Assessment: Program Review Update

Program (AG) - Agriculture Plant Science AS-T.2002

Program Catalog Summary: The AS-T in Agriculture-Plant Science is designed to prepare students for transfer to a Bachelor's degree program in Plant Science, Horticulture or related major at a CSU campus. A Bachelor's degree in Plant Science prepares students for a career as a plant scientist, agriculture teacher, biotechnologist, agronomist or crop scientist, turf manager, farm manager, weed scientist, entomologist, nursery manager, garden specialist, researcher, or landscape manager. In order to earn this degree, a student must complete 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Completing this degree guarantees admission to the CSU system but not to a particular campus or major. The degree is designed to prepare students for upper division study in Agricultural Plant Science and related fields.

This degree is approved through the California Community College Chancellor's Office. Upon satisfactory completion of all degree requirements and filing an application for graduation with Admissions and Records, the student's transcript will reflect completion of this degree.

PROGRAM LEARNING OUTCOMES:
Upon successful completion of this degree, the student should be able to:
1. Identify and apply communication skills when interacting with all people. Demonstrate the ability to communicate with clients, and assess landscape or nursery for ecological and economic sustainability.
2. Demonstrate the ability to test and evaluate soils, make recommendations for soil fertility, erosion control and irrigation management.
3. Explain and apply basic principles of botany to horticulture practices, plant growth, development and harvest.
4. Meet the requirements for transfer to a California State University with a major in Plant Science or Horticulture.

REQUIREMENTS:
In addition to the 37-39 unit general education pattern for CSU or IGETC, students must complete the core courses listed below for the Associate in Science in Agriculture Plant Science for Transfer Degree. Students must also obtain a minimum grade point average of 2.0 and a C or better in each major course, or a "P" if the course is taken on a Pass/No Pass basis.

REQUIRED CORE:
AGAB 54* Agriculture Economics 3
AGPS 20*# Plant Science 4
AGPS 24* Soils 3
CHEM 1A*# General Chemistry (5) OR 5
CHEM 2A*# Introduction to Chemistry (5)
MATH 14*# Introduction to Statistics 4

LIST A (Select one option): 3-4
AGEH 10 Plant Identification and Usage (3)
OR
AGEH 22 Nursery Practices and Plant Propagation (2) AND
AGEH 23 Nursery Practices and Management (2)

LIST B (Select two courses): 6-8
Any List A course not used above
AGEH 38 Landscape and Turf Management (3)
AGMA 42 Farm Power and Machinery (3)
CHEM 2B*# Introduction to Organic and Biochemistry (5)
*May be used to fulfill CSU General Education requirements. See a counselor.
#May be used to fulfill IGETC requirements. See a counselor.

ASSOCIATE IN SCIENCE IN AGRICULTURE PLANT SCIENCE
FOR TRANSFER DEGREE REQUIREMENTS:
Major 28-31
General Education 37-39* General
Electives 2-5?
Degree Total Will Not Exceed 60 Units
Number will vary depending on units that double count.

Fall 2018

PRIOR PROGRAM REVIEW REFLECTION (If applicable)

Discuss any changes to the program as a result of the previous program review: New program so no previous program reviews.

CURRENT PROGRAM REVIEW

Who completed this form: Leimone Waite
Participation in completing this report: Area Faculty (list in the next box), Advisory Committee (if one exists).
Summarize participation comments: Area faculty comments include the need for updated program sheets and more information for students about the program.
Discuss some of the program successes and benefits to the students and/or community: Provides a path for transfer give student priority for CSU admission. Give students a path to follow for transfer in plant science or horticulture.
List each PLO and write a brief narrative summary analysis discussing outcomes for each of them: Identify and Apply Communication Skills --This has been a difficult assessment to track, we can determine if a student has passed public speaking but not what they have scored on assignments. Have been able to track students in AGEH 10 and AGEH 23. I was at a SLO/PLO workshop this last week and they were talking about tracking results through Canvas. This may make this an easier PLO to track. Test and Evaluate Soils- Students have averaged 78% on this PLO over the past 5 years. However a few students have been able to pass the course but not pass this PLO.
Explain and Apply Basic Principles of Botany – After reviewing the data collected for this PLO, it was determined that the course SLOs were not collecting the data needed to determine if students were passing this PLO. Will need to adjust the course SLO for AGPS 20. I plan to change the SLO for AGPS 20 to collect data on the depth of understanding students have about the basic principles of botany.
Meet Transfer Requirements to CSU in Plant Science or Horticulture. - I have had students self-report this to me but otherwise, I am not certain how to track it. All students who have self-reported (10 so far) have successfully met the transfer requirement for this area.
Describe how this program supports a transfer pathway to CSU or UC: It is an AS-T degree so it provides a pathway to CSU transfer.
Specify Labor Market Demand (for CTE programs): The plant sciences area is showing a projected 8% growth for the next 5 years. Of the nearly 40,000 annual career level jobs listed in agriculture each year in California 45% of them are in the Plant Sciences area. Students in this field have an average starting salary of $53,600.

