PROGRAM REVIEW

VITICULTURE & ENOLOGY *AND* AGRICULTURE

Alfredo Koch and Erin Krier

Six-Year Comprehensive Program Review for Agribusiness/Viticulture & Enology *AND* Agriculture

Self-Study Members: Alfredo Koch and Erin Krier

Allan Hancock College

PROGRAM REVIEW

Viticulture & Enology *and* Agriculture

TABLE OF CONTENTS

PROGRAM REVIEW

- Status Summary - Final Plan of Action
- Program Review Self Study
- Assessment Plan
- Review of Prerequisites, Corequisites, and Advisories – Summary
- Plan of Action – Pre-Validation

STATUS SUMMARY – FINAL PLAN OF ACTION

During the academic year, 2015-2016, Agribusiness: Viticulture & Enology completed program review. The Agriculture program was not established until 2017 and only Annual Updates have been completed for that new program which was officially split from the Viticulture & Enology program in the 2020-2021 college catalog. The Agribusiness: Viticulture & Enology self-study and validation teams developed a final plan of action - post validation based on information in the self-study and the recommendations of the validation team. For each plan, indicate the action taken, the result of that action, and the current status of the plan, if it is incomplete.

PLAN OF ACTION	ACTION TAKEN, RESULT, AND STATUS
RECOMMENDATIONS TO IMPROVE **STUDENT LEARNING OUTCOMES** AND ACHIEVEMENT	
1. Coordinate with the local industry our College Internship program 2. Establish Student Outcomes Assessments in all classes 3. Follow up with a Tutor's program to improve student achievement 4. Promote work practices internships and student exchange with other institutions. 5. Broaden the use of Blackboard/Canvas as a supplement in all courses 6. Improve the engagement in all courses with updated materials, videos, games and quizzes.	1. Regular interactions with industry partners continue to provide excellent internship opportunities in both VEN and AG 2. Given the heavy reliance on part-time faculty who are not trained in SLO assessments and the changing of systems that has shut down documenting SLOs during the transition, adequate SLO assessments have not occurred in all classes 3. The basic introductory courses VEN101 and VEN 102 have been incorporated into tutor's guidance. 4. Partnerships with industry and universities have served to promote internships and encourage student relationships with other institutions 5. Canvas is used as a regular addendum to instruction in nearly all VEN and AG courses. Additional part-time faculty training is needed in order to meet the goal of use in all classes 6. Professional development and faculty trainings continue to improve the creative use of engaging practices in the classroom

RECOMMENDATIONS TO ACCOMMODATE CHANGES IN **STUDENT CHARACTERISTICS**	
Enrollment Changes	
Demographic Changes 1. Promote courses to more Hispanics and women.	1. According to institutional data, female enrollment has increased significantly to catch up with male enrollment in AG. Likewise, Hispanic enrollment is on an upward trend.

RECOMMENDATIONS TO IMPROVE THE **EDUCATIONAL ENVIRONMENT**	
Curricular Changes 1. A new AS degree and Certificate is needed in Winemaking/Enology. **2.** Send for approval the Agriculture Science AS. Then the Agribusiness AST and Plant Propagation AST**.** **3.** Include newly created courses as core, selectives or electives in curriculum. Bring back the Winemaking operations course as required, allowing students 18+ to take these courses. (Revise course for 18-year-old students) 4. Conduct assessment about Winemaking/Enology Curriculum, Wine Business Curriculum and Agriculture Curriculum 5. Design distance learning introductory courses. One in each discipline Viticulture, Winemaking, Wine Business. Add a Wine Financial management course. **6.** Develop new Online courses for wine business **7.** Make our website program access information more streamlined **8.** Prepare videos, games and activities for student engagement. **9.** Prepare more field trips, participation in industry activities.	1. The certificate and associate in winemaking is still in preparation. 2. AS in Agricultural Science is approved and active. AST in both Agricultural Business and Agricultural Plant Science are approved and active 3. Several new courses have been created and approved and all have been added to the appropriate programs 4. The whole curriculum is still under analysis. A plan has been drafted to publish all course offerings until Fall 2027 5. 2 courses have been designed and taught on line VEN 101 and VEN 102, VEN 114 Wien Business is still in preparation. 6. Wine Business online courses are still in preparation, with the aim to offer an online certificate in Vineyard and Winery Administration 7. Still needs a lot of improvement. Even Google searches do not show AHC V&E program in the first results. 8. Use of videos and engaging activities is common practice in VEN and AG courses. Many more videos are needed in V&E. 9. Regular participation in field trips and industry-sponsored trainings and workshops occurs in both VEN and AG courses.
Co-Curricular Changes 1. Reevaluation and update class materials, including viticulture, wine analysis, winemaking class lab manuals. 2. Prepare exercises for each class in Blackboard and study materials. 3. Update course outlines for instructors in selected classes e.g. Wine Analysis, Food and Wine Pairing, Viticulture, Winemaking, and Wine Business 4. Coordinate guest speakers and field trips in order to allow all students from the program to participate 5. Prepare guide for part time faculty in agribusiness	1. It is ongoing update of class materials and lab manuals are in preparation. 2. Use of Blackboard has shifted to Canvas, which is regularly used in VEN and AG courses to share resources and study materials with students 3. Also ongoing efforts. 4. Guest speakers and industry field trips are integrated regularly into all VEN and AG courses 5. An updated guide is planned to be drafted in Spring 2024.
Related Community Plans 1. The wine sales can improve participation in the community and promote the overall program. 2. One possibility to study would be to offer, together with Culinary Arts, a series of dinners served by our students, pairing food and wine. 3. We could also use funnier wine labels. We could possibly represent different programs with one label dedicated to each, e.g. dance, automotive, ceramics, music, biology, etc.	1. Sales have not increased in newer accounts 2. A working relationship with the Culinary Arts program provides an integration of food preparation and service at the weekly wine tasting events in the AHC winery along with food service for other AG program events and activities 3. New labels are just being analyzed but they are not done yet.

RECOMMENDATIONS THAT REQUIRE ADDITIONAL RESOURCES	
Facilities 1. Operational greenhouse (Electricity and others). Estimated cost ($20K) 2. Clonal demonstration and different trellis systems at the campus vineyard. Estimated cost ($2K) 3. Signage on vineyard and winery. Inside vineyard, signage of different clones and cultivars. ($3K)	1. Electricity has yet to be provided by AHC facilities, in spite of many requests from AG faculty. AG program coordinator is working with Machining and Manufacturing professor to install a small solar panel to provide limited electricity to the greenhouse for running irrigation 2. Not done yet 3. Only inside vineyard signing still missing.
Equipment 1. Filtration new equipment for winery. ($35K) (Probably purchased by AHC V&E Foundation) 2. Pickup truck for agriculture and viticulture ($15K) 3. Kegs and carboys are needed at the winery. ($2K) 4. One fermentation tank for red wine. ($13K) 5. Barrel steam cleaner. ($12K) 6. Capper for winery. ($7K) 7. Tractor with cabin for vineyard. (42K)	1. Must pump not purchased yet. 2. Funding has not been provided to purchase a truck for use in these programs 3. Not yet acquired 4. Not yet acquired 5. Purchased 6. Purchased 7. Purchased
Staffing 1. Full time AG Instructor ($92,000) Lastly, without qualified instructors in place, we can't offer Agriculture courses. We can become the main community college in Agriculture in SLO, SB and Ventura counties, but we do need a dedicated AG instructor. 2. Lab Assistant ($50,000) Part time 20 hours per week. And a revolving issue, probably what will increase the efficiency of our program the most is a dedicated Lab Assistant for Viticulture and Enology.	1. A temporary full-time coordinator/instructor in AG has been hired in response to NSF grant funding. This position has subsequently been funded by SWP and District funds but remains as temporary status until the new position is prioritized for permanent hiring 2. The lack of funding to support the hiring of a lab assistant proves to be challenging for both the VEN and AG programs. The faculty in these programs are responsible for purchasing, preparing, organizing, and cleaning up all lab activities – which is problematic and inefficient, especially for part-time faculty

Allan Hancock College Program Review

2021-2022 Comprehensive Self-Study

I. Program Mission *(must align with college mission statement)*

The Agribusiness program offers courses primarily in the area of viticulture and enology, providing excellent college-level education and hands-on experience allowing students to earn an Associate Degree or Certificate in Agribusiness, transfer to four-year institutions, or expand their knowledge and practical experience in these areas. To meet the needs of the diverse agriculture industry in the region and adequately prepare students for the broad range of agricultural employment opportunities, an expansion of the Agribusiness program has led to the development of new courses, certificates, and degrees and the creation of a new program, called Agriculture. This addition to the historic Agribusiness: Viticulture & Enology program at Allan Hancock College aligns with the mission of the college in that, through strong industry relationships, students are provided with current and relevant skills and knowledge. Students in both the Viticulture & Enology and Agriculture programs will therefore be prepared for employment in mid-level local careers, with many opportunities for upskilling, which will improve the vitality of our largely agricultural community on many levels. This program also serves to offer career opportunities to populations that have traditionally been underserved in preparing for local, higher-wage earning positions without a 4-year degree, such as first-generation college students, minorities, and women.

II. Progress Made Toward Past Program/Departmental Goals

Most notably, the Agribusiness programs have been separated into Viticulture & Enology and Agriculture. All viticulture and enology classes were converted to a VEN prefix, while the AG prefix was reserved for non-viticulture and enology classes. Certain foundational courses are cross-listed under both prefixes, such as Introduction to Soil Science and Integrated Pest Management. The establishment of a separate Agriculture program was born from the need to provide students with clear pathway options which include a diversity of crop production and agricultural support services careers.

The development of the separate Agriculture program began with the addition of a new associate's degree and certificate in Agricultural Science. This was followed by the creation of an associate's degree for transfer in Agricultural Business, and another associate's degree for transfer in Agricultural Plant Science. Following the award of National Science Foundation Advanced Technological Education (NSF ATE) funds through a project entitled *Creating Precision Agriculture and Crop Protection Pathways via Industry Partnerships*, additional course and program development has occurred. New courses approved and now offered include Introduction to Agriculture Studies and Careers, Agricultural Plant Pathology, Economic Entomology, Weed Science, and Pest Control Adviser Preparation. New courses still in development include Introduction to Precision Agriculture and three season-based Agricultural Enterprise projects. Two new stackable certificates, in Crop Protection and Pest Control Adviser Preparation are approved and

now in the catalog. A new certificate and associate's degree in Precision Agriculture is in development. Additionally, a new course and certificate in Mechanized Agriculture/Agriculture Technology is in development to fill the local labor gap for skilled technicians who are in demand with the emergence of advanced technologies used in agricultural production, such as automation of field and processing equipment.

AG 100, Introduction to Agriculture Studies and Careers, is targeted at students who are interested in agriculture as a general pathway but may not have the guidance and direction to know the best plan to suit their interests, talents, and goals. This course has been offered both Fall and Spring semesters in an effort to help incoming students prepare for their best pathway. This course offers guidance that leads to a deeper understanding of local agricultural career opportunities, how students' passions and talents best fit in the industry, and exactly what path they need to follow to lead to completion, transfer, and career readiness.

The following Agriculture degrees and certificates exist (2021-2022 catalog):

- Agricultural Business - Associate in Science for Transfer
- Agricultural Plant Science - Associate in Science for Transfer
- Agricultural Science – Associate in Science and Certificate of Achievement
- Crop Protection - Certificate of Achievement
- Pest Control Adviser Preparation - Certificate of Achievement

The following are in the planning and/or development stages:

- Precision Agriculture – Associate in Science, Certificate of Achievement
- Mechanized Agriculture/Agriculture Technology – stackable certificates

Past program goals also recognized the need to improve relationships with the local high school agriculture programs. Collaborations with our high school FFA partners have proven valuable in promoting the program to local students and bridging gaps between the high schools and Allan Hancock College. To begin, there are currently 18 concurrent enrollment agreements with the agriculture courses at Santa Maria, Righetti, Pioneer Valley, and Lompoc High Schools. Additional courses will be considered as the Santa Maria Joint Union High School District Career Technical Education (CTE) program expands. These collaborations increase awareness of the viticulture & enology and agriculture program opportunities at AHC and helps to drive enrollment in the programs. Per the recommendation of our high school partners on the advisory committee, Allan Hancock College hosted the virtual FFA State Finals for the Soil and Land Evaluation contest in May 2021. In February 2022, AHC's agriculture program hosted over 125 students from 14 high schools around the state of California for a Field Day that included three contests: Soil and Land Evaluation, Vegetable Crop Judging, and Veterinary Science. These competitions drew attention to the AHC Agriculture and Viticulture & Enology programs from the entire state as FFA students were exposed to our campus and wonderful program facilities, such as the student vineyard and farm.

Improvement in student success measures has been noticed with the implementation of new practices within the Agriculture program, some of which have the added benefit of enhancing student success in the Viticulture and Enology program. Incoming students in any of the "Field to Table" disciplines (agriculture, viticulture & enology, culinary arts & management, or food science & nutrition), are encouraged to join a collaboration among

these programs through an intimate "Week of Welcome" experience. This 2 to 3-day event offers an introduction to the campus, program resources such as the student farm, the program coordinators, faculty, and student services counselors. This initial welcome introduces students to the resources they will need to ensure success at AHC and beyond. The support offered by the Field to Table Week of Welcome is holistic in its approach to acknowledge and encourage the whole person – academic, social, emotional, and cultural values. A relevant Field to Table industry tour day is a highlight of the event, connecting students in these disciplines with local businesses participating in sustainable food systems.

Additionally, the continued involvement of agriculture students in the Young Farmers and Ranchers club, which operates in collaboration with the Santa Barbara County Farm Bureau, provides a critical interaction with industry partners who offer guidance, improve student awareness of job opportunities, and inform students of issues facing local agriculture that can influence their career choices. The Rodeo Team Club has also increased interest in the Agriculture program, as local students who have participated in the very robust high school rodeo circuit are finally able to compete in college rodeo while remaining in the Santa Maria Valley for a high-quality college education.

The engagement of an active, industry-based advisory committee further aligns students with career opportunities and guides the program to provide locally relevant knowledge and skills. Field trips and tours offered by advisory committee industry partners serve to inspire and inform students about the diverse career options in the local community.

Furthermore, strong working relationships with Cal Poly State University, Fresno State University, Chico State University, and UC Davis have proven to ensure successful transfers into the many agriculture programs desirable to Allan Hancock College transfer students. Two Associate Degrees for Transfer, in Agricultural Business and Agricultural Plant Science, are now available and were awarded for the first time in Spring 2020 – providing even more opportunities for successful transfer to CSUs.

