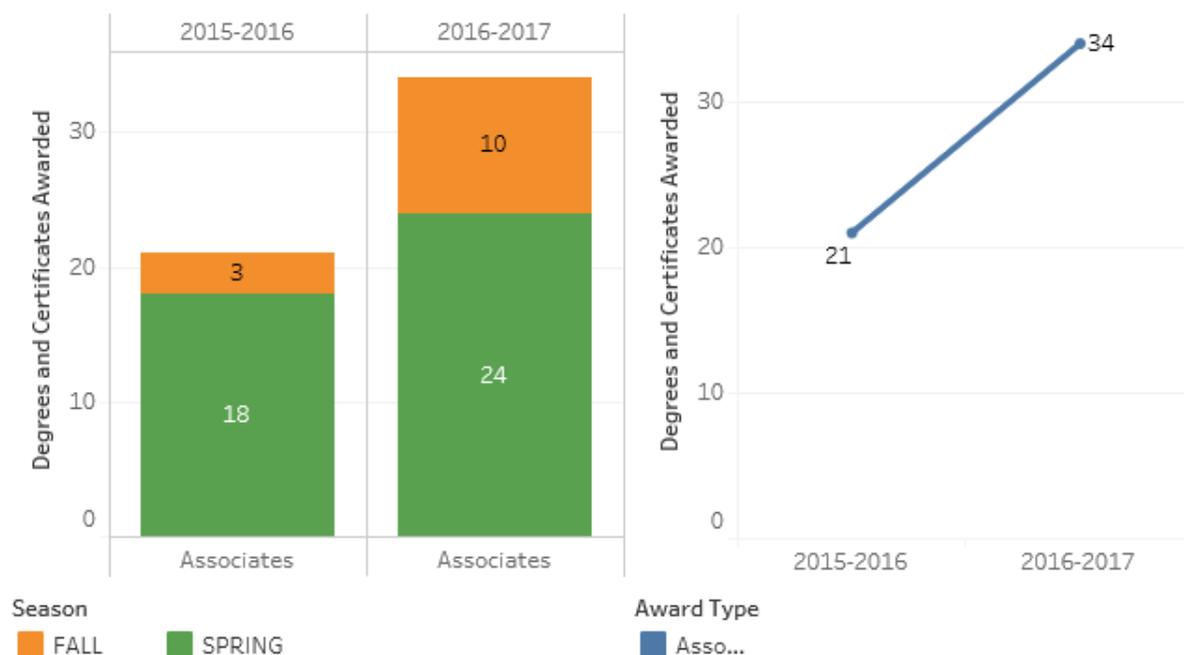
Degrees Awards and Certificates - Trended

Academic Year: (Multiple value...
 Division ID: MAGEN
 Department ID: MPLSC
 Academic Program: (All)

Academic Program Awards, 2015-2016 & 2016-2017

Select Dept, Division, or Program, or use dropdown filters to focus charts.

		Associates	Total
MAGEN	Total	55	55
	MPLSC		
	Total	55	55
	Crop Science	20	20
	Fruit Science	15	15
	Soil Science	20	20