PROGRAM DATA ANALYSIS

Program Effectiveness: Students are self-reporting that they have successfully met the transfer requirement for this area and been admitted either to CSU, Chico or CSU, Fresno.
Program Effectiveness (CTE): This is a new degree so I do not have a lot of historical data, students who have transferred to a university have reported that it prepared them well. The University Studies-Agricultural Sciences degree does compete with this degree as students can get classes to better align with CSU, Chico by taking that degree path.
Course Success Rates: All core courses have a five year average success rate above 77% with most above 80& except for the CHEM 2A and MATH 14 courses who had success rates just above 60%.
Course Retention Rates: Course retention rates are all above 80% for courses with most above 92%.
Course Enrollments: Average course enrollments for the course courses in this degree are 23.9 students per section on a five year average.
Equity: Depending on the year ethnic diversity is between 15 and 20 percent more diverse then our tri-county population. Over eighty percent of the students in the program are under the age of 24. There are about 10% more female then male students in the program.

CURRICULUM

Review of courses with prerequisites: Prerequisites are in the general education courses.

Challenges to offering key courses: We only have two full time instructors that can teach the core courses and it is challenging to find qualified individuals that are willing to teach in the plant sciences area.

Course changes: None recommended at this time.

SUMMARY

****BELOW TO BE COMPLETED BY THE PROGRAM REVIEW COMMITTEE****

COURSE STATISTICS

		Academic Year				
Course Name		2012-13	2013-14	2014-15	2015-16	2016-17
AGAB-54	# of Sections	2	1	1	1	2
	Enrollment	16	30	25	36	46
	FTES	1.5	2.8	2.2	3.6	4.5
	FTEF	0.20	0.20	0.20	0.20	0.20
	WSCH	45	84	66	108	132
	Avg Enrl/Section	8	30	25	36	23
	Avg FTES FTEF	5.50	14.00	11.00	18.00	17.00
	Avg WSCH FTEF	165	420	330	540	510
AGEH-10	# of Sections				1	1
	Enrollment				14	12
	FTES				1.7	2.0
	FTEF				0.28	0.28
	WSCH				50	60
	Avg Enrl/Section				14	12
	Avg FTES FTEF				5.89	7.06
	Avg WSCH FTEF				176	212
AGEH-22	# of Sections	1	1	1	1	1
	Enrollment	16	22	16	23	18
	FTES	1.9	2.8	2.1	2.5	2.1
	FTEF	0.22	0.22	0.22	0.22	0.22
	WSCH	56	84	64	76	64
	Avg Enrl/Section	16	22	16	23	18
	Avg FTES FTEF	8.63	12.92	9.83	11.68	9.83
	Avg WSCH FTEF	258	388	295	351	295
AGEH-23	# of Sections	1	1	1	1	1
	Enrollment	12	16	15	13	15
	FTES	1.3	1.9	1.9	1.6	1.9
	FTEF	0.22	0.22	0.22	0.22	0.22
	WSCH	40	56	56	48	56
	Avg Enrl/Section	12	16	15	13	15
	Avg FTES FTEF	6.14	8.63	8.63	7.38	8.63
	Avg WSCH FTEF	185	258	258	222	258
AGEH-38	# of Sections		1	1		
	Enrollment		10	15		
	FTES		1.7	2.3		
	FTEF		0.28	0.28		
	WSCH		50	70		
	Avg Enrl/Section		10	15		
	Avg FTES FTEF		5.89	8.22		
	Avg WSCH FTEF		176	247		
AGMA-42	# of Sections	1	1	1	1	2
	Enrollment	21	21	17	17	24
	FTES	4.0	2.8	3.2	3.2	4.7