The urgent program goals, as described in past reviews, are generally summarized by the need for additional personnel and designated classroom space. While a full-time agriculture coordinator/instructor has been hired temporarily, a permanent position has yet to be approved. Although the temporary addition of this position has allowed the expansion and growth that the agriculture program has enjoyed over the past three years, a permanent position remains to be established and will be necessary for the sustainability of the blossoming program. The long-awaited designation of classroom and laboratory space for the courses offered in the viticulture & enology and agriculture programs remains a critical concern for the viability of both programs. The absence of laboratory space, coupled with regular scheduling conflicts with the other lab-based Life and Physical Sciences courses, prevents the Viticulture & Enology and Agriculture programs from realizing their full potential. Additionally, the need for a laboratory technician to assist with both indoor labs and outdoor "living laboratory" projects at the student farm is a hinderance to improved program success and quality.

The Viticulture and Enology program has also seen new curriculum development.

Stackable certificates have been created for Viticulture. So, it is now Certificates in Viticulture I, II and III. There is a plan to also offer stackable certificates in Winemaking. A Certificate in Sustainable Agriculture with emphasis in Viticulture and Enology is planned.

The following are being modified:

- Agribusiness: Enology/Viticulture (A.A.) will include Winemaking Operations I and II as required courses.
- Agribusiness: Winemaking (A.S., Certificate) is being developed and the
- Agribusiness: Wine Business AS and Certificate are being enhanced with class modifications and updates and a new class in Winery and Vineyard Financial Management.

The following Viticulture and Enology degrees and certificates exist (2021-2022 catalog):

- Agribusiness: Enology/Viticulture (A.A)
- Agribusiness: Wine Business (A.S., Certificate)
- Agribusiness: Viticulture (A.S., Certificate)
- Agribusiness: Paring Wine and Food (Certificate)
- Agricultural Science (A.S., Certificate)

This degree is in preparation:

- Agribusiness: Winemaking (A.S., Stackable Certificates)

The following Agriculture degrees and certificates exist (2021-2022 catalog):

- Agricultural Business - Associate in Science for Transfer
- Agricultural Plant Science - Associate in Science for Transfer
- Agricultural Science – Associate in Science, Certificate of Achievement
- Crop Protection - Certificate of Achievement
- Pest Control Adviser Preparation - Certificate of Achievement

The following are in the planning and/or development stages:

- Precision Agriculture – A.S., Certificate
- Agriculture Technology – stackable certificates

In the Viticulture and Enology program, a new half-acre of vines that were planted in 2011-12 continue to grow well this season. The vineyard management funding presents a challenge that may be accomplished by the sale of grapes or wine, when the bonded winery permit allows, but help is needed to cover the vineyard expenses.

There is hope to obtain electricity for the greenhouse located south of the campus vineyard.

When time allows the class in Beer Brewing should be brought back.

Also, a pickup truck is needed to visit farms, collect donated Ag tools or items, move produce, wines, compost, etc., and resources to allow for more outreach in the Ag and Viticulture community.

There is a winery lab assistant that is mainly responsible for lab preparation for wine related classes, winery activities, wine production follow up and wine sales.

In relation to equipment, the vineyard has received some new equipment, the sprayer has corrosion and spare parts are difficult to get since we had the same model for the last 16 years and this needs to be replaced. In the winery there is the need to improve electrical outlets and connections so all equipment can be properly used.

From the previous plans of action since 2002, items not implemented include a dedicated classroom for the program, a dedicated pick-up truck and a request for an additional full-time winemaking instructor.

III. Analysis of Resource Use and Program Implementation

The Agriculture program has been extremely limited in laboratory space and restricted in use of current Life and Physical Sciences laboratory equipment. There is not a dedicated lab area for the agriculture program and when existing physical and biological science labs are attempted for use, it creates significant scheduling and practical conflicts.

Many of the hands-on and/or laboratory activities in the agriculture courses occur in the student farm, where the variety of vegetable plots, the fruit orchard, and the greenhouse provide essential learning opportunities. However, to adequately prepare agriculture students for the modern era of crop production, these courses must have access to indoor laboratory space and modern equipment.

Furthermore, with the addition of three new lab-based courses (Agricultural Plant Pathology, Economic Entomology, and Weed Science) and an industry-driven push for plant genetic examination and research, the field-based living laboratory will no longer suffice as our only hands-on resource. It is not possible for students to learn any of these subjects to the depth expected by universities and industry without having access to indoor laboratory activities.

Additionally, a full-time faculty position will be crucial to the long-term success of the agriculture program. The work required to develop, maintain, support, and promote this program in addition to the instructional responsibilities can only be accomplished by a full-time faculty. This position should be not only teaching but also include the work of a program coordinator.

Finally, a full-time classified student farm manager/lab assistant to run the daily operations in tending to this living laboratory and assisting with indoor laboratory activities will

significantly improve the experiential opportunities of this program. A manager/lab assistant will provide course support similar to a laboratory technician – preparing and maintaining the vegetable garden, fruit orchard, greenhouse, production vineyard, and maintaining appropriate indoor-related laboratory supplies and equipment.

Thanks to donations and district purchases, the vineyard and winery are better equipped. Some necessary equipment includes a barrel steam washer, more kegs and barrels.

There is a need for more consistent and reliable funding to cover the basic needs of the vineyard and winery as well as any emergency repairs or unforeseen needs in the program.

The funds obtained from the sale of wine and grapes is helping, but district funds are needed for lab assistant and basic maintenance to support the academic program. Degrees and certificate numbers awarded are low compared to the number of students enrolled. The plan is to expand the idea that the associate degrees and the certificates are very valuable, and to update the existing programs to better address students' needs. Particularly, offering a set program of courses and programs for the next five years to facilitate student planning. Many students transfer or use the information learned at work, but do not necessarily believe that they need a certificate or degree for their future endeavors. Promotion of the degrees and certificates would help.

Also, the purchase of a pickup truck to visit farms, collect donated ag tools or items, move produce, wines, compost, etc., resources to and allow for more outreach in the ag community is essential to the program.

The creation of lab manuals would benefit the courses of Wine Business, Wine Tasting Room Sales, Grapevine Physiology, Introduction to Winemaking, Introduction to Agribusiness, Viticulture Practices I, II and III. An updated vineyard operations manual and updated winery operations manual are needed.

Some equipment is needed to demonstrate the use of new technology at the winery e.g. ORP probes, sensors for Brix, oxygen and CO2 to monitor fermentations and fermented wines, stability analysis sensors, etc.

IV. Program SLOs/Assessment

Ineffective and inadequate training in program SLO assessment followed by significant changes to the procedures have prevented the collection of sufficient learning outcome data for the newly established Agriculture program. Furthermore, a lack of training or even expressed expectations for part-time faculty, who provide the majority of the instructional services in the program, has led to many years of neglected learning outcome data gathering.

V. Distance Learning (If applicable):

In response to the COVID-19 pandemic and subsequent in-person school closure, students and faculty in the Agriculture program quickly transitioned to live online

instruction via Zoom beginning in March 2020. Many of these faculty continued to offer a remote, Zoom option for the agriculture courses during the 2021-2022 academic year. However, there are not any Distance Education courses offered in the newly differentiated Agriculture program.

There is also consensus in the V&E program that in person teaching is preferred. The possibility of offering the 3 main basic courses: Intro to Viticulture, Intro to Winemaking and wine business online will be appreciated by prospective students and it would be a requisite for the new online Certificate in Vineyard and Winery Administration. The online classes have usually lower retention and successful rates. Currently, the only active online course is AG 101 intro to Winemaking. AG 102 Intro to Viticulture has also been taught online once. There is a planned online course for AG 114 Wine Business. Some videos can be updated and improved in our current AG 101 online class. We offer one online course per semester out of 15 onsite courses. Each fall and spring semester, we offer two sections of AG 101—one online and one in the classroom. After COVID we learned even more about the need to offer a Certificate entirely online in Vineyard and Winery Administration which is being consulted with the Advisory Board with high expectation. It is proposed to create a certificate on Vineyard and Winery Administration with online/hybrid classes.

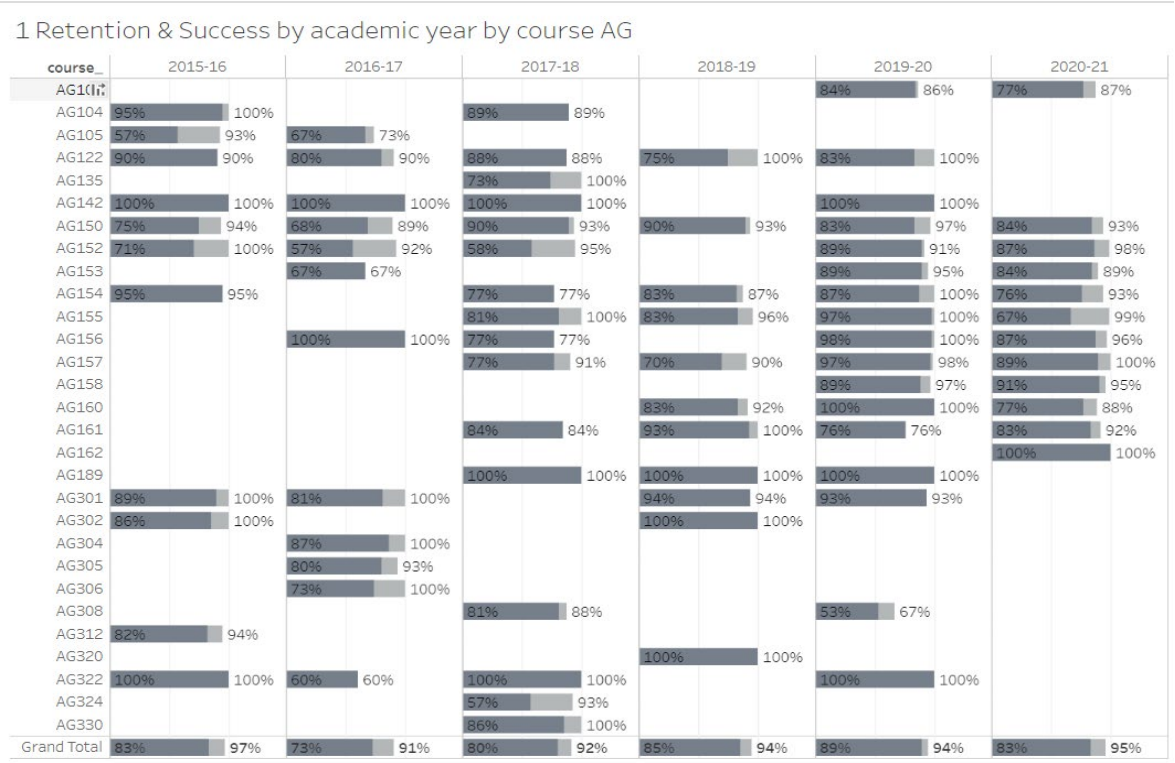
VI. Success, Retention, and Equity

The Agriculture program operates with an intentional student-centered, holistic approach to education that includes integrating field and laboratory-based experiential learning opportunities with traditional classroom-based lecture. All instructors in the program value the incorporation of hands-on learning experiences to contextualize content covered via classroom lecture and discussion. Additionally, through integration within the classroom setting, students are connected to the library, the MESA/STEM center, counseling, basic needs, LAP, the Aim to Dream center, the Veteran's Center, the Career Center, and all other programs that can serve both the collective and the individual needs of students.

One of the most substantive benefits of the Agriculture program is the connection every instructor has to industry – through knowledge, experience, and relationships. Students are exposed to these valuable networks via incorporation of industry content in the classroom, invitations of industry partners as guest speakers and presenters, field trips and tours to course-relevant industry sites, local industry internship and job opportunities, and guidance from diverse industry stakeholders via the program advisory committee.

The addition of the AG 100, Introduction to Agriculture Studies and Careers, course provides further support and guidance for students who might not be clear about which direction in agriculture is best suited for their interests, talents, and goals. Through this course, students are introduced to the diverse array of potential career pathways in agriculture, viticulture, enology, food science, nutrition, animal science, and veterinary medicine. They are also connected to counseling via a required Student Education Plan (SEP) assignment and a guest speaker providing the True Colors assessment tool. Additionally, a Career Center guest speaker shares the variety of resources available to students, including assistance with preparing the required resume and student portfolio

assignments.



In VEN we had very low success in 2020-21of 66% close to overall college of 65% probably due to the influence of COVID that affected our students in several different ways. Although success has been always higher than college average in this program.

Retention in VEN has also been low in that year of 88% but higher than college average of 78%.
Retention is difficult since attrition is significant in most courses. There is a need to captivate students from the beginning in each course, stressing the importance of the class from early in the semester. It is indispensable to have exciting material and participation in the learning process, presenting challenging questions to solve in the next class. Having a roster with student's pictures would help to memorize their names from the very beginning as done in other institutions.

Success is difficult for some students, as they may have personal difficulties and often lack a strong foundation in education.

Some strategies to help students include:

- Changing pace and addressing them frequently (to different questions, topics and videos).
- Add rewards or extra credit for trying different tasks. Add fun exercises.
- Something that helps is to remember all names by heart and every two weeks ask how they are doing following up with each student.

The data for all Agribusiness classes over the last six years show success and retention rates at or higher than the general campus, for all ethnicities, ages and genders, compared to campus wide. Retention and success were heavily affected by COVID as shown in last semesters variations.

In 2020-21 VEN students are spread out in all ages, 49% are white and 42% are Hispanic, away from the college average of 50+% Hispanic, 58% are male and 42% female, this is especially significant in viticulture and winery operations classes where male students are predominant. Recommendation is to invite more women that are leaders in the industry to help promote the classes.
67% are continuing students, 9% first time students, 20% first time students for transfer, and 10% returning students.