Degrees Awards and Certificates

Academic Year
 (Multiple values) ▼

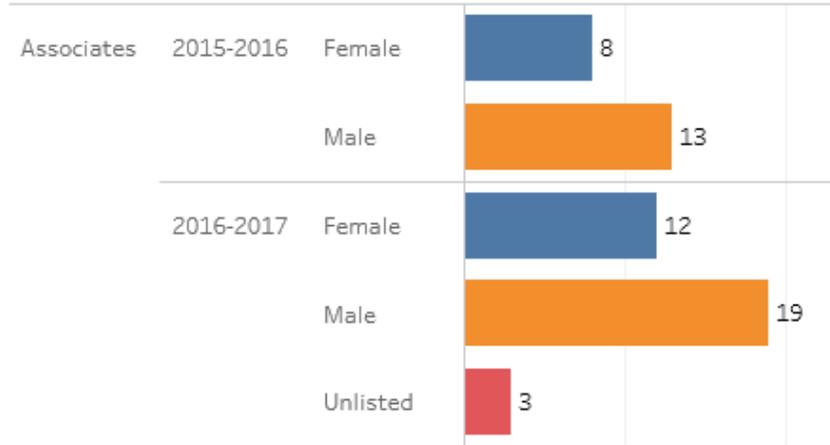
Division
 MAGEN ▼

Department
 MPLSC ▼

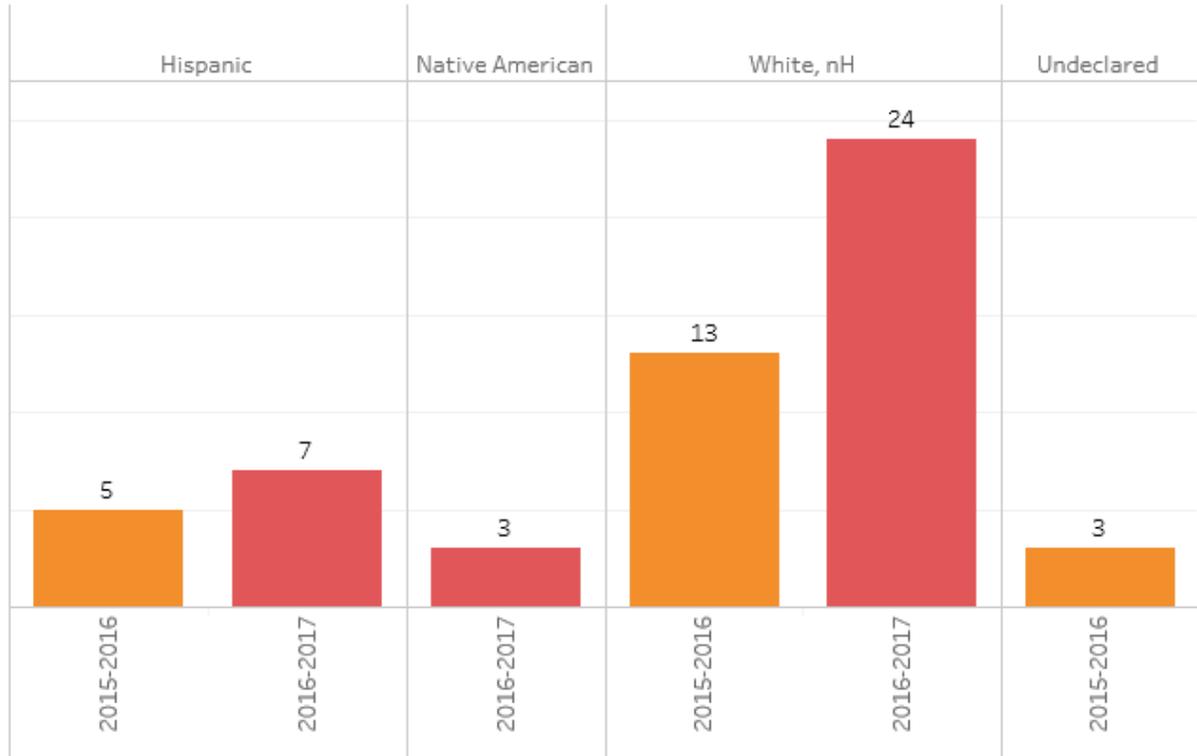
Academic Program
 (All) ▼

Award Type
 Associates ▼

2015-2016 & 2016-2017



By Ethnicity



Student Learning Outcomes

Instructions

This section of the Program Review measures student learning.

PLO / GELO / ILO Outcomes

To ease in analysis, trending charts have been created by Research and Planning on the [Learning Outcomes Dashboard](#) website. Using these charts, you can identify your current success rates in student achievement towards the outcomes. Considering your current outcome success rates, and previous semester, set a department aspirational goal, and examine what your outcome success rates are currently. Later you will be asked to outline a plan to achieve this threshold, but for now, simply supply the Goal % and Current % for each level.

Note: If the dashboards do not show your Learning Outcomes, please ensure that they have been mapped in eLumen. Each course will need to be mapped to each applicable PLO, GELO, and ILO. The Outcome Assessment Workgroup has created a web page detailing the work already done -> [PLO, ILO, and GELO Assessment grids](#). For additional assistance, review [the Course Learning Outcome Assessment](#) web pages, or contact Nita Gopal at gopaln@mjc.edu.

Student Learning and Outcomes Assessment

Please review your Learning Outcomes data located on the [MJC Student Learning Outcomes Assessment](#) website and below, in regards to any applicable Program, Institutional, and General Education Learning Outcomes.

For each ILO that your course learning outcomes inform, you will find your overall rate. On the MJC Student Learning Outcomes Assessment website, you will also see that overall rate disaggregated across student populations; you can use this information to understand how different student populations are learning in your courses.

After you have examined your rates and disaggregated data, reflect on the data you encountered. Please address the program outcomes (PLO), general education outcomes GELO (if any), and institutional outcomes (ILO) in your analysis.

Program Learning Outcomes (PLO)

What is your set goal for PLO success? Do your overall rates meet this goal?

Data not available at time of writing

General Education Learning Outcomes (GELO)

If your program has General Education outcomes, what is your set goal for GELO success? Do your overall rates meet this goal?

Data not available at time of writing

Institutional Learning Outcomes (ILO)

What is your set goal for ILO success? Do your overall rates meet this goal?

Data not available at time of writing

Continuous Quality Improvement

If your rates for success for any PLOs, GELOs, and ILOs are lower than your goals, what are your plans to improve them?

Data not available at time of writing

Equity and Success

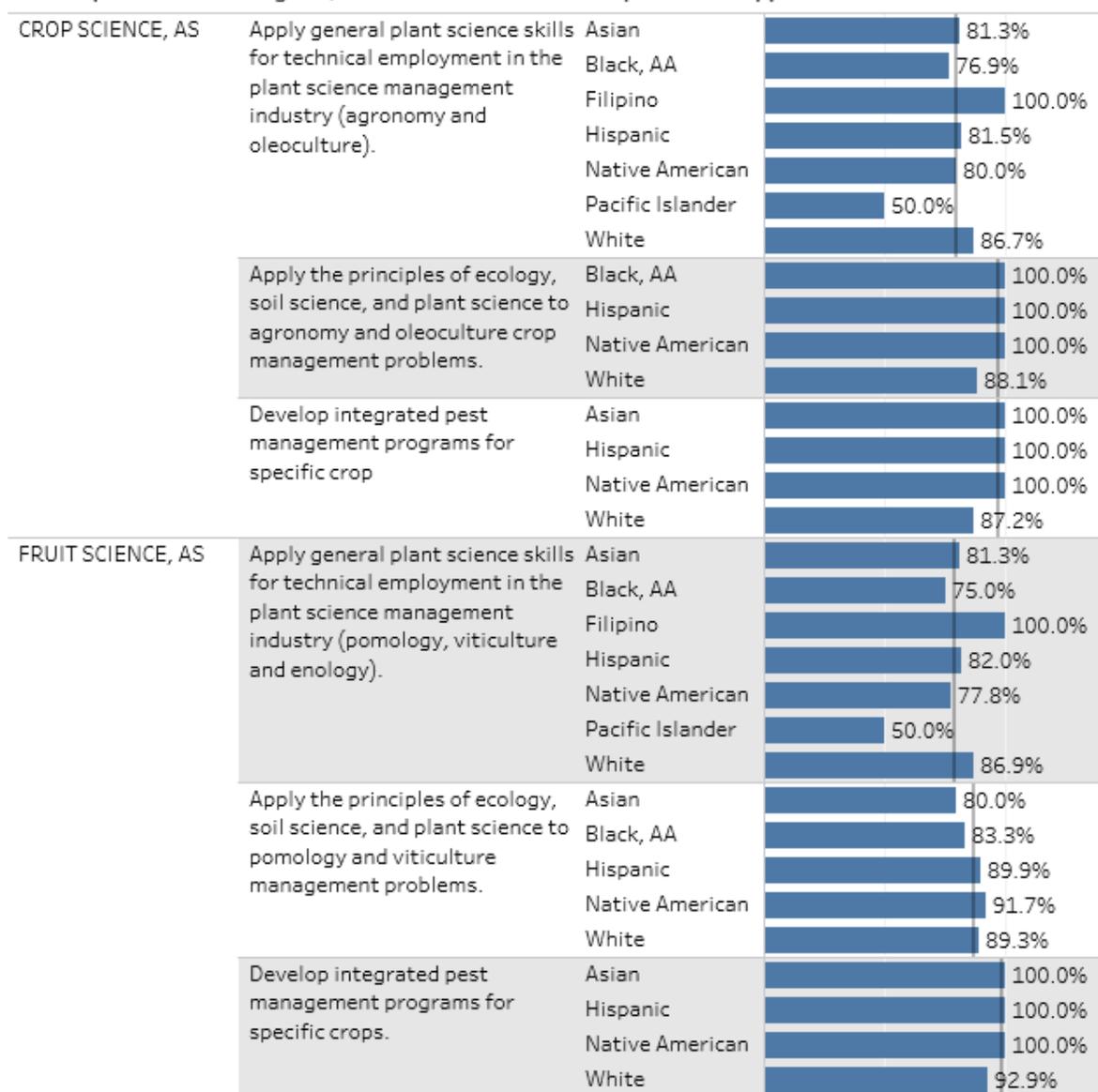
Do your rates for your PLOs, GELOs, and ILOs vary across student populations? How do you plan on addressing issues of equity? In other words, how do you plan on closing the learning gaps across student populations?