	FTEF	0.33	0.33	0.33	0.33	0.33
	WSCH	120	84	96	96	132
	Avg Enrl/Section	21	21	17	17	12
	Avg FTES FTEF	12.31	8.62	9.85	9.85	8.00
	Avg WSCH FTEF	369	258	295	295	240
AGPS-20	# of Sections	1	3	1	1	1
	Enrollment	26	44	31	30	28
	FTES	4.6	6.8	5.8	5.8	5.8
	FTEF	0.35	1.05	0.35	0.35	0.35
	WSCH	138	204	174	174	174
	Avg Enrl/Section	26	15	31	30	28
	Avg FTES FTEF	13.14	6.50	16.57	16.57	16.57
	Avg WSCH FTEF	394	194	497	497	497
AGPS-24	# of Sections	2	3	3	3	3
	Enrollment	61	65	76	70	69
	FTES	9.1	8.9	10.8	9.4	8.5
	FTEF	0.57	0.69	0.85	0.85	0.80
	WSCH	262	255	308	257	235
	Avg Enrl/Section	31	22	25	23	23
	Avg FTES FTEF	15.99	13.71	12.71	11.11	10.56
	Avg WSCH FTEF	462	393	362	302	294
CHEM-1A	# of Sections	8	9	10	6	5
	Enrollment	246	243	205	213	222
	FTES	51.8	45.5	45.0	47.2	47.9
	FTEF	2.54	2.35	2.48	1.52	1.45
	WSCH	1,592	1,415	1,351	1,498	1,489
	Avg Enrl/Section	31	27	21	36	44
	Avg FTES FTEF	23.11	24.05	19.61	37.23	42.85
	Avg WSCH FTEF	704	735	588	1,161	1,311
CHEM-2A	# of Sections	21	21	23	21	22
	Enrollment	617	639	562	573	594
	FTES	138.8	131.0	124.9	125.1	131.6
	FTEF	6.36	5.62	6.05	5.49	5.70
	WSCH	4,163	3,929	3,746	3,754	3,949
	Avg Enrl/Section	29	30	24	27	27
	Avg FTES FTEF	25.55	28.04	25.12	27.99	28.54
	Avg WSCH FTEF	769	844	756	842	858
CHEM-2B	# of Sections	4	4	3	3	3
	Enrollment	101	76	56	63	69
	FTES	20.0	16.3	10.9	11.5	11.5
	FTEF	1.27	1.27	0.98	0.92	0.92
	WSCH	656	490	368	381	390
	Avg Enrl/Section	25	19	19	21	23
	Avg FTES FTEF	17.54	13.41	12.74	15.22	15.55
	Avg WSCH FTEF	560	403	416	486	502
MATH-14	# of Sections	37	43	42	44	48
	Enrollment	1,244	1,281	1,235	1,294	1,468

	FTES	154.3	165.2	163.7	169.2	191.5
	FTEF	8.55	9.88	9.61	10.15	11.12
	WSCH	4,652	4,985	4,945	5,111	5,738
	Avg Enrl/Section	34	30	29	29	31
	Avg FTES FTEF	17.43	15.83	16.54	15.89	16.33
	Avg WSCH FTEF	526	478	500	481	495
Grand Total	# of Sections	78	88	87	83	89
	Enrollment	2,070	2,113	1,951	2,018	2,241
	FTES	387.2	385.6	372.8	380.8	411.9
	FTEF	20.58	22.10	21.57	20.51	21.59
	WSCH	11,724	11,636	11,244	11,553	12,419
	Avg Enrl/Section	27	24	22	24	25
	Avg FTES FTEF	19.82	18.97	18.63	20.31	20.66
	Avg WSCH FTEF	599	572	562	615	625