1 Retention & Success by academic year by course VEN

course_	2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
VEN101	59%	87%	67%	86%	71%	87%	66%	84%	75%	82%	51%	85%
VEN102	77%	90%	76%	97%	75%	87%	74%	89%	80%	92%	62%	87%
VEN103	81%	87%	79%	92%	63%	75%	80%	85%	67%	90%	80%	95%
VEN114					64%	76%	82%	95%	82%	88%	62%	69%
VEN120	75%	89%	81%	100%	69%	81%	87%	96%	79%	100%	57%	100%
VEN121	78%	96%	91%	96%	76%	95%	76%	90%	100%	100%	75%	100%
VEN125	97%	97%	87%	100%	90%	97%	88%	96%	95%	97%	77%	96%
VEN130			83%	100%	64%	100%	92%	100%	100%	100%	57%	93%
VEN140	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
VEN141	100%	100%	50%	100%	100%	100%	100%	100%	100%	100%	50%	50%
VEN310	83%	89%	70%	80%	73%	80%	90%	100%	86%	93%	76%	94%
VEN311	90%	90%	82%	91%	80%	90%	86%	86%	100%	100%	83%	92%
VEN314	91%	95%			91%	100%					100%	100%
VEN315	81%	90%	72%	88%	81%	90%	71%	93%	100%	100%	44%	61%
VEN321	78%	89%	100%	100%			50%	100%	67%	100%	0%	
Grand Total	75%	90%	76%	92%	74%	88%	78%	91%	84%	93%	66%	88%

Measure Names
Retention %
Success %

2 Program Demographics VEN

Choose individual course via filter or see Appendix A for full demographic course details

course_
All

Academic Year

Age Category	2015-16 Headcount	2015-16 FTES	2016-17 Headcount	2016-17 FTES	2017-18 Headcount	2017-18 FTES	2018-19 Headcount	2018-19 FTES	2019-20 Headcount	2019-20 FTES	2020-21 Headcount	2020-21 FTES
Under 20	50	7.09	23	4.29	33	5.27	43	7.75	69	12.35	36	7.80
20-24	76	15.36	73	15.60	81	16.65	68	17.64	68	19.63	43	13.68
25-29	39	8.37	37	7.83	34	9.69	28	8.67	25	6.95	22	5.65
30-34	22	4.40	16	3.51	17	5.33	13	4.75	12	2.09	19	5.12
35-39	18	2.34	17	2.54	14	2.51	11	2.81	9	2.72	10	3.82
40-49	24	4.82	18	3.64	18	3.36	10	4.02	13	3.92	13	4.59
50+	41	8.77	34	8.04	23	5.64	15	4.30	28	7.02	24	7.37

ETHNICITY	2015-16 Headcount	2015-16 FTES	2016-17 Headcount	2016-17 FTES	2017-18 Headcount	2017-18 FTES	2018-19 Headcount	2018-19 FTES	2019-20 Headcount	2019-20 FTES	2020-21 Headcount	2020-21 FTES
Asian	5	2.0	1	0.2	3	0.3	3	0.6	1	0.1	4	1.4
Black	5	1.0	4	0.5	2	0.8	3	0.6	5	1.3	4	0.5
Filipino	5	0.7	5	0.6	1	0.1	4	1.4	2	0.9	2	0.8
Hispanic	107	20.7	91	18.8	91	20.5	80	18.8	92	24.0	67	18.4
NativeAm	5	0.8	2	0.6	6	2.2	3	0.8	6	0.9	2	0.4
PacIsl									1	0.2	2	1.7
White	143	26.0	111	24.2	112	24.2	92	26.8	106	24.6	77	24.1

	2015-16 Headcount	2015-16 FTES	2016-17 Headcount	2016-17 FTES	2017-18 Headcount	2017-18 FTES	2018-19 Headcount	2018-19 FTES	2019-20 Headcount	2019-20 FTES	2020-21 Headcount	2020-21 FTES
Female	120	22.7	103	17.8	80	18.0	79	20.6	78	18.9	66	19.0
Male	150	28.5	111	27.0	133	29.6	103	27.7	123	30.9	91	27.8
Unknown					2	0.5	3	0.7	12	2.1	1	0.6

	2015-16 Headcount	2015-16 FTES	2016-17 Headcount	2016-17 FTES	2017-18 Headcount	2017-18 FTES	2018-19 Headcount	2018-19 FTES	2019-20 Headcount	2019-20 FTES	2020-21 Headcount	2020-21 FTES
First Time	43	5.7	17	2.5	15	2.4	25	4.1	18	2.2	15	3.1
First Time Transfer	51	7.6	31	4.1	34	5.7	21	3.9	29	5.7	32	8.9
Continuing	140	31.2	140	32.6	158	36.9	131	37.1	126	34.6	106	31.5
Returning	43	6.3	36	5.6	17	3.1	21	4.0	27	5.3	17	3.6
Special Admit	3	0.3							25	4.1	1	0.3
Grand Total	270	51.2	214	44.9	215	48.1	185	49.0	213	52.0	158	47.3

STUDENT TYPE - AGRICULTURE

		Academic Year											
		2018-19				2019-20				2020-21			
		cou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %
AG100	First Time					20	0.6	85%	80%	21	0.7	81%	71%
	First Time Transfer					1	0.0	100%	100%	1	0.0	100%	100%
	Continuing					25	0.8	95%	95%	22	0.7	91%	77%
	Returning					7	0.2	57%	57%	2	0.1	100%	100%
	Special Admit									1	0.0	100%	100%

		Academic Year															
		2015-16				2016-17				2018-19				2019-20				2020-21			
		Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %
AG150	First Time	6	0.6	100%	83%	5	0.5	80%	40%	12	1.2	83%	75%	12	1.2	100%	67%				
	First Time Transfer					3	0.3	100%	67%	2	0.2	100%	100%					12	1.2	100%	83%
	Continuing	8	0.9	100%	75%	11	1.2	91%	82%	14	1.4	100%	100%	21	2.0	100%	95%	1	0.1	100%	100%
	Returning	2	0.2	50%	50%					1	0.1	100%	100%	2	0.2	50%	50%	25	2.4	92%	88%
	Special Admit																	7	0.7	86%	71%
AG152	First Time	2	0.2	100%	0%	8	0.8	88%	38%									1	0.1	100%	100%
	First Time Transfer	1	0.1	100%	100%	2	0.2	100%	0%									1	0.1	100%	100%
	Continuing	20	2.1	100%	80%	41	4.4	93%	63%					41	4.0	81%	81%	38	3.7	95%	89%
	Returning	1	0.1	100%	0%									1	0.1	100%	100%				
	Special Admit													46	4.4	100%	95%	89	8.2	100%	85%
AG153	First Time													4	0.4	100%	100%	1	0.1	100%	100%
	First Time Transfer					1	0.1	100%	100%									1	0.1	100%	100%
	Continuing					13	1.4	69%	69%					9	1.0	100%	89%				
	Returning					1	0.1	0%	0%					6	0.6	83%	83%	17	1.7	88%	82%
	Special Admit																				
AG154	First Time	4	0.4	100%	100%					1	0.1	100%	100%					17	1.8	88%	88%
	First Time Transfer									1	0.1	100%	100%					2	0.2	100%	100%
	Continuing	14	1.5	93%	93%					21	2.2	86%	81%					1	0.1	100%	100%
	Returning	2	0.2	100%	100%													2	0.2	50%	50%
	Special Admit													23	2.1	100%	87%	36	3.4	97%	69%
AG155	Special Admit									48	4.9	96%	83%	46	4.4	100%	97%	69	6.6	99%	67%
AG156	First Time					4	0.4	100%	100%												
	First Time Transfer					1	0.1	100%	100%					4	0.4	100%	100%	28	3.0	93%	89%
	Continuing					13	1.4	100%	100%					22	2.3	100%	95%	2	0.2	100%	100%
	Returning					3	0.3	100%	100%					2	0.2	100%	100%	1	0.1	100%	100%
	Special Admit													21	2.2	100%	100%	76	7.1	97%	86%
AG157	First Time																				
	First Time Transfer									28	3.0	89%	75%	18	1.9	92%	92%	1	0.1	100%	100%
	Continuing																	29	3.1	100%	90%
	Returning									2	0.2	100%	0%	50	4.6	100%	98%	15	1.4	100%	87%
	Special Admit																				

Academic Year: 2018-19
DemoChoiceGroup: Returning
course_: AG150
Headcount: 1

		Academic Year															
		2017-18				2018-19				2019-20				2020-21			
		Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG158	First Time Transfer													1	0.1	100%	0%
	Continuing									13	1.4	85%	85%	25	2.7	92%	80%
	Special Admit									128	12.2	98%	89%	81	7.7	98%	98%
	First Time									4	0.4	100%	100%	2	0.2	50%	0%
	Returning									1	0.1	100%	100%	1	0.1	100%	100%
AG160	First Time					2	0.3	100%	50%								
	Continuing					9	1.5	89%	89%	5	0.9	100%	100%	22	3.8	91%	77%
	First Time Transfer									3	0.5	100%	100%				
	Returning					1	0.2	100%	100%	1	0.2	100%	100%	4	0.7	75%	75%
AG161	First Time					1	0.1	100%	0%					4	0.9	100%	75%
	Returning	1	0.1	0%	0%					3	0.3	50%	50%	2	0.4	100%	100%
	Continuing	18	1.9	89%	89%	13	1.4	100%	100%	20	2.1	76%	76%	18	3.8	89%	83%
	First Time Transfer									2	0.2	100%	100%				

		Academic Year															
		2015-16				2016-17				2017-18				2018-19			
		ou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	cou..	FTES	Retention %	Success %
VEN125	Special Admit																
	Continuing													37	7.9	95%	92%
	First Time													5	1.1	100%	40%
	First Time Transfer	1	0.2	100%	100%					1	0.2	100%	100%	2	0.4	100%	100%
	Returning	1	0.2	100%	100%	2	0.4	100%	100%	1	0.2	100%	0%	4	0.9	100%	100%

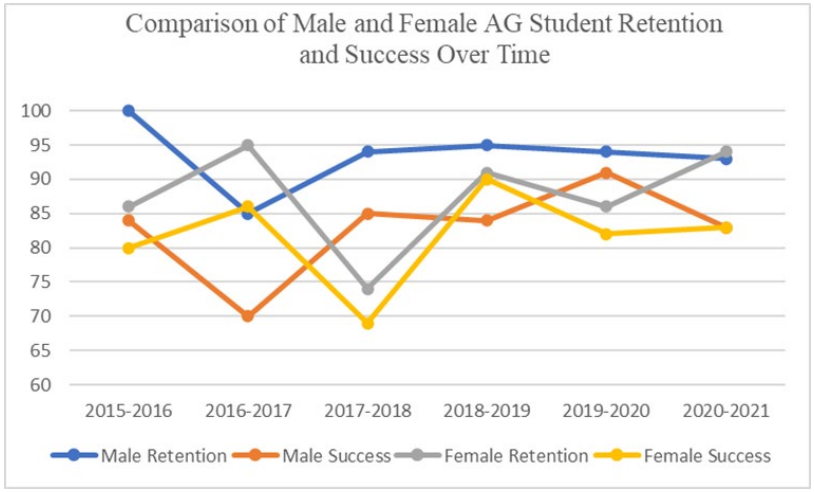
		Academic Year															
		2019-20								2020-21							
		Headcou..	FTES	Retenti %	Success %					Headcou..	FTES	Retention %	Success %				
VEN125	Special Admit									1	0.3	100%	100%				
	Continuing	34	7.1	97%	94%					41	9.9	98%	78%				
	First Time	1	0.2	100%	100%					9	2.4	100%	100%				
	First Time Transfer	2	0.4	100%	100%					3	0.7	67%	33%				
	Returning	2	0.4	100%	100%					3	0.9	100%	33%				

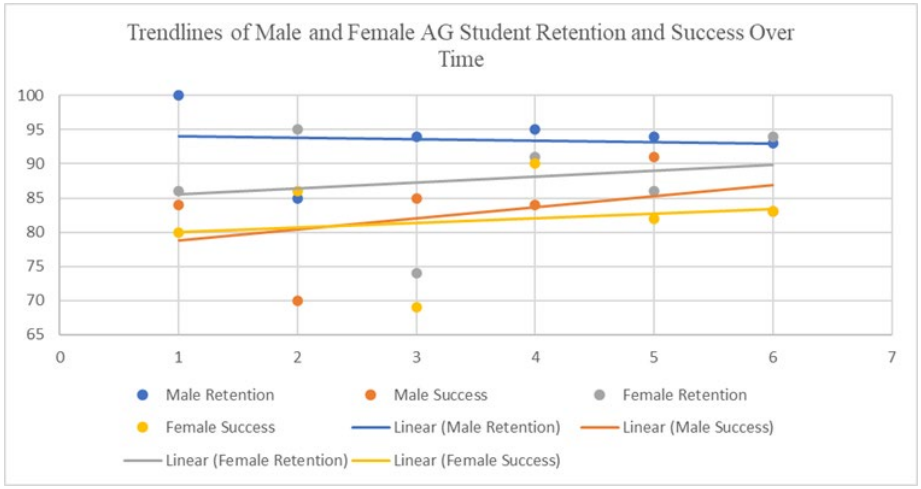
In reviewing the course retention and success data based on student type, the majority of students are categorized as "continuing" and among this demographic, retention tends to be above 90% for most classes, with success rates in most cases above 80%. The high number of "special admittance" students in certain classes can be attributed to the concurrent enrollment courses that are taught at the high school sites.

GENDER IN AGRICULTURE

		Academic Year											
		2018-19				2019-20				2020-21			
		cou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG100	Female					20	0.65	85%	85%	18	0.58	89%	67%
	Male					32	1.04	86%	83%	29	0.94	86%	83%
	Unknown					1	0.03	100%	100%				