Data not available at time of writing

Program Learning Outcomes,

by Ethnicity for MAGEN division, MPLSC department, All program

To Collapse to SLO or Program, hover over item and click +/- that will appear



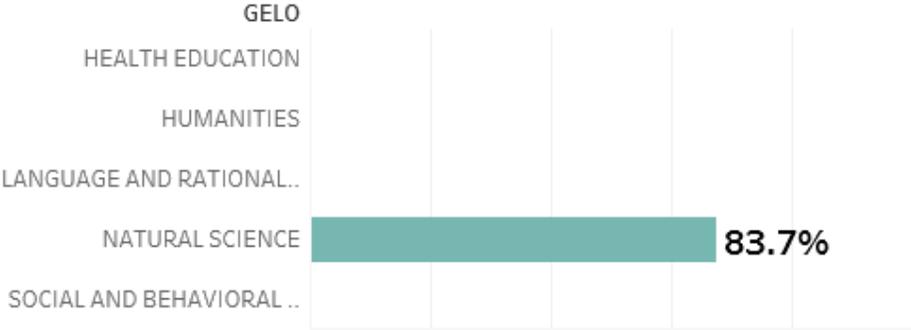
General Education Learning Outcomes

Use drop down boxes to focus on divisions, or departments.
 Hover over chart elements for details.

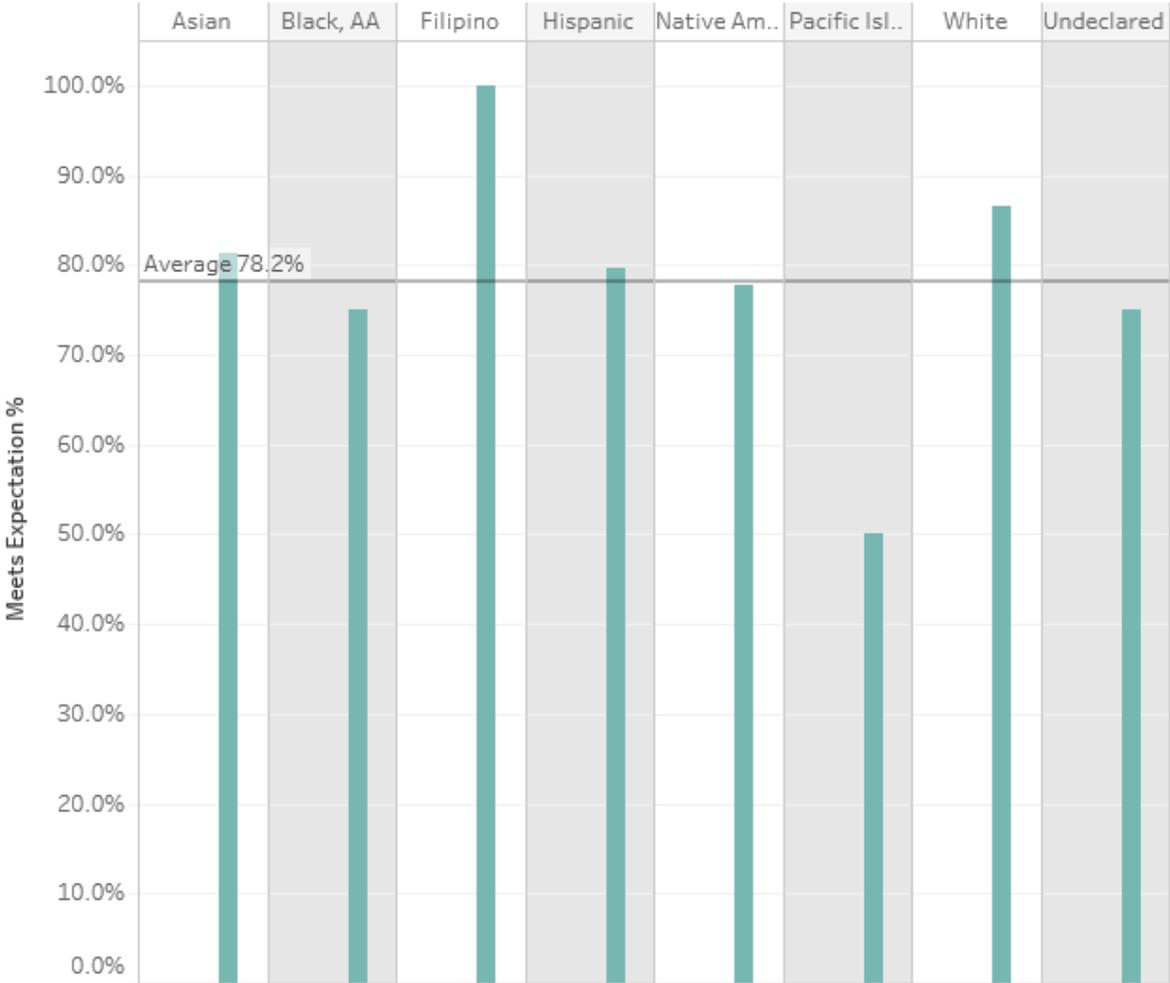
Overall Outcome Results for MAGEN, MPLSC (Select GELO to filter to ethnicity)