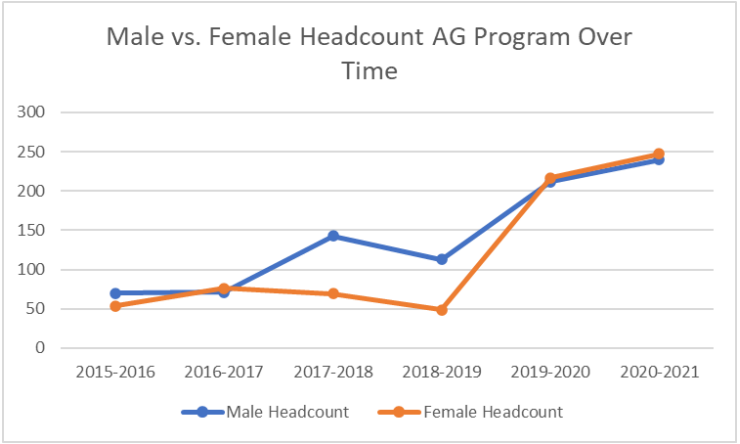
		Academic Year																			
		2015-16				2016-17				2017-18				2018-19				2019-20				2020-21			
		cou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Su	cou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG150	Female	7	0.75	86%	86%	7	0.75	100%	100%	10	0.97	90%		6	0.58	83%	83%	14	1.36	93%	71%	16	1.56	81%	75%
	Male	9	0.96	100%	67%	11	1.18	82%	55%	19	1.85	95%		23	2.23	96%	91%	20	1.94	100%	90%	29	2.82	100%	90%
	Unknown					1	0.11	100%	0%									1	0.10	100%	100%				
AG152	Male	12	1.28	100%	67%	20	2.04	85%	50%	7	0.75	100%						25	2.41	76%	76%	41	3.86	95%	85%
	Female	12	1.28	100%	75%	31	3.37	97%	61%	12	1.28	92%						61	5.83	97%	93%	83	7.75	100%	87%
	Unknown																	2	0.19	100%	100%	5	0.46	100%	100%
AG153	Unknown																					1	0.10	100%	0%
	Female					5	0.53	80%	80%									6	0.64	83%	83%	4	0.39	100%	100%
	Male					10	1.07	60%	60%									13	1.39	100%	92%	14	1.36	86%	86%
AG154	Female	3	0.32	67%	67%					9	0.96	44%		9	0.96	89%	89%	14	1.28	100%	86%	27	2.63	93%	70%
	Male	17	1.82	100%	100%					21	2.24	90%		14	1.50	86%	79%	6	0.55	100%	100%	26	2.63	92%	77%
	Unknown																	3	0.27	100%	67%	5	0.46	100%	100%
AG155	Female									6	0.62	100%		5	0.51	100%	100%	1	0.09	100%	100%	6	0.59	100%	83%
	Male									48	4.94	100%		41	4.22	95%	83%	39	3.70	100%	97%	63	6.02	98%	65%
	Unknown													2	0.21	100%	50%	6	0.59	100%	100%				
AG156	Female					3	0.32	100%	100%	2	0.21	0%						24	2.52	100%	96%	64	6.13	97%	89%
	Male					18	1.92	100%	100%	11	1.18	91%						23	2.43	100%	100%	37	3.71	95%	84%
	Unknown																	2	0.21	100%	100%	6	0.56	100%	83%
AG157	Male									13	1.39	85%		18	1.92	94%	61%	28	2.73	96%	92%	16	1.68	100%	88%
	Female									9	0.96	100%		12	1.28	83%	83%	39	3.73	100%	100%	28	2.84	100%	93%
	Unknown																	1	0.09	100%	100%	1	0.11	100%	0%
AG158	Unknown																	9	0.87	83%	83%	1	0.11	100%	100%
	Female																	79	7.63	97%	91%	70	6.80	96%	91%
	Male																	58	5.66	98%	85%	39	3.91	95%	90%
AG160	Female													6	1.03	83%	83%	1	0.17			5	0.86	80%	80%
	Male													6	1.03	100%	83%	7	1.20	100%	100%	20	3.43	90%	75%
	Unknown																	1	0.17	100%	100%	1	0.17	100%	100%
AG161	Unknown																					1	0.21	100%	100%
	Male									13	1.39	92%		12	1.28	100%	92%	14	1.50	69%	69%	17	3.63	88%	82%
	Female									6	0.64	67%		2	0.21	100%	100%	11	1.18	88%	88%	6	1.28	100%	83%
VEN125	Female	12	2.56	92%	92%	9	1.92	100%	89%	5	1.07	100%	100%	21	4.49	100%	95%	13	2.72	92%	85%	22	5.33	100%	77%
	Male	21	4.49	100%	100%	22	4.70	100%	86%	25	5.34	96%	88%	26	5.56	92%	81%	25	5.19	100%	100%	35	8.92	94%	77%
	Unknown													1	0.21	100%	100%	1	0.21	100%	100%				





Looking at the course retention and success data based on student gender as demonstrated by the comparison graph illustrating data points for each academic year, we see that in general male retention and success rates tend to be higher than retention and success rates for female students in the agriculture program courses. Average male retention rate in all courses over the 6-year period analyzed was 93.5% while the same statistic for female students was 87.7%. A similar discrepancy was noted when averaging the success rates for male and female students in all courses over the 6-year period, where the male average was 87.7% and the female student average success rate was 81.7%. When analyzing the data using a trendline, it is noted that improvement in male success rates is occurring at a more positive rate than that of the female students in the program. However, average male student retention sees a slightly declining trendline, while female student retention is trending positive.

Male success appears to have been more significantly impacted than female success during the years affected by the COVID-19 pandemic and ensuing school closures with the shift to online instruction. In the years prior to the impacts of the COVID-19 pandemic, the average female retention and success rates were consistently lower than those of male students. Although it is only speculation, one might assume that male rates dropped during the COVID-19 years as many male students chose to work while the job market was good and many of them were not well-suited for online learning. One might also surmise that female students experienced some level of discomfort in male-dominated programs. Looking at the program gender demographics, we see that over the past 6 years, female enrollment has significantly improved, catching up to, and sometimes exceeding, that of male enrollment:

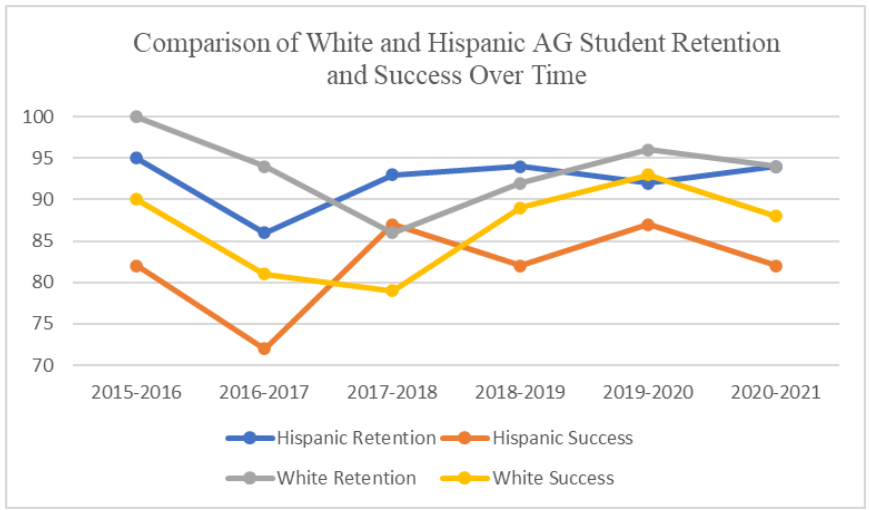


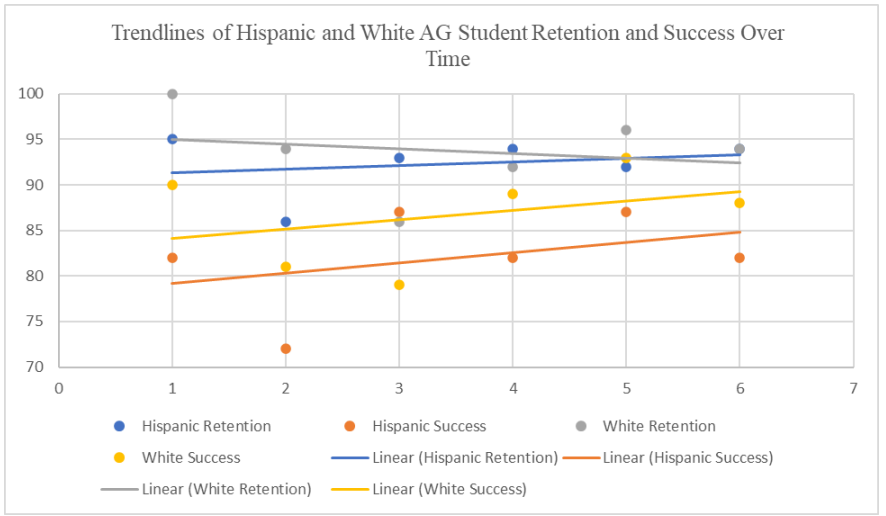
ETHNICITY IN AGRICULTURE

		Academic Year											
		2018-19				2019-20				2020-21			
		cou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG100	Black									1	0.03	0%	0%
	Native Am									1	0.03	100%	0%
	Unknown					2	0.06	50%	50%				
	White					15	0.49	79%	79%	18	0.58	89%	78%
	Hispanic					34	1.10	91%	88%	27	0.87	89%	81%
	Asian					1	0.03	100%	100%				
	Filipino					1	0.03	100%	100%				

		Academic Year																	
		2015-16				2016-17				2017-18				2018-19				2019-20				2020-21			
		ou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	cou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG150	Black					1	0.11	100%	100%	1	0.10	100%	100%												
	Filipino																					4	0.39	100%	100%
	Native Am					1	0.11	100%	0%																
	Hispanic	11	1.18	91%	73%	11	1.18	82%	64%	13	1.26	100%	92%	17	1.65	94%	88%	18	1.75	94%	72%	24	2.33	96%	79%
	Unknown																	1	0.10	100%	100%				
	White	5	0.53	100%	80%	6	0.64	100%	83%	15	1.46	87%	87%	12	1.17	92%	92%	16	1.55	100%	94%	17	1.65	88%	88%
AG152	Pac Isl					1	0.11	100%	100%																
	Hispanic	14	1.50	100%	64%	32	3.48	94%	56%	9	0.96	89%	56%					36	3.46	84%	77%	81	7.54	98%	81%
	White	10	1.07	100%	80%	15	1.53	87%	47%	7	0.75	100%	57%					44	4.21	95%	95%	41	3.87	100%	95%
	Asian					2	0.19	100%	100%									1	0.10	100%	100%	1	0.10	100%	100%
	Black									1	0.11	100%	100%					1	0.10	100%	100%	1	0.09	100%	100%
	Filipino									1	0.11	100%	100%					2	0.19	100%	100%				
	Native Am					1	0.10	100%	100%	1	0.11	100%	0%					2	0.19	100%	100%	2	0.18	100%	100%
	Unknown																	2	0.18	100%	100%	3	0.28	100%	100%
AG153	Hispanic					9	0.96	56%	56%									9	0.96	89%	89%	10	0.97	80%	70%
	Black																	1	0.11	100%	100%	2	0.19	100%	100%
	Native Am																	1	0.11	100%	100%				
	White					6	0.64	83%	83%									8	0.85	100%	88%	7	0.68	100%	100%
AG154	Black	1	0.11	100%	100%									1	0.11	100%	100%								
	Filipino									1	0.11	100%	100%					1	0.09	100%	100%	1	0.09	100%	100%
	Hispanic	16	1.71	94%	94%					16	1.71	69%	69%	17	1.82	88%	82%	10	0.91	100%	90%	40	3.90	95%	73%
	Unknown																	3	0.27	100%	67%	1	0.09	100%	100%
	White	3	0.32	100%	100%					13	1.39	85%	85%	5	0.53	80%	80%	9	0.82	100%	89%	16	1.64	88%	81%
AG155	Black																					2	0.20	100%	100%
	Native Am																					2	0.20	100%	100%
	Pac Isl									1	0.10	100%	0%												
	Filipino													1	0.10	100%	100%	1	0.09	100%	100%	1	0.10	100%	100%
	Hispanic									42	4.32	100%	81%	43	4.42	95%	81%	31	2.97	100%	100%	51	4.86	98%	67%
	Unknown													1	0.10	100%	100%	3	0.29	100%	50%	2	0.18	100%	50%
	White									11	1.13	100%	91%	3	0.31	100%	100%	11	1.03	100%	100%	11	1.07	100%	55%

		Academic Year																			
		2015-16				2016-17				2017-18				2018-19				2019-20				2020-21			
		ou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	cou..	FTES	Retention %	Success %	Headcou..	FTES	Retenti %	Success %	Headcou..	FTES	Retention %	Success %
AG156	Native Am																					3	0.27	100%	100%
	Pac Isl																					1	0.11	100%	100%
	Black																	2	0.21	100%	100%	1	0.09	100%	100%
	Filipino																	1	0.10	100%	100%	2	0.20	100%	100%
	Hispanic					9	0.96	100%	100%	5	0.53	100%	100%					24	2.53	100%	96%	63	6.14	97%	84%
	Unknown																	3	0.31	100%	100%	3	0.29	100%	100%
	White					12	1.28	100%	100%	8	0.85	63%	63%					19	1.99	100%	100%	34	3.31	94%	88%
AG157	Black									1	0.11	100%	0%	1	0.11	100%	100%					1	0.09	100%	100%
	Hispanic									8	0.85	100%	88%	21	2.24	95%	71%	20	1.90	95%	95%	22	2.28	100%	82%
	Asian																	1	0.09	100%	100%				
	Filipino																	4	0.37	100%	100%	2	0.20	100%	100%
	Pac Isl									1	0.11	100%	100%					1	0.09	100%	100%				
	Unknown																	5	0.48	100%	100%	1	0.09	100%	100%
	White									12	1.28	83%	75%	8	0.85	75%	63%	37	3.62	100%	97%	19	1.96	100%	95%
AG158	Hispanic																	88	8.50	96%	90%	68	6.62	93%	87%
	White																	41	4.01	97%	88%	39	3.89	100%	97%
	Black																	4	0.40	100%	75%	1	0.10	100%	100%
	Filipino																	2	0.19	100%	100%	1	0.11	100%	100%
	Native Am																	5	0.48	100%	100%	1	0.10	100%	100%
	Unknown																	6	0.58	100%	67%				
AG160	Native Am													1	0.17	100%	100%								
	Hispanic													6	1.03	83%	67%	4	0.69	100%	100%	17	2.92	94%	82%
	Unknown																	2	0.34	100%	100%				
	White													5	0.86	100%	100%	3	0.51	100%	100%	9	1.54	78%	67%
AG161	Asian									1	0.11	100%	100%												
	Black									2	0.21	100%	100%												
	Hispanic									9	0.96	89%	89%	5	0.53	100%	80%	11	1.18	50%	50%	14	2.99	86%	79%
	White									7	0.75	71%	71%	9	0.96	100%	100%	11	1.18	90%	90%	10	2.14	100%	90%
	Filipino																	2	0.21	100%	100%				
	Native Am																	1	0.11	100%	100%				
VEN125	Filipino	1	0.21	100%	100%	1	0.21	100%	100%					1	0.21	100%	100%					1	0.30	100%	100%
	Native Am	1	0.21	100%	100%					2	0.43	100%	100%	1	0.21	100%	100%					1	0.21	100%	0%
	Unknown																					1	0.30	100%	100%
	White	12	2.56	100%	100%	11	2.35	100%	91%	11	2.35	100%	91%	20	4.27	95%	85%	19	4.00	95%	95%	21	5.48	95%	71%
	Black					1	0.21	100%	100%					1	0.21	100%	100%	1	0.19	100%	100%				
	Hispanic	19	4.06	95%	95%	18	3.85	100%	83%	17	3.63	94%	88%	25	5.34	96%	88%	18	3.73	100%	94%	31	7.53	97%	81%
	Pac Isl																	1	0.19	100%	100%	2	0.43	100%	100%