1) Division

2) Department



Overall Outcome Results by Ethnicity for MAGEN, MPLSC



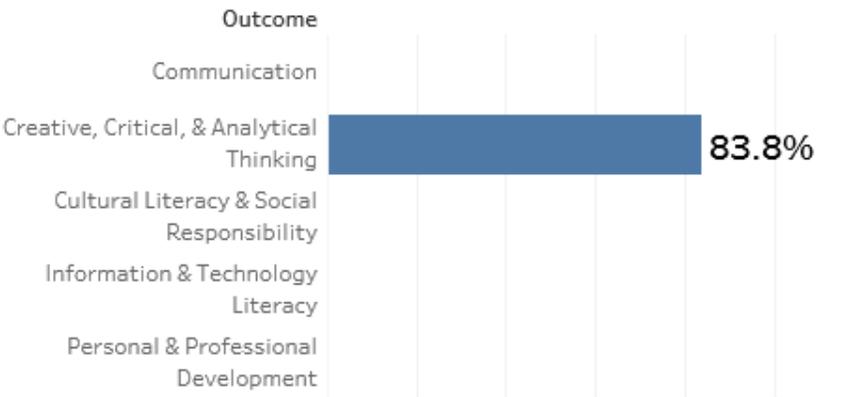
Institutional Learning Outcomes

Use drop down boxes to focus on divisions, or departments.
 Hover over chart elements for details.

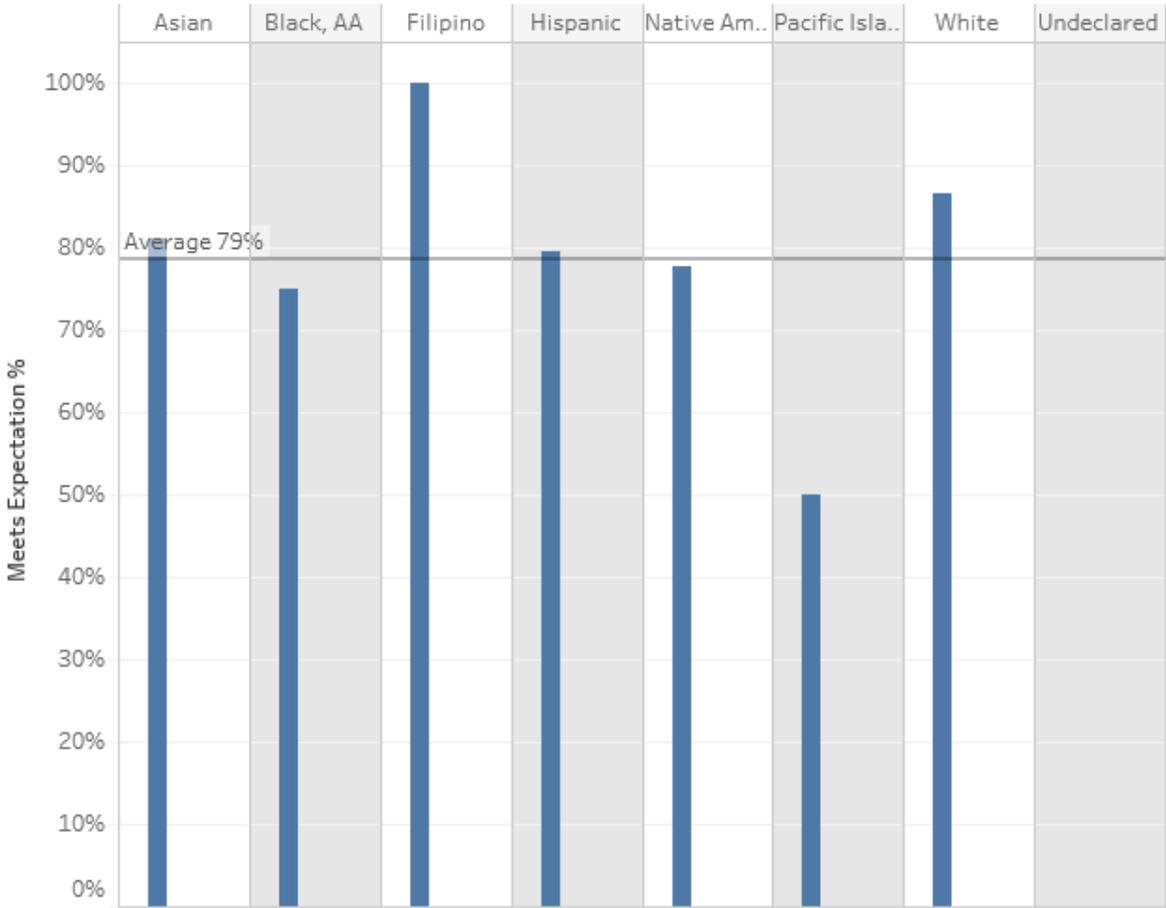
Overall Outcome Results for MAGEN, MPLSC (Select outcome to filter to ethnicity)

1) Division

2) Department



ILO by Ethnicity, MAGEN, MPLSC



Curriculum and Course Offerings Analysis

Curriculum Analysis

Courses that have not been reviewed, or not scheduled to be reviewed, are listed on the Curriculum Committee web pages. To aid in use, please [view this filtered spreadsheet](#), using the drop down menus along the field headings, to view just your department. On opening the spreadsheet, click the Enable Editing and Enable content buttons that should appear across the top menu bar.

Considering those courses that have not been reviewed within the last five years, please address these below.

Provide your plans to bring courses into compliance with the 5-year cycle of review. If your department is compliant, please state that.

We are current with all our courses.

Provide your plans to either inactivate or teach each course not taught in the last two years.

We use our meetings with our advisory committee to develop a plan for the course that are offered over a two-year span.

Does the College Catalog accurately display the descriptions and requirements of all the courses and educational awards (degrees/certificates) overseen by this program? If not, please describe your plans to correct.

Yes

Are there plans for new courses or educational awards (degrees/certificates) in this program? If so, please describe the new course(s) or award(s) you intend to create.

We are currently discussing with the advisory committee the possibility of adding an enology A.S. degree and a Farm Calibration course. More research needs to occur prior to making a decision.

What needs or rationale support this action, and when do you expect to submit these items to the Curriculum Committee?

Job workforce analysis to determine if there is a need for the degree.

Course Time, Location and Modality Analysis

Please follow this link and review the [Course Attributes](#) in regards to when, where, and in which method the courses in this program are taught. Use the filters to focus the report on your department. Then answer the following questions.

Location/Times/Modality Trend Analysis:

Consider and analyze your location, time, and modality trends. Discuss any program plans that address more efficient and beneficial location, modality and/or time of day trends.

Courses are taught on East and West Campus. With a majority of courses being taught at West Campus. In addition, the majority of courses are taught during the day and not evenings due to the laboratory requirements.

Course Distribution and Fill Rates

Division:
 Department:
 Season:
 Academic Year:
 Component:

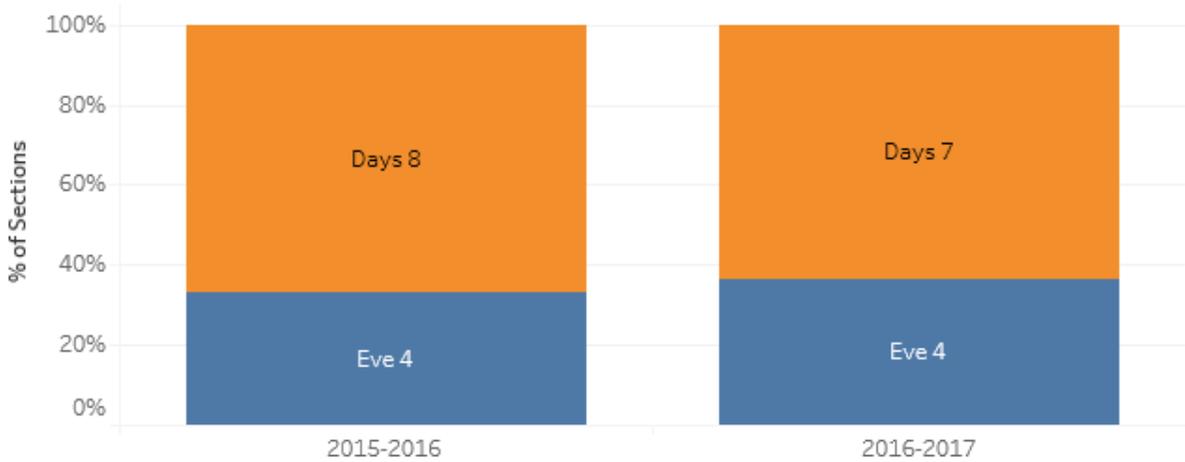
Section Distribution

Academic ..	Season	Days	Eve
2015-2016	FALL	71%	29%
	SPRING	60%	40%
2016-2017	FALL	67%	33%
	SPRING	60%	40%

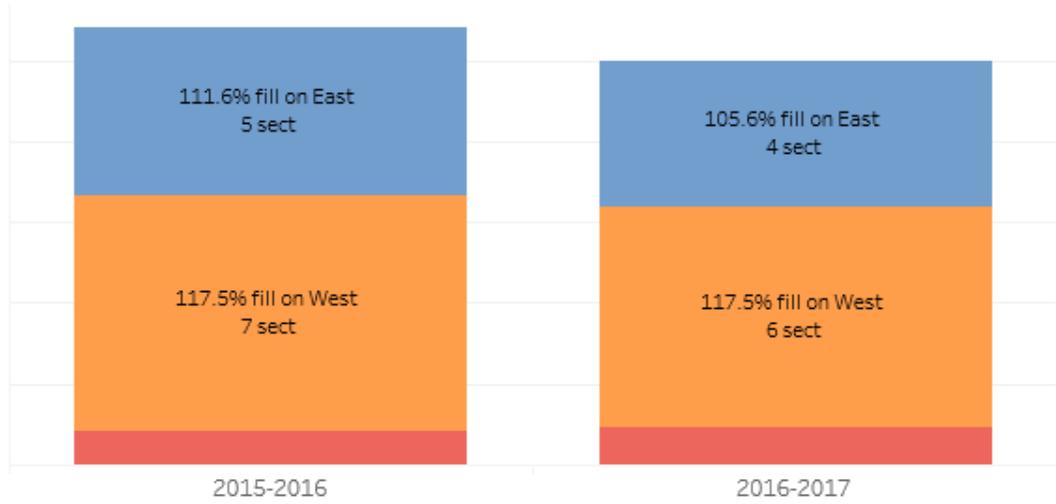
Fill Rate Distribution

Academic ..	Season	80-89%	90-99%	>100%
2015-2016	FALL		14.3%	85.7%
	SPRING	20.0%	40.0%	40.0%
2016-2017	FALL		33.3%	66.7%
	SPRING	20.0%		80.0%

Sections Offered by Time of Day



Sections by Location (Dual listed multiple)



Program Analysis

Program Personnel

Please refer to the [Department Faculty and Sections Dashboard](#) to supply the names of faculty and adjuncts for the periods requested. Use the dashboard filters to focus on your individual department. Due to the complexity of payroll accounts and assignments, those listed may not match known individuals, please note any discrepancies.