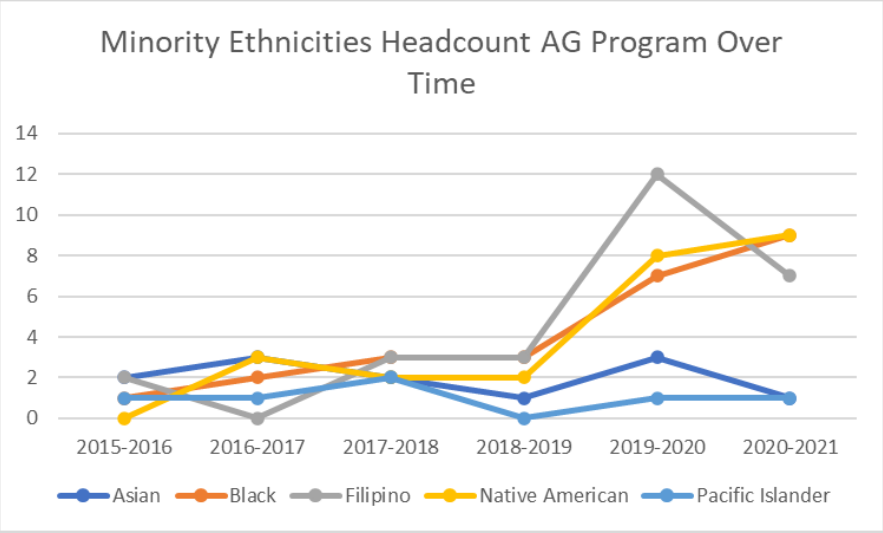


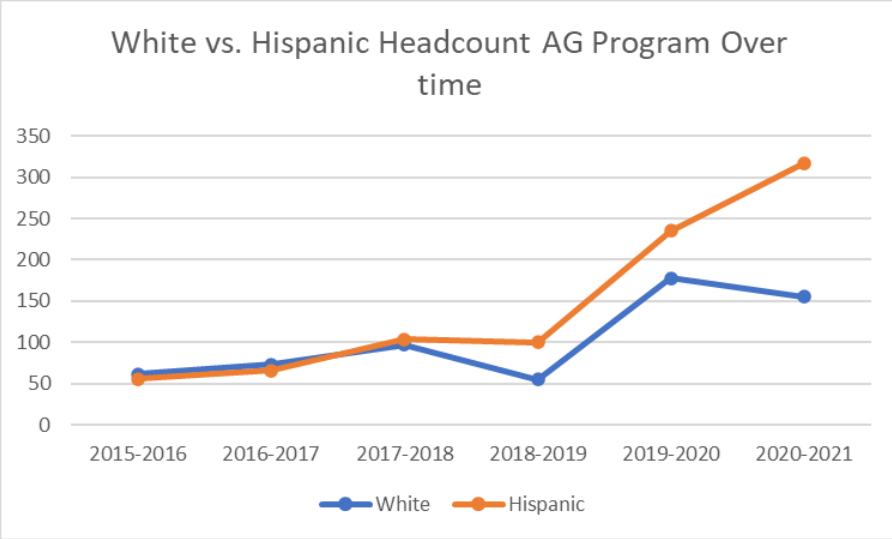


Considering the ethnicity data for course retention and success, a more in-depth graphical analysis was conducted on White and Hispanic student populations because other ethnicities have significantly lower representation in agriculture courses. The average retention rates for both student demographics in all courses over the 6-year time period is similar, with Hispanic retention averaging 92.3% while White retention averages 93.7%. Hispanic success rates, however, have a larger discrepancy at 82% while White success rates average 86.7%. Positive trendlines are seen in both Hispanic and White success rates, while only Hispanic retention rates are trending in a positive direction and White retention rates are seeing a slightly declining trend.

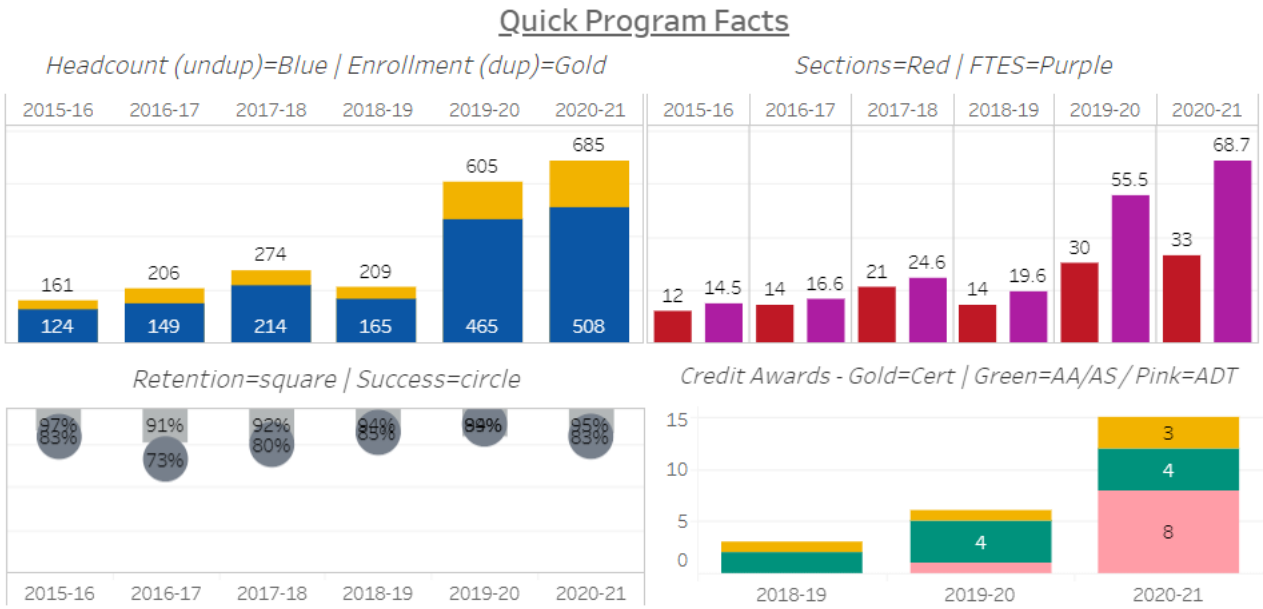
Again, we see a notable drop in student success for both White and Hispanic populations during the years impacted by the COVID-19 pandemic and subsequent shift to online-only instruction. While students may in some ways prefer remote options, we see that successful learning of course content had significantly negative outcomes.

Overall program headcount with respect to ethnicity data was disaggregated into two graphs to improve data visualization for the small numbers of most ethnicities and a separate graph for the two majority ethnic groups, Hispanic and White. We see a general trend toward improved headcount data in all student groups other than a slight decrease at times in both Asian and Filipino student enrollment in the Agriculture program. This significant increase in student enrollment in the program is likely attributed to the addition of several degree and certificate options, improved relationships with high school agriculture programs, regular community outreach to promote the program, active engagement with the local agriculture industry, and frequent media releases highlighting the expanding Agriculture program at AHC.





AGRICULTURE



VITICULTURE & ENOLOGY

A counselor is invited to talk to the students during the first weeks of classes each semester. The idea is to prepare a plan for the students for graduation or transfer. We encourage the use of the student support services found on campus: Counseling, Learning Assistance, Financial Aid, EOPS/CalWorks, the Library and Open Access Computer Lab, the Tutorial Center, and specially internship possibilities among others.

We have several field trips that we promote among all courses, and we invite guest speakers from different specific areas in the program.

Retention is difficult since attrition is significant in most courses. There is a need to captivate students from the beginning in each course, knowing their names and stressing the importance of the class from early in the semester. It is indispensable to have exciting material and participation in the learning process, presenting challenging questions to solve in the next class.

Success is difficult for some students, as they may have personal difficulties and often lack a strong foundation in education.

Some strategies to help student include:

Changing modality frequently (to different questions, topics and videos).

Add rewards or extra credit for trying different tasks. Add fun exercises.

Something that helps is to remember all names by heart and every couple of weeks ask how they are doing following up with each student. A roster with pictures would help as is provided in other institutions.

The data for all Agribusiness classes over the last six years show success and retention rates at or higher than the general campus, for all ethnicities, ages and genders, compared to campus wide.

Degrees awarded are slowly increasing through 2019.

The retention in the online course AG 101 is similar to AHC average 80% but the success is 10% lower being 50% instead of AHC average of 60%.

Retention and success were heavily affected by COVID as shown in last semesters variations.

VII. Trend Analyses/Outlook

The establishment of an Agriculture program separate from the Viticulture and Enology program has received incredible support from the community of Santa Maria and surrounding rural areas within the college's service district. A decades-long lack of sufficient local higher education opportunities in agriculture created a generation of parents, students, K-12 partners, and industry members desperate for a local, affordable option for students pursuing studies in the diverse field of agricultural sciences.

The Agriculture program continues to be in a period of rapid expansion, with community support and outreach proving to be driving forces in its development. This program is being well received on many levels throughout the community and the enthusiasm is palatable for the development of this program which is long overdue in the Santa Maria Valley. High schools, elementary schools, community organizations, and industry leaders continue to reach out with a desire to collaborate and participate in the growth and establishment of the agriculture program.

With a current program focus on crop science, plant science, and agribusiness now well established, the program is responding to emerging industry workforce needs. A new stackable certificate program designed to meet California Department of Pesticide Regulation (DPR) academic requirements to qualify to take the Pest Control Adviser (PCA) licensing exam is enjoying increased attention and enrollment. The new courses that partially comprise this program are preparing students to pass this rigorous state exam, for which there is significant industry demand.

As a result of urging from local industry partners, development of a Mechanized Agriculture/Agriculture Technology program is underway with a diversity of pathway opportunities – from diesel and standard mechanics to computerized technologies and autonomous vehicle repair. A new Precision Agriculture course will be combined with existing courses to create a certificate and associate's degree in Precision Agriculture, which will include GIS/GPS science and sensor technologies integrated with drone communication, data analysis, and sustainable management decision-making. Additionally, newly awarded funding from the NSF will assist in the establishment of an Agriculture Biotechnology program – bringing unique and valuable high-tech career training to our student population. Additional curriculum development is being considered in the food safety and commercial beekeeping areas of study.

The biggest challenges facing the agriculture program are: (1) it is completely powered by temporary full-time and part-time faculty, (2) it lacks laboratory space and resources, and (3) there is no classified laboratory support.

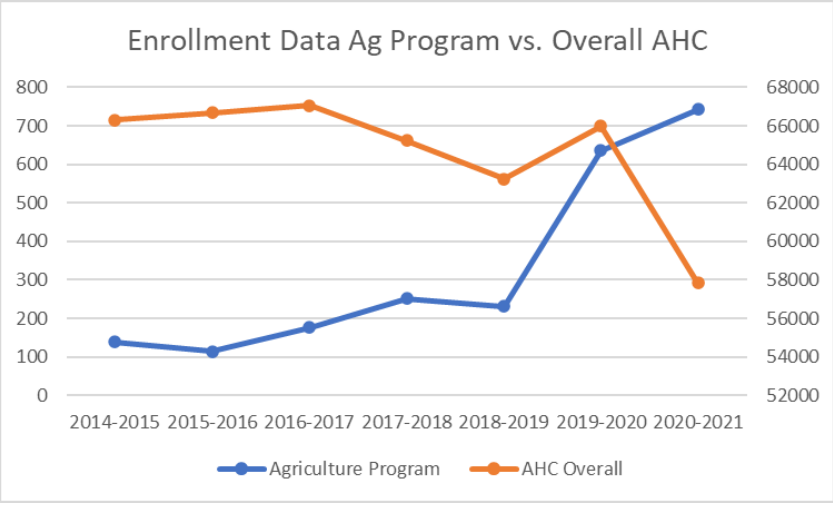
(1) The program coordinator and main instructor is currently temporary full-time, funded largely from external grant sources. All other instructors in the program are part-time faculty who by the nature of their assignments do not provide the consistency and dedication needed for the program to fully realize its potential. Although we are enjoying excellent part-time faculty in the program, they generally lack the desire to participate in any aspect of the program other than teaching their assigned course. This leads to a relatively disconnected program whereby students can suffer from an absence of energy and time devoted to their courses and external support projects/events.

(2) The agriculture program has been extremely limited in laboratory space and restricted in use of current Life and Physical Sciences laboratory equipment. There is not a dedicated lab area for the agriculture program and when existing physical and biological science labs are attempted for use, it creates significant scheduling and practical conflicts. This issue also holds true for lecture classroom space, where scheduling continues to be a challenge and priority for department space is given to other department programs.

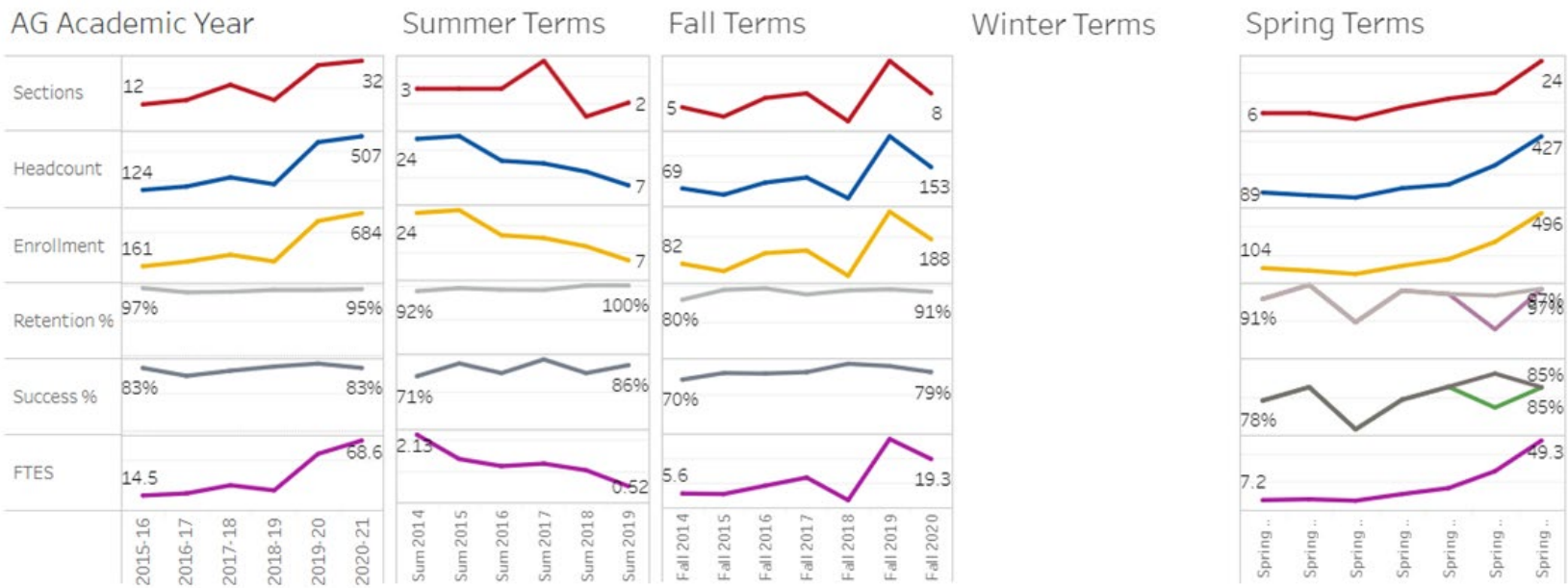
(3) The valuable "living laboratory" on-campus student farm is under the sole supervision and direction of the temporary full-time faculty, who does not have the time to adequately maintain this important academic resource. The many jobs that must be completed to keep the student farm functioning rely on a student workforce, which is generally unstable with frequent turnover due to shifting schedules and graduations and student workers lack the expertise to properly maintain irrigation, farm equipment, and crops. Likewise, there is not any laboratory support for the indoor sections of the lab-based courses that are part of the Agriculture program, leaving lab technician work up to the many part-time faculty who teach the courses without sufficient knowledge or assistance to make proper use of laboratory space and equipment. A full-time, classified student farm manager/lab technician is necessary to run the daily operations in tending to the student farm, student vineyard, and indoor laboratory space to improve the experiential opportunities of this program. A manager would provide course support similar to a laboratory technician – preparing and maintaining the vegetable garden, fruit orchard, greenhouse, production vineyard, and classroom laboratory.

The Agriculture program has seen strong growth and enrollment. Even when overall AHC enrollment was down 12% during the COVID-19 pandemic, the Agriculture program saw substantive growth. The headcount for the Agriculture program increased by14% at a time when overall headcount at Allan Hancock College decreased by 8%.

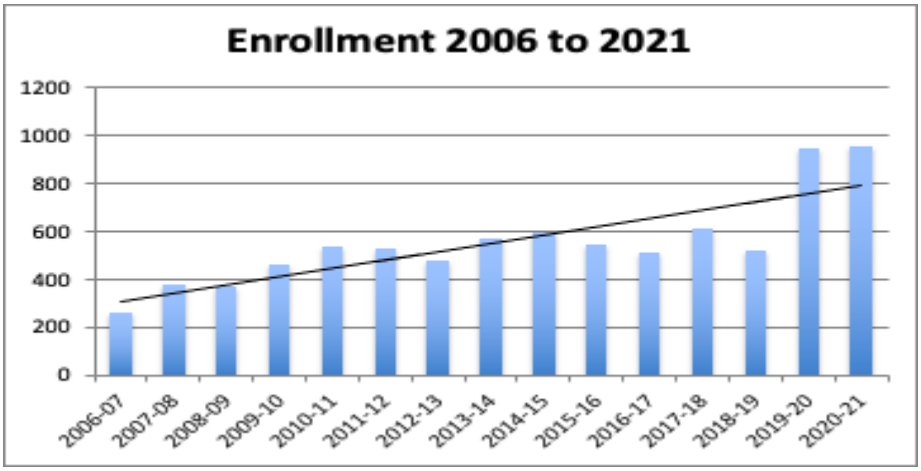
Academic Year	14-15	15-16	16-17	17-18	18-19	19-20	20-21
AG Science							
HC	119	94	142	192	171	465	529
% change previous year		-21%	51%	35%	-11%	172%	14%
Enroll	139	114	176	251	231	636	743
% change previous year		-18%	54%	43%	-8%	175%	17%
AHC Credit							
HC	16709	17009	17251	17276	15700	17034	15710
% change previous year		2%	1%	0%	-9%	8%	-8%
Enroll	66305	66683	67048	65246	63246	65981	57840
% change previous year		1%	1%	-3%	-3%	4%	-12%



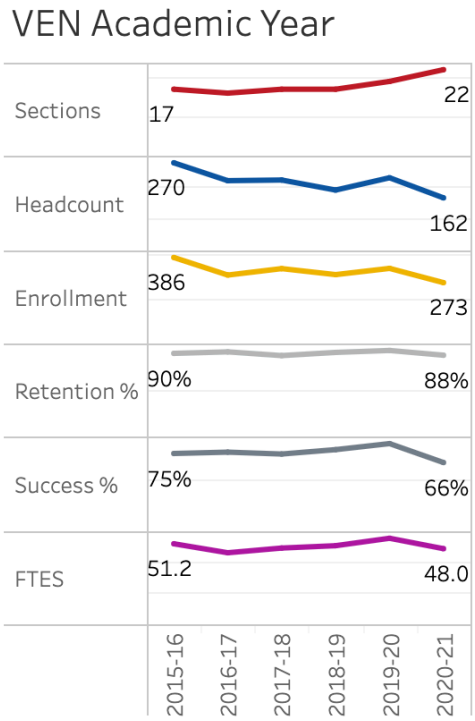
AGRICULTURE



Viticulture and Enology



Total enrollment in both V&E and Ag is close to 1000 per year but if we only look at V&E, the enrollment has decreased in the last 2 years.



In analyzing only VEN courses we can see in the chart VEN Academic Year that enrollment is down from 386 to 273 and headcount is down from 270 to 162, which means that the students in the program are taking more classes but of course there are less students enrolled. Possible causes for the decrease in enrollment are as follows: COVID situation, high employment (students receive multiple job employment offers before finishing any program), the program is highly interactive with the community, there may be a sense of no interest for online classes when students can wait to have in person classes. It has also been a complicated time so that may be a reason for a decline in success from 75% to 66%.

We can see in the table below that the decrease in enrollment is heavily impacted in the viticulture and winemaking operations classes that are mainly in person.

	2015-16	2020-21	2021-22
Ven 101	142	47	30
Ven 102	30	52	31

Ven 103	31	20	0
Ven 104			8
Ven 114		13	13
Ven 120	28	7	11
Ven 121	27	4	9
Ven 125	33	57	47
Ven 130		14	9
Ven 140	3	3	0
Ven 141	1	2	0
Ven 301			16
Ven 302			9
Ven 310	18	17	16
Ven 311	20	12	15
Ven 314	22	6	13
Ven 315	21	18	0
Ven 320			14
Ven 321	9	1	23
Ven 324			14
Ven 330			9
Total	385	273	287

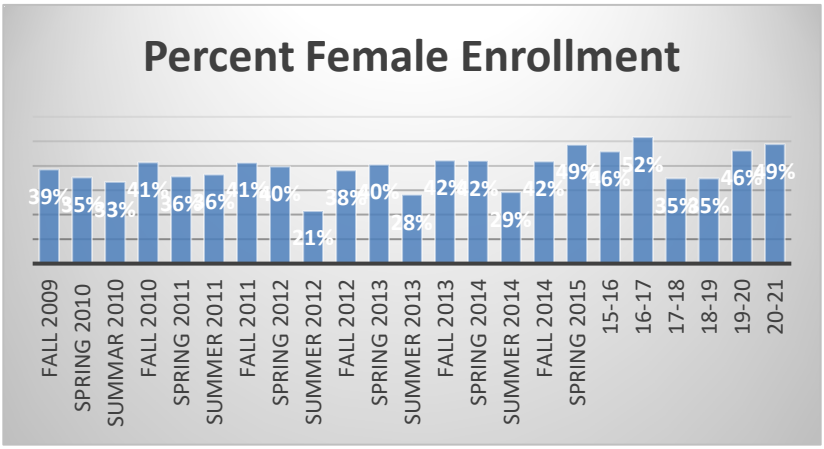
In the last year 21-22 the enrollments are staying low as shown in the table above.

In both programs VEN and AG the population of Hispanic students have been growing as demonstrated in chart 1.

When looking at the V&E program we find a low percent of females compared to male students. Hispanic students remain quite constant in percentages.

Appendix A: Program/Course Demographics by Outcome VEN

		Academic Year											
		2015-16				2019-20				2020-21			
		Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %	Headcou..	FTES	Retention %	Success %
VEN101	Female	69	7.15	87%	62%	25	2.55	87%	83%	22	2.23	86%	55%
	Male	72	7.19	86%	57%	44	4.54	78%	72%	23	2.44	83%	46%
	Unknown					1	0.11	100%	0%	1	0.11	100%	100%
VEN102	Female	14	1.50	79%	64%	23	2.46	94%	83%	23	2.46	83%	57%
	Male	16	1.71	100%	88%	35	3.74	91%	78%	27	2.99	89%	64%
	Unknown									1	0.11	100%	100%
VEN103	Female	14	1.50	93%	86%	8	0.85	88%	63%	11	1.18	91%	64%
	Male	17	1.82	82%	76%	12	1.28	92%	75%	9	0.96	100%	100%
	Unknown					1	0.11	100%	0%				
VEN114	Female					9	0.96	78%	67%	8	0.85	63%	63%
	Male					8	0.85	100%	100%	5	0.53	80%	60%
VEN120	Female	15	2.57	87%	73%	15	2.54	100%	100%	2	0.34	100%	100%
	Male	13	2.23	92%	77%	12	2.04	100%	83%	5	0.86	100%	40%
	Unknown					12	2.01	100%	50%				
VEN121	Female	10	1.72	100%	100%	12	2.06	100%	100%	1	0.17	100%	100%
	Male	17	2.92	94%	65%	9	1.54	100%	100%	3	0.51	100%	67%
VEN125	Female	12	2.56	92%	92%	13	2.72	92%	85%	22	5.33	100%	77%
	Male	21	4.49	100%	100%	25	5.19	100%	100%	35	8.92	94%	77%
	Unknown					1	0.21	100%	100%				
VEN130	Female					5	1.98	100%	100%	3	1.00	100%	100%
	Male					10	3.95	100%	100%	11	3.99	91%	45%
VEN140	Female	1	0.17	100%	100%					2	0.34	100%	100%
	Male	2	0.34	100%	100%	4	0.69	100%	100%	1	0.17	100%	100%
VEN141	Female									1	0.17	0%	0%
	Male	1	0.17	100%	100%	2	0.34	100%	100%	1	0.17	100%	100%
VEN310	Female	8	1.04	100%	88%	8	2.08	88%	88%	8	2.08	88%	88%
	Male	10	1.30	80%	80%	6	1.56	100%	83%	9	2.34	100%	67%
VEN311	Female	7	0.97	71%	71%	6	1.56	100%	100%	6	1.56	100%	100%
	Male	13	1.81	100%	100%	7	1.82	100%	100%	5	1.30	100%	80%
	Unknown									1	0.26	0%	0%
VEN314	Female	13	1.39	100%	100%					3	0.32	100%	100%
	Male	9	0.96	89%	78%					2	0.21	100%	100%
	Unknown									1	0.11	100%	100%
VEN315	Female	8	1.71	88%	75%	4	0.85	100%	100%	5	1.07	80%	60%
	Male	13	2.78	92%	85%	16	3.42	100%	100%	13	2.78	54%	38%
	Unknown					1	0.21	100%	100%				
VEN321	Female	3	0.39	67%	67%	1	0.14	100%	100%	1	0.14	0%	0%
	Male	6	0.78	100%	83%	2	0.28	100%	50%				



Enrollments have steadily increased since 2006. In the last years 2019-2021 almost half of the student population was female, which is an improvement since some semesters it has been approximately 30 percent.

In V&E, there is a change in the last years coming back to an older average in student age, (meaning that high school promotion is important), and less females are in the operations classes currently (more advertising in needed).

The explanation of these last two-year difference in enrollment could be as follows: less students in practical courses like Viticultural practices, one less section of Intro to Winemaking partially offset by IPM and Wine business class offered in 20-21.

As we can see in the above chart enrollment has decreased in the last year. Same students are taking more classes in the program which is good and according to our surveys, students are happy once they started in the program more so than at the beginning. Probably the key is to get more students starting and keep the engagement going strong.

Here is the strategy to bring it up again:

1. Major promotion and advertising at vineyards and wineries in the SB and SLO counties.
2. New online offerings.
3. 3 new certificates.

Major Challenges:

To create a 5-year schedule so students can plan ahead.

To create and update Certificates and Associate degrees.

To continue to offer excellent classes without a winemaking full-time instructor.

To be able to offer classes using the greenhouse that is not operational at this time due to lack of electricity.

To be able to update the programs and offer new classes with AP&P system.

To improve and update Wine Business concentration.

To update and expand online courses.

To create workbooks for different classes and improve/update online materials.

To create more opportunities and improve student internships.

To make classes more engaging with newer material.

To be able to offer a certificate in Sustainable AG/Viticulture degree programs.

To be able to offer scalable certificates and an AS in Winemaking.

Opportunities

To promote with bonded winery wines, our programs and courses throughout California, pouring wines at different events.

To strengthen relationships with other colleges and four-year institutions promoting student exchange, interaction and internships.

To extend the information in website advertising every course.

To offer the AHC Wine Festival once a year in October to attract community interest and involvement.

VIII. Long-Term Program Goals and Action Plans (Aligned with the College Educational Master Plan)

Recommendations from the Agriculture Program Advisory Committee, which includes stakeholders from diverse sectors of the local industry, government agencies, high school agriculture programs, help to drive the recommendations for future program plans.