Additional comments or narrative can be added below.

Faculty Name	Full-Time or Part-Time (adjunct)	Hire Date (optional)
Dale Pollard	Full Time	1999
Mike Morales	Full Time	2001
Troy Gravatt	Full Time	2016
Jake Wenger	Part Time	2017

Faculty Assignments

Please refer to the [Department Faculty and Sections Dashboard](#) to supply the number of faculty and adjuncts for the past two years of regular terms. Use the dashboard filters to focus on your individual department. Due to the complexity of payroll accounts and assignments, those listed may not match known individuals, please note any discrepancies. Please note that summer positions are all shown as adjunct due to payroll categories.

Enter figures for each term, to add additional rows, click in last cell on right and push tab on the keyboard.

Additional comments or narrative can be added below.

Term	# Taught by FT Faculty	# Taught by Other Faculty	# Sections Offered / Term	Program Fill Rate %
2015 Fall	7		7	107
2016 Spring	5		5	104
2016 Fall	5		5	110
2017 Spring	4		4	97

Department Faculty and Sections Taught

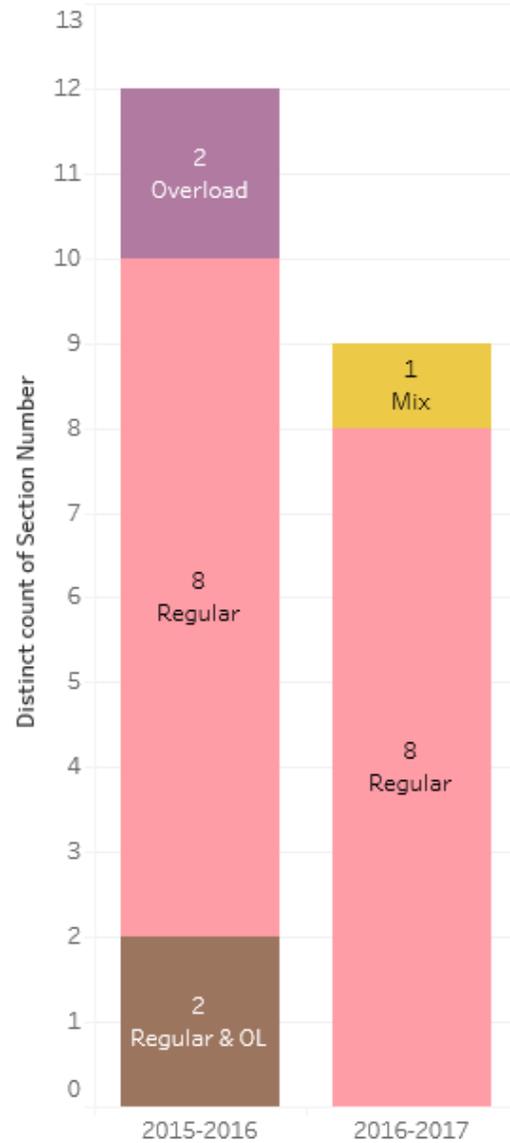
Faculty Assignments

Division	MAGEN	Full Time	# Sec	Fill Rate		
Department	MPLSC	2015MFA	7	2015MFA	7	107%
Years	(Multiple v...	2016MSP	5	2016MSP	5	104%
Terms	(Multiple v...	2016MFA	5	2016MFA	5	110%
		2017MSP	4	2017MSP	4	97%

Faculty Teaching in Department

Instructor	Full Time	
Brumley, Gail B	●	
Gravatt, Troy A	●	
Morales, Michael A	●	
Pollard, Dale N	●	