AGRICULTURE

Program Improvement Plan	Anticipated Outcome (Goal)	Justification	Resource Request	Anticipated Completion Date
1. Hire FT agriculture program coordinator/instructor	Long-term consistency for program development and maintenance	A dedicated FT faculty position in the agriculture program is essential to the continued success of this rapidly developing program	Staffing	Spring 2023
2. Establish a dedicated laboratory and classroom space for agriculture courses	Students in the agriculture program will have the space and equipment necessary for quality learning experiences	Without adequate learning facilities, the students in the agriculture program lack the resources necessary for optimal learning	Facility	Fall 2023
3. Hire a classified farm/laboratory technician	A dedicated staffing position will adequately manage the operational needs of the "living laboratory" student farm (vegetable garden, fruit orchard, greenhouse, and vineyard) along with providing indoor laboratory support	A dedicated farm/lab technician is essential for the maintenance of the valuable living laboratory space and support for indoor labs. Students consistently experience improved learning outcomes when they have access to a well-maintained farm lab space.	Staffing	Spring 2024
4. Establish an agricultural production enterprise project on the AHC student farm	Creation of an on-farm production and agribusiness sales & marketing project using the AHC on-campus student farm	Based on input from students and advisory committee industry partner members, there is a need for students to have access to an enterprise learning model for improvement of knowledge and skills needed for future employment in the agriculture industry	NSF ATE Supplemental Funds have been awarded to support this project	Fall 2022

5. Expand the Field to Table collaborative program	Aid students in exploring and comprehending the interdisciplinary connectivity between food and beverage production, food science, nutrition, and culinary arts	There is a natural connection between these programs yet a lack of collaboration. This plan will improve student opportunities and also engage the community at large	Previous CTEA grant support may be requested for renewal to continue the Field to Table program	Ongoing
6. Complete the development of the Precision Ag Program	To fulfill the requirements of the NSF grant award, this new pathway will be fully developed	Industry input has confirmed that the need for employees trained in this subject is great	NSF grant funds already secured	Fall 2022 – Spring 2023
7. Expand on Produce Safety program to develop food safety curriculum	To meet a significant industry need in preparing students for the critical role in produce safety work required under the Food Safety Modernization Act	Industry input has confirmed that the need for employees trained in this subject is great	USDA grant funds provided start-up support	Fall 2024
8. Develop a collaboration with the AHC industrial technology program to establish ag machining, engineering, and manufacturing curriculum and appropriate agriculture-based mechanized/automated technologies for industry-relevant, experiential training	To meet significant industry needs in preparing students for the essential workforce training in agricultural industrial trades	Industry input has confirmed that the need for employees trained in this subject is great	Funds for additional curriculum development have been requested in partnership with a West Hills College-led consortium from USDA	Spring 2023 - Fall 2024

9. Explore new curriculum concepts in agriculture laws & regulations; natural resource management; and certified crop adviser preparation	To meet significant industry needs in preparing students for the essential workforce training in regulations affecting ag production, natural resource management, and crop advising, genetics, laboratory diagnostics and other high-tech laboratory techniques applied to agriculture	Industry input has confirmed that the need for employees trained in this subject is great	Funds for additional curriculum development may be requested from NSF, CTEA, and/or USDA	Ongoing
10. Develop agriculture biotechnology program	To prepare technicians for advanced laboratory skills needed in sectors of the industry addressing matters related to food safety, plant breeding, and genetic analysis, among other technical laboratory skills	Industry input has confirmed that the need for employees trained in this subject is great	NSF ATE Funds have been awarded to support this project	Fall 2025 – Spring 2026

VITICULTURE AND ENOLOGY

In VEN the main goals are to increase promotion to enhance enrollment, since students appreciate the program once they know about it.
The development of stackable certificates and the AS in Winemaking, the Certificate in Sustainable Agriculture with concentration in Viticulture and the Certificate in Vineyard and Winery Administration (Online).
There is still need for wine analysis equipment, electricity for the greenhouse and greenhouse set up. The clonal and trellis demonstration at the vineyard will be important to showcase different training system, ampelography and the clonal differences in the major varietals grown in Santa Barbara County.
A pick-up truck would be very useful for wine supplies, small deliveries, pick up donations and visit vineyards and wineries more often for promotions, internships and collaboration with the community.

The AHC Winery website will allow for wine promotion and online sales, the Santa Barbara Vineyard and Wineries website will help to promote the industry and tourism in the SB county.

In order to increase promotion and participation of our students it is recommended to reapply and continue offering a booth at Unified Symposium in Sacramento.

More engaging materials, including videos can be developed for several courses; this will increase student participation.

Program Improvement Plan (Program Priority Number, year)	Anticipated Outcome (Goal)	Program Goal Status (Indicate if this goal is ongoing from a previous Annual Or Comprehensive Program Review or new this year).	Alignment to Strategic Directions and planning goals (see " Alignment to Strategic Directions" Attached	Activities	Justification (Evidence of need)	Resource Request (From table Below)	Anticipated Completion Date or On-going
Marketing Campaign for V&E program	Increased awareness of the AHC V&E program	New this year	Goal E1, SLS2, SLS3	Social media marketing, field visits,	Better outreach to increase awareness of the program and student completions	Other	Ongoing
Improvement of course materials	Better courses	Ongoing	Goal SLS1, SLS2, SLS6, IR3	New handbooks and videos	Learning improvements	Technology	Ongoing
Stackable Winemaking Certificates and new AS	Increased awareness of the AHC V&E program	New this year	Goal E1, SLS2, SLS3	Social media marketing, field visits,	Better outreach to increase awareness of the program and student completions	Other	2023
New Certificates in Sustainable AG with emphasis in viticulture and Vineyard and Winery Administration (Online)	Increased awareness of the AHC V&E program	New this year	Goal E1, SLS2, SLS3	Social media marketing, field visits,	Better outreach to increase awareness of the program and student completions	Other	2024
5 Year Class Schedule	Increased awareness of the AHC V&E program	New this year	Goal E1, SLS2, SLS3	Social media marketing, field visits,	Better outreach to increase awareness of the program and student completions	Other	2022

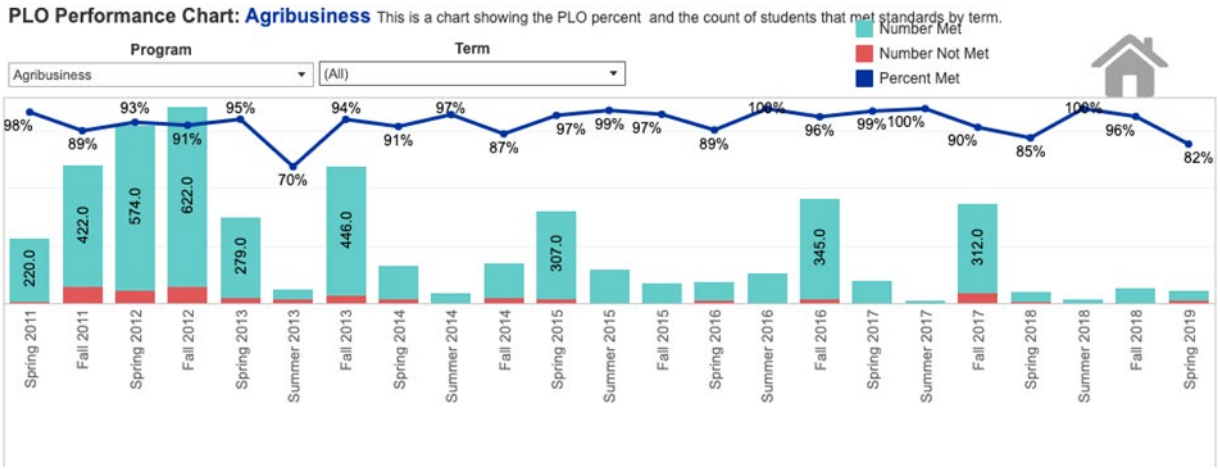
Resource Requests (Program, RRX year)	Item	Program Goal	Type	One-time cost	On-going cost (per fiscal year)	Anticipated Completion Date or On-going
Marketing program campaign	1	Program Outreach	Other	$10,000		2022-2023 and ongoing
Sprayer Tank for Vineyard	2	Vineyard maintenance	Equipment	$14,000		2023
Dish washer	3	Sanitization	Equipment	$15,000		2022
ORP Sensors	4	Wine quality	Technology	$5,000		2022
Electricity upgrades at Winery	5	Winemaking Operations	Facilities	$5,000		2022
Wine lab analysis equipment	6	Wine quality and stability	Technology	$5,000		2022
Pickup truck	7	Mobility and transport for donations, visits, wine deliveries	Equipment	$35,000		2023
Hopper for grape crush	8	Wine quality	Technology	$15,000		2024
Semiautomatic Bottling	9	Wine quality	Technology	$35,000		2024
Tasting room area improvements	10	Improve lab area for winery demonstrations and sales	Facilities	$3,000		2024
Wine Barrels	11	Show current technology Open canopies	Technology	$3,000		2022
Red Fermentation Tank	12	Showcase red fermentation with lees management	Technology	$5,000		2021
Rotary Fermentation Barrel	13	Showcase red fermentation with lees management	Technology	$5,000		2021
Winemaking Instructor	3	Improve education	Staffing	$100,000	$100,000	On-going

ASSESSMENT PLAN

Includes: Program Learning Outcomes, Assessment Methods, Alignment of Course SLOs, Assessment Calendar, Plan for Dissemination of Results

Viticulture and Enology

The courses SLO's were assessed completely several times but included in "Agribusiness". Assessment was satisfactory in all levels.



PLO Performance Table: Agribusiness- This is a table showing the overal PLO performance over the last 6 academic years, including percent and ata Visualization nts meeting standards.

		Number Met	Number Not Met	Percent Met
Null	No PLO Associated	127	12	91%
AG AS 1	Demonstrate effective animal husbandry skills including familiarization with livestock anatomy, physiology, and genetics.	0	0	
AG BUS1	Analyze consumer and market conditions.	57	6	90%
AG BUS2	Analyze promotion, selling, marketing and distribution possibilities.	42	2	95%

	AG E/V2	Demonstrate an understanding of the yearly cycle in the winery.	542	44	92%
	AG E/V3	Describe and demonstrate a proficiency in crushing, fermenting and pressing.	238	25	90%
Agribusiness	AG E/V4	Make appropriate additions to maintain wine stability and to determine the optimum time to bottle and release the wine.	294	29	91%
	AG E/V5	Make sound enological decisions during the course of the entire year (or years to bottling) to ensure wine quality and a clean, safe winery workplace.	219	7	97%
	AG VIT1	Analyze costs and sustainable alternatives in viticulture.	4	1	80%
	AG VIT2	Assess and differentiate effects of viticultural activities and processes in final grapes and wines produced, including yearly activities and grape vine phenology describing alternatives to make sound viticultural decisions during the entire	1,204	83	94%
	AG VIT3	Identify common vineyard problems and suggest solutions.	209	21	91%
	AG VIT4	Identify effects on different soils in viticulture and analyze precision viticulture practices and be able to use the information for continuous vineyard improvement.	688	34	95%
	AG VIT5	Use basic ideas and concepts in viticulture, including biology, and ecophysiology of vines and grape cultivars, to work in the viticulture industry.	475	33	94%

Course performance:

6. Historical Course Performance: Agribusiness- This is SLO assessment by course, including percent and number of students that met standards.

Historical CLO Performance Table: Agribusiness- This is a chart of the table above.

			Number Met	Number Not Met	Percent Met
AG101	AG101.1	AG101 SLO1 - Identify wine types, region and country of origin by reading wine labels.	80.00	3.00	96%
	AG101.2	AG101 SLO2 - List the winegrape cultivars typically associated with different classes of wines.	76.00	7.00	92%
	AG101.3	AG101 SLO3 - Describe the entire winemaking process from harvest to bottling, identifying the steps where particular problems may occur, for ..	75.00	8.00	90%
	AG101.4	AG101 SLO4 - Identify alternatives and possible problems in microorganisms and fermentation, cooperage or any other wine additio..	75.00	8.00	90%
	AG101.5	AG101 SLO5 - knowledgeable of health and legal issues, wines of California, the US, Europe and other wine regions around the world	79.00	4.00	95%
AG102	AG102.1	AG102 SLO1 - Utilize introductory grapevine biology basic concepts including phloem and xylem functions and cells	60.00	1.00	98%
	AG102.2	AG102 SLO2 - List and compare winegrape varieties, rootstocks and describe trellis types; along with the pruning, training and canopy manag..	57.00	4.00	93%
	AG102.3	AG102 SLO3 - Relate Grapevine phenology and berry developmental growth with aroma and natural compound devel..	58.00	3.00	95%
	AG102.4	AG102 SLO4 - Analyze different methods of vineyard propagation and grafting	59.00	2.00	97%
	AG102.5	AG102 SLO5 - Analyze ecophysiological factors that are essential for vineyard implementation and management	56.00	5.00	92%
	AG102.6	AG102 SLO6 - List and compare the most common grape pest and diseases in the Central Coast	56.00	5.00	92%
	AG102.7	AG102 SLO7 - Contrast Quality vines techniques including canopy management, deficit irrigation, precision viticulture	57.00	4.00	93%
AG114	AG114.1	AG114 SLO1 - Assess and relate an appropriate mastery of the knowledge, techniques, skills and modern tools of the winemaking ind..	24.00	1.00	96%
	AG114.2	AG114 SLO2 - Compare various marketing and selling techniques.	25.00	0.00	100%
	AG114.3	AG114 SLO3 - Describe logistics and compliance related to winegrowing implementation.	23.00	2.00	92%
	AG114.4	AG114 SLO4 - Practice to function effectively on teams, including effective communication, understanding professional, ethical ..	23.00	2.00	92%
	AG114.5	AG114 SLO5 - Use a commitment to quality, timeliness and continuous improvement.	24.00	1.00	96%
AG120	AG120.2	AG120 SLO2 - Compare benefits and problems with tasting fruit/juice versus lab analysis in deciding when to harvest	44.00	2.00	96%
	AG120.5	AG120 SLO5 - use veraison plant tissue analysis to develop a post-harvest fertigation program	41.00	5.00	89%
	AG120.6	AG120 SLO6 - analyze various rootstock and cultivar combinations and match them to soil variables	34.00	3.00	92%

Some more material and testing should be introduced in courses like VEN 114 Wine Business, VEN 102 Intro to Viticulture and VEN 324 Small Acreage Viticulture. With SPOL software a more integrative approach to assessment will start in 2022-2023.

AG121	AG121.1	AG121 SLO1 - evaluate the effectiveness of drip irrigation.	95.00	7.00	93%
	AG121.2	AG121 SLO2 - identify various insects and differentiate between beneficial and pest species.	18.00	1.00	95%
	AG121.3	AG121 SLO3 - identify various trellis designs and their application.	95.00	8.00	92%
	AG121.5	AG121 SLO5 - perform tissue analysis to determine nutrient levels in vines	57.00	7.00	89%
AG130	AG130.1	AG130 SLO1 - Identify common pests and diseases, plus beneficial insects, found in Central Coast vineyards.	10.00	0.00	100%
	AG130.2	AG130 SLO2 - Describe life cycles and the critical time periods when each pest and disease is a problem.	10.00	0.00	100%
	AG130.3	AG130 SLO3 - Use sampling and monitoring techniques in addition to explanation of control strategies appropriate to each pest and diseas..	9.00	1.00	90%
AG140	AG140.1	**AG140 SLO1 - develop accurate winegrape crop projections including the determination of timing and optimum quality for grape harvest.**	4.00	0.00	100%
	AG140.2	AG140 SLO2 - describe how and why different post-harvest operations are important to sustainable vineyard management.	7.00	0.00	100%

AG161	8.1	AG308 SLO1 - Define some reasons for the application of the scientific process in winemaking	12.00	0.00	100%
AG308	AG308.2	AG308 SLO2 - Identify common analyses in winemaking	12.00	0.00	100%
	AG308.3	AG308 SLO3 - Demonstrate at least one method of analysis	12.00	1.00	92%
	AG308.4	AG308 SLO4 - Compare different methods of analysis.	9.00	3.00	75%
AG311	AG311.1	AG311 SLO1 - Understand the difference between white and red wine production in the cellar	11.00	1.00	92%
	AG311.2	AG311 SLO2 - Identify potential spoilage and stability problems	10.00	2.00	83%
	AG311.3	AG311 SLO3 - Understand the different traits of wine fining agents	11.00	1.00	92%
	AG311.4	AG311 SLO4 -Provide a basic background of sensory analysis	12.00	0.00	100%
	AG311.5	AG311 SLO5 - Understand the basic operation of all the wine processing equipment at the Allan Hancock Campus Winery	12.00	0.00	100%

Agriculture

Ineffective and inadequate training in program SLO assessment followed by significant changes to the procedures have prevented the collection of sufficient learning outcome data for the newly established Agriculture program. Furthermore, a lack of training or even expressed expectations for part-time faculty, who provide the majority of the instructional services in the program, has led to many years of neglected learning outcome data gathering.