Sections by Position Type

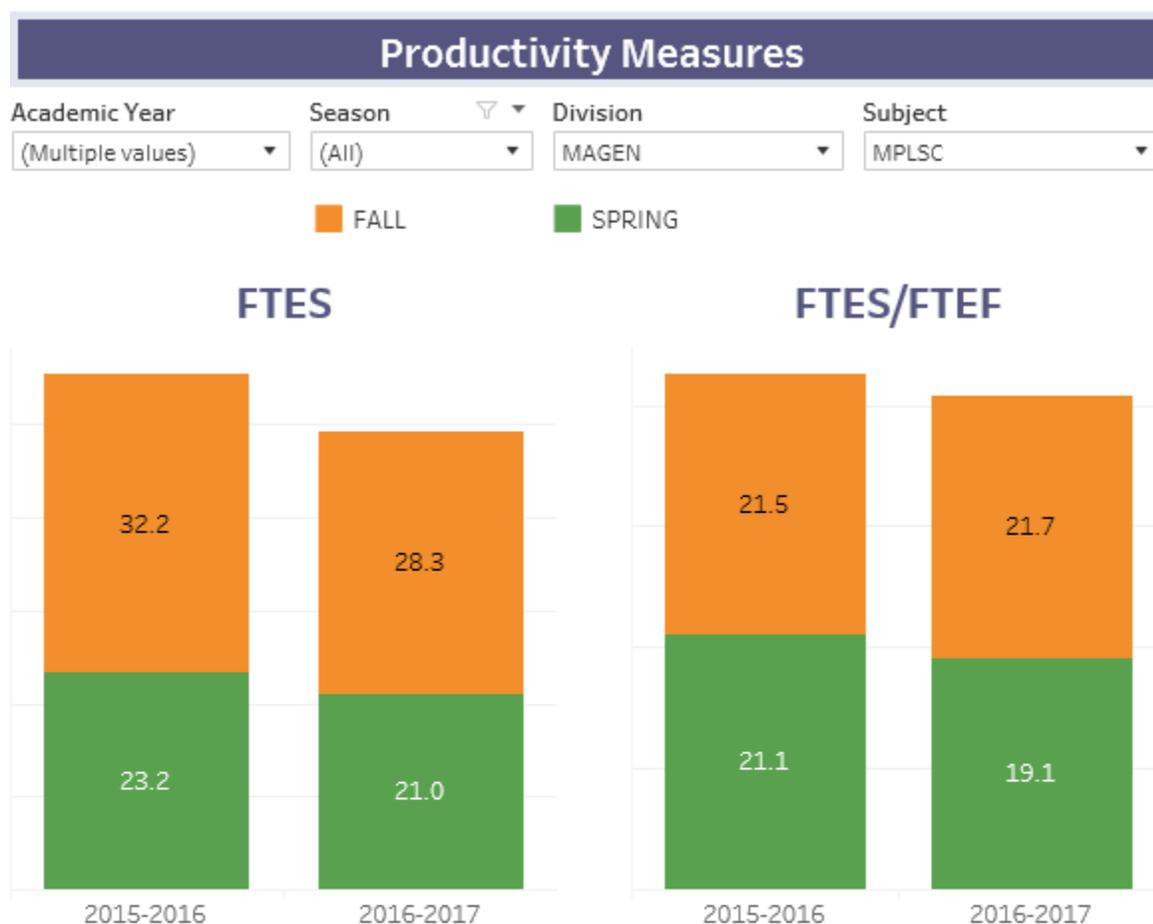


Departmental Productivity Measurements

If not pre-filled, please complete for **two years** the following table of indicators, as listed on top of the **Productivity Dashboard**. A picture of this dashboard will be supplied by Research and Planning. Please enter one term per line; to add an additional line, click in last cell and use the Tab key.

The space below is available for comments and narratives.

Term	FTEF	FTES	FTES/FTEF	WSCH/FTEF
2015 Fall	1.50	32.20	21.47	644.00
2016 Spring	1.10	23.21	21.10	633.08
2016 Fall	1.30	28.26	21.74	652.18
2017 Spring	1.10	21.00	19.09	572.60



Department Productivity MAGEN division, MPLSC department

	Ftef	Ftes	FTES/FTEF	WSCH/FTEF
2015MFA	1.50	32.20	21.47	644.00
2016MSP	1.10	23.21	21.10	633.08
2016MFA	1.30	28.26	21.74	652.18
2017MSP	1.10	21.00	19.09	572.60

Long Term Planning and Resource Needs

Long Term Planning

Provide any additional information that hasn't been addressed elsewhere in this program review, such as environmental scans for opportunities or threats to your program, or an analysis of important subgroups of the college population you serve.

View the [Program Review Instructions](#) page for reference and inspiration.

Taking into account the trends within this program and the college, describe what you realistically believe your program will look like in three to five years, including such things as staffing, facilities, enrollments, breadth and locations of offerings, etc.

Presently, the program is delivered via three full-time faculty sharing the teaching load (all instructors have responsibilities

Previous Program review Recommendations:

Describe how your program has responded to these commendations and recommendations. In a previous year, the college funded the Resource Requests listed below. You provided a proposed measure of effectiveness at that time. Please "close the loop" by analyzing the actual effectiveness of each item.

Program Personnel:

Fulltime faculty retirements or other departures last review:

Adjunct Faculty Spring:

Adjunct Faculty Fall:

Anticipated Staffing Changes: in other programs and teach overloads in order to deliver the courses needed by students to complete their education during a 4-semester cycle) with one instructor being responsible for managing the school farms. This situation has created undue hardship and stress for all instructors involved and affects the overall quality of classroom instruction.

Based upon enrollment and productivity data that indicates future growth potential and incapacity of current staffing to offer adequate course offerings, a 50% dedicated Plant Science position needs to be hired to reduce the overload situation, bring more consistency to the program, and increase student success. This situation is created in-part by the enrollment cap of 25 students/lab class that prevents students on wait lists from taking those classes. Therefore, there is a misrepresentation of the real positive student demand for plant science offerings. In addition, that is a need to increase the current Agriculture department computer lab technician from a 75% position to a 100% position. The person in this position serves to support the Plant Science program in many ways.

Plant Science classes are hands-on in nature and the majority of courses include labs. It is difficult to find qualified adjunct instructors willing to teach lab classes during the day and this reflected in the program's faculty staffing trends and is radically different from the college-wide data. All classes taught by adjunct faculty are night classes.

Presently, the program is delivered via one full-time faculty sharing the teaching load two full-time instructors who teach one to two PLSC courses each year (all instructors have responsibilities in other programs and teach overloads in order to deliver the courses needed by students to complete their education during a 4-semester cycle) with one instructor being responsible for the program in general and managing the school farms. This situation has created undue hardship and stress for all instructors involved and affects the overall quality of classroom instruction. We recommend that a 50% dedicated Plant Science position be hired to reduce the overload situation, bring more consistency to the program, and increase student success. Additionally, with approximately 85 acres of permanent and annual crops, a plant science field technician is needed to assist in laboratory set-up, assist with student supervision, maintain equipment, manage crops, and manage irrigation, harvest, cultural practices, and pest

management on the year round laboratory facilities. Therefore, we also recommend that the department hire a 50% Plant Science Field Technician to serve this need.

In summary, although the department contributes less than 1 FTEF to the program, it generates higher fill rates, retention, and FTES than the college wide average.

Presently, the program is delivered via one full-time faculty sharing the teaching load two additional instructors teaching one or two sections of PLSC per year. All instructors have responsibilities in other programs and teach overloads in order to deliver the courses needed by students to complete their education during a 4 semester cycle) with one instructor being responsible for managing the school farms. This situation has created undue hardship and stress for all instructors involved and may affect the overall quality of classroom instruction. We recommend that a 50% dedicated Plant Science position be hired to reduce the overload situation, bring more consistency to the program, and increase student success.

Additionally, with approximately 85 acres of permanent and annual crops, a plant science field technician is needed to assist in laboratory set-up, assist with student supervision, maintain equipment, manage crops, and manage irrigation, harvest, cultural practices, and pest management on the year-round laboratory facilities.

Resource Request and Action Plan

Priority	Name	Resource Type	Estimated Cost	Objective
1	Drone with NDVI Camera		\$8000	It will provide a working functional laboratory setting for hands on learning.
2	Drone RGB Camera		\$2000	It will provide a working functional laboratory setting for hands on learning.
3	Interactive Flat Screen		\$5,000	It will provide a working functional laboratory setting for hands on learning.
4	Leaf Pressure Bomb		\$5,000	It will provide a working functional laboratory setting for hands on learning.
5	Soil Moisture Probes		\$10,000	It will provide a working functional laboratory setting for hands on learning.
6	3 pt 100 gallon Sprayer		\$8,000	It will provide a working functional laboratory setting for hands on learning.
7	Row Crop Cultivator		\$5,000	It will provide a working functional laboratory setting for hands on learning.
8	30 HP Tractor		\$35,000	It will provide a working functional laboratory setting for hands on learning.
9	Hay Baler		\$65,000	It will provide a working functional laboratory setting for hands on learning.
10	Broadcast Spreader		\$10,000	It will provide a working functional laboratory setting for hands on learning.
11	3-pt. Planting Drill		\$17,500	It will provide a working functional laboratory setting for hands on learning.
12	Cane cutter retro fit		\$8,000	It will provide a working functional laboratory setting for hands on learning.
13	Cane Cutter Bars		\$5,000	It will provide a working functional laboratory setting for hands on learning.
14	GPS & GIS Technology		\$135,000	It will provide a working functional laboratory setting for hands on learning.
15	Repair Trellis System in vineyard		\$20,000	It will provide a working functional laboratory setting for hands on learning.

16	Irrigation Pipeline and Valves at Beckwith		\$20,000	It will provide a working functional laboratory setting for hands on learning.
17	Band Saw		\$10,000	It will provide a working functional laboratory setting for hands on learning.
18	Sand Blasting Cabinet		\$5,000	It will provide a working functional laboratory setting for hands on learning.
19	10' Harrow		\$3,500	It will provide a working functional laboratory setting for hands on learning.
20	Elevator		\$15,000	It will provide a working functional laboratory setting for hands on learning.
21	Chipper		\$35,000	It will provide a working functional laboratory setting for hands on learning.
22	75 HP Tractor		\$125,000	It will provide a working functional laboratory setting for hands on learning.
23	Harrow Bed		\$90,000	It will provide a working functional laboratory setting for hands on learning.
24	Gator		\$15,000	It will provide a working functional laboratory setting for hands on learning.
25	10' Springtooth		\$4,000	It will provide a working functional laboratory setting for hands on learning.
26	13' Offest Disc		\$10,000	It will provide a working functional laboratory setting for hands on learning.
27	110 HP Tractor		\$250,000	It will provide a working functional laboratory setting for hands on learning.
28	Swather		\$35,000	It will provide a working functional laboratory setting for hands on learning.
29	Cold Boxes		\$10,000	It will provide a working functional laboratory setting for hands on learning.
30	General Shop Equipment		\$20,000	It will provide a working functional laboratory setting for hands on learning.
31	Scissor Lift		\$10,000	It will provide a working functional laboratory setting for hands on learning.
43	Solid Waste Spreader		\$10,000	It will provide a working functional laboratory setting for hands on learning.
42	Hay Squeeze		\$50,000	It will provide a working functional laboratory setting for hands on learning.
41	Storage Racking		\$5,000	It will provide a working functional laboratory setting for hands on learning.
33	Self Propelled weed sprayer		\$80,000	It will provide a working functional laboratory setting for hands on learning.
32	Storage Racking		\$5,000	It will provide a working functional laboratory setting for hands on learning.
34	Air-o-Fan Sprayer		\$120,000	It will provide a working functional laboratory setting for hands on learning.
35	Mower		\$25,000	It will provide a working functional laboratory setting for hands on learning.
36	Bulk Fertilizer tank/trailer		\$10,000	It will provide a working functional laboratory setting for hands on learning.
37	Storage Building		\$30,000	It will provide a working functional laboratory setting for hands on learning.
38	New Roof on Milk Barn at Beckwith		\$50,000	It will provide a working functional laboratory setting for hands on learning.
39	Weather station subscriptions		\$30,000	It will provide a working functional laboratory setting for hands on learning.

40	Plant Science Instructor		\$100,000	Presently, the program is delivered via one full-time faculty sharing the teaching load with two full-time instructors who teach one to two classes each year (all instructors have responsibilities in other programs and teach overloads in order to deliver the courses needed by students to complete their education during a 4 semester cycle) with one instructor being responsible for managing the school farms. This situation has created undue hardship and stress for all instructors involved and affects the overall quality of classroom instruction. We recommend that a 50% dedicated Plant Science position be hired to reduce the overload situation, bring more consistency to the program, and increase student success. Additionally, with approximately 85 acres of permanent and annual crops, a plant science field technician is needed to assist in laboratory set-up, assist with student supervision, maintain equipment, manage crops, and manage irrigation, harvest, cultural practices, and pest management on the year round laboratory facilities. Therefore, we also recommend that the department hire a 50% Plant Science Field Technician to serve this need.
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Evaluation of Previous Resource Allocations

Below is a list of resource allocations received in previous Program Reviews. Please evaluate the effectiveness of the resources utilized for your program. How did these resources help student success and completion?

(<https://www.mjc.edu/governance/rac/documents/ielmallocationsummary20142015.pdf>)

The Evaluation / Measured Effectiveness can be typed in another program and pasted here, or typed directly in to the box below. The box will expand with additional text, and paragraphs (hard returns) can be added by using Ctrl+Enter.

Resource Allocated	PR Year	Evaluation / Measured Effectiveness
VEGETABLE TRANSPLATERS	2014-2015	

Executive Summary

Provide an executive summary of the findings of this program review. Your audience will be your Division Program Review Group, the MJC Program Review Workgroup, and the various councils of MJC.