Agricultural Science Program Outcomes

Program SLO 1: apply current agricultural industry standards, laws and regulations in the agricultural sciences or related fields.
Program SLO 2: demonstrate knowledge of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully produce agricultural crops.
Program SLO 3: Identify common insect and disease pests and use knowledge of pest life cycles to recommend pest prevention and management plans.
Program SLO 4: Employ effective business skills using industry analysis, market trends, business plans and other standard agribusiness techniques, when presented with a farm or ranch management situation.
Program SLO 5: Assess and differentiate effects of agricultural activities in plant and cropping systems, while describing alternative practices in order to make sound agricultural decisions that ensure the quality and success of a crop.
Program SLO 6: Demonstrate an understanding of crop plant biological functions and their application to successful commodity production.
Program SLO 7: Demonstrate basic worker safety practices.

Agricultural Plant Science Program Outcomes

Program SLO 1: Understand the importance, value, characteristics and physiology of higher plants.
Program SLO 2: Assess and differentiate effects of agricultural activities in plant cropping systems, while describing alternative practices in order to make sound agricultural decisions that ensure the quality and success of a crop.
Program SLO 3: Demonstrate comprehension of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully raise horticultural crops.
Program SLO 4: Apply current agricultural industry standards in the agricultural sciences or related fields.
Program SLO 5: Employ effective business, sales, marketing, and communication skills when presented with an agribusiness or farm management situation.
Program SLO 6: Analyze current market trends, costs, and inputs, to provide sustainable solutions in farming systems.

Agricultural Business Program Outcomes

Program SLO 1: Explain how economic principles relate to commodity marketing and sales in agriculture. Analyze agricultural production, food processing and retailing; and their influence on food marketing, considering factors that influence consumer choice.
Program SLO 2: Recognize and describe agricultural business organizational structures, functions of management and how they relate to the agribusiness organization. Identify the role of the agricultural manager and recognize various styles of leadership.
Program SLO 3: Develop an awareness of the basic laws, regulations, and regulatory agencies that interact with the agriculture community. Explain the process and rationality for government regulations impacting businesses and the effect of regulations on market decisions.
Program SLO 4: Understand theoretical concepts and principles of economics applied to agricultural sciences, including how markets work, characteristics of divergent market structures, and the major determinants of supply and demand interaction. Demonstrate the ability to apply the appropriate monetary

and fiscal policies to different phases of the business cycle.
Program SLO 5: Demonstrate comprehension of soils, fertilizers, plant nutrition, and current industry growing techniques and apply this understanding to successfully raise horticultural crops.

Crop Protection Program Outcomes

Program SLO 1: Identify plant pathogens, insects and weed species and assess the economic impact of pest infestations to determine the proper course of action for treatment and control.
Program SLO 2: Utilize integrated pest management strategies and techniques to sustainably prevent and control pathogen, insect and weed populations.
Program SLO 3: Demonstrate working knowledge of plant physiological processes that affect crop production.
Program SLO 4: Demonstrate knowledge of pesticide modes of action and the biology of host-pest interactions in order to make effective and sustainable pest management decisions.

Pest Control Adviser Program Outcomes

Program SLO 1: Use standard scientific procedures to answer questions related to the chemical and biological properties of agricultural products and materials.
Program SLO 2: Utilize agronomic principles to identify issues in and solutions for agricultural production systems.
Program SLO 3: Apply sustainable agricultural techniques to solve pest and nutrient issues in the agricultural system.
Program SLO 4: Employ safety standards, calibration techniques, and laws and regulations to effectively prepare and apply crop protection materials for pest control.

	Outcomes				
	1	2	3	4	5
P106	I,D				
P110		I,D			
P120	D		I,D		
P240	D			I,D	
P250					I,D
P310	D	D	D	D	
P320		D			
P330	D		D		
P340	D			D	
P390	M	M	M	M	M
P391	M	M	M	M	M

REVIEW OF PREREQUISITES, COREQUISITES, AND ADVISORIES – SUMMARY

	VITICULTURE AND ENOLOGY (VEN)					
	REVIEW OF PREREQUISITES, COREQUISITES, AND ADVISORIES					
	Course	**CURRENT**	**CURRENT**	**LEVEL OF SCRUTINY**	**RESULT**	**ACTION TO BE TAKEN**
	Prefix No	Limitation on Enrollment	Prequisite/Coreq/Advisory/	(Statistics, Content Review, UC/CSU Comparison, Student Survey – list all)	(i.e., current PCA is established, should be dropped/modified or new PCA is established)	(None, APP-Major or Minor)
1	VEN 101			Course Review		
2	VEN 102			Course Review		
3	VEN 103	21 yrs old		Course Review		
4	VEN 104	21 yrs old	VEN 103	Course Review	Ok	None
5	VEN 105			Course Review		
6	VEN 106		VEN 101	Course Review	Sunset course	Major AP&P
7	VEN 114			Course Review		
8	VEN 120			Course Review		
9	VEN 121			Course Review		

10	VEN 122			Course Review			
11	VEN 125			Course Review			
12	VEN 130		VEN 102	Course Review	Dropped	Major AP&P	
13	VEN 134			Course Review			
14	VEN 135			Course Review			
15	VEN 140		VEN 120	Course Review	Ok	None	
16	VEN 141		VEN 121	Course Review	Ok	None	
17	VEN 142		VEN 122	Course Review	Ok	None	
18	VEN 149			Course Review			
19	AG 157			Course Review			Ag Sales
20	AG 158			Course Review			Ag Econ
21	VEN 179			Course Review			
22	VEN 189			Course Review			
23	VEN 199			Course Review			
24	VEN 301	21 yrs old	VEN 301	Course Review	Ok	None	
25	VEN 302	21 yrs old	VEN 302	Course Review	Ok	None	
26	VEN 303	21 yrs old		Course Review			
27	VEN 304	21 yrs old	VEN 301	Course Review	Ok	None	
28	VEN 305	21 yrs old	VEN 301	Course Review	Ok	None	
29	VEN 306	21 yrs old	VEN 301	Course Review	Ok	None	
30	VEN 307			Course Review			Vine Irrigation
31	VEN 308			Course Review			Wine Analysis
32	VEN 310	18/21 yrs old	VEN 101	Course Review	Ok	None	

33	VEN 311	18/21 yrs old	VEN 310/ VEN 101	Course Review	Ok	None	
34	VEN 312		VEN 102	Course Review	Ok	None	Advanced viticulture
35	VEN 314			Course Review			Organic Biodynamic
36	VEN 315			Course Review			Fertilizers
37	VEN 316		VEN 101	Course Review	Ok	None	Intro to Wine Microbilogy
38	VEN 318	21 yrs old	VEN 101	Course Review	Ok	None	Advanced Winemaking
39	VEN 320			Course Review			Tasting room sales
40	VEN 321	18/21 yrs old	VEN 310	Course Review	Ok	None	
41	VEN 322	18/21 yrs old	VEN 311	Course Review	Ok	None	
42	VEN 323						Vineyard Equipement Evaluation
43	VEN 324			Course Review			
44	VEN 325						Vineyard Equipment Practices
45	VEN 379						

	AGRICULTURE (AG)					
	REVIEW OF PREREQUISITES, COREQUISITES, AND ADVISORIES					
	Course	**CURRENT**	**CURRENT**	**LEVEL OF SCRUTINY**	**RESULT**	**ACTION TO BE TAKEN**
	Prefix No	Limitation on Enrollment	Prequisite/Coreq/Advisory/	(Statistics, Content Review, UC/CSU Comparison, Student Survey – list all)	(i.e., current PCA is established, should be dropped/modified or new PCA is established)	(None, APP-Major or Minor)
1	AG 100			Course Review	X	Added summer session to the times course is offered and corrected SLOs which mistakenly were written as AG115 SLO1.....fixed all to AG100
2	AG 125		Advisory: CHEM 120	Course Review	X	name changed to more accurately reflect course content and eliminate confusion with the "Fertilizers & Plant Nutrition" course; textbook updated;

						semester offered updated
3	AG 130		VEN 102 or AG 161	Course Review	X	None
4	AG 149			Course Review	X	None
5	AG 150			Course Review	X	None
6	AG 152		Advisory: BIOL 100	Course Review	X	BIOL 100 advisory added, ERT to DE sync conversion. Textbook updated
7	AG 153			Course Review	X	addition of one suggested book, ERT to DE sync conversion
8	AG 154			Course Review	X	clarification added that instructor provides all required reading sources
9	AG 155			Course Review	X	only change was to clarify that required readings are provided by instructor
10	AG 156			Course Review	X	addition of textbook for required text
11	AG 157			Course Review	X	None
12	AG 158			Course Review	X	None
13	AG 160		Advisory: AG 161 or BIOL 154	Course Review	X	textbook updated to most current edition

14	AG 161		Advisory: BIOL 100	Course Review	X	advisory course added and textbook updated to most current edition
15	AG 162		AG 161 or BIOL 100	Course Review	X	Textbook updated
16	AG 163		BIOL 100	Course Review	X	textbook updated to current edition, lab manual added
17	AG 164			Course Review	X	lab manual added
18	AG 165			Course Review	X	None
19	AG 315			Course Review	X	lab content added; textbook updated. Consolidated SLOs to more accurately represent learning outcomes as opposed to learning objectives

PLAN OF ACTION – PRE-VALIDATION

Sixth Year

DEPARTMENT: Life and Physical Science PROGRAM: Viticulture & Enology and Agriculture

RECOMMENDATIONS TO IMPROVE **STUDENT LEARNING OUTCOMES** AND ACHIEVEMENT	Strategic Direction from AHC Strategic Plan	**TARGET DATE**
1. Coordinate with the local industry our College Internship program	SLS 2,3,4,6, I1	Ongoing
2. Establish Student Outcomes Assessments in all classes	SLS 1,2,3,4,6	Ongoing
3. Follow up with a Tutor's program to improve student achievement	SLS 2,3,4,6	Ongoing
4. Promote work practices internships and student exchange with other institutions.	SLS 2,3,4,6	Ongoing
5. Broaden the use of Canvas as a supplement in all courses	SLS 6	Ongoing
6. Improve the engagement in all courses with updated materials, videos, games and quizzes.	SLS 2,3,4,6	Ongoing
7. Work with community industry to promote internships and collaboration	SLS 2,3,4,6	Ongoing
8. Develop a complete online Certificate in vineyard and winery administration	SLS 2,3,4,6	Fall 2024
9. Establish an agricultural production enterprise project on the AHC student farm	SLS 2,3,4,6	Fall 2022
10. Expand the Field to Table collaborative program	SLS 2,3,4,6	Ongoing

RECOMMENDATIONS TO ACCOMMODATE CHANGES IN **STUDENT CHARACTERISTICS**	**Strategic Plan Goa**	**TARGET DATE**
Enrollment Changes		
1. Extensive promotion of classes in high schools and within the industry	SLS 5	Ongoing
2. Work with STEM Success Team and The Learning Collective to improve retention and success of marginalized student populations	SLS 5	Ongoing
Demographic Changes		
1. Promote courses to more Hispanics and women.	SLS 5	Ongoing

RECOMMENDATIONS TO IMPROVE THE **EDUCATIONAL ENVIRONMENT**	**Strategic Plan Goa**	**TARGET DATE**
Curricular Changes		
1. A new AS degree and Certificate is needed in Winemaking/Enology.	SLS 2,3,4, IR 2	Fall 2024
2. A new Certificate in Sustainable Viticulture is needed	SLS 2,3,4, IR 2	Fall 2024
3. A new Online Certificate in Vineyard and Winery Administration is recommended	SLS 2,3,4, IR 2	Fall 2023
4. Include newly created courses as core, selectives or electives in curriculum.	SLS 2,3,4, IR 2	Fall 2023
5. Conduct assessment about Winemaking/Enology Curriculum, Wine Business Curriculum and Agriculture Curriculum	SLS 2,3,4, IR 2	Fall 2024
6. Design distance learning introductory courses. One more in each discipline Viticulture, Winemaking, Wine Business. Add a Wine Financial management course.	SLS 2,3,4, IR 2	Ongoing
7. Develop new Online courses for wine business	SLS 2,3,4, IR 2	Ongoing
8. Make our website program access information more streamlined	SLS 2,3,4, IR 2	Ongoing
9. Prepare videos, games and activities for student engagement.	SLS 2,3,4, IR 2	Ongoing
10. Prepare more field trips, participation in industry activities.	SLS 2,3,4, IR 2	Ongoing
11. Establish a dedicated laboratory and classroom space for agriculture courses	SLS 2,3,4, IR 2	Ongoing
12. Complete the development of the Precision Ag Program	SLS 2,3,4, IR 2	Ongoing
13. Expand on Produce Safety program to develop food safety curriculum	SLS 2,3,4, IR 2	Fall 2023
14. Develop a collaboration with the AHC industrial technology program to establish Mechanized Ag/Ag Technology program	SLS 2,3,4, IR 2	Fall 2024
15. Explore new curriculum concepts in agriculture laws & regulations; natural resource management; and certified crop adviser preparation	SLS 2,3,4, IR 2	Spring 2023 - Fall 2024
16. Develop agriculture biotechnology program	SLS 2,3,4, IR 2	Fall 2025 – Spring 2026
Co-Curricular Changes		
6. Reevaluation and update class materials, including viticulture, wine analysis, winemaking class lab manuals.	SLS 4, IR 2	Ongoing
7. Prepare exercises for each class in Blackboard and study materials.		
8. Update course outlines for instructors in selected classes e.g. Wine Analysis, Food and Wine Pairing, Viticulture, Winemaking, and Wine Business	SLS 4, IR 2	Ongoing
9. Coordinate guest speakers and field trips in order to allow all students from the program to participate	SLS 4, IR 2	Ongoing
10. Prepare guide for part-time faculty in Viticulture & Enology and Agriculture	SLS 4, IR 2	Ongoing
11. Host part-time faculty check-ins/trainings to ensure cooperation and cohesion	SLS 4, IR 2	Ongoing
Neighboring College and University Plans		
1. Continue with current communications with Cal Poly SLO to		Ongoing

identify potential new course articulations 2. Continue with Cal Poly SLO Summer Undergraduate Research Program (SURP) 3. Continue discussions with UC Davis to establish clear transfer pathwa 4. Continue work with CSU Fresno on Ag Career Readiness Certificate Program 5. Continue work with CSU Chico on Regenerative/Sustainable Agricultu pathway 6. Continue partnerships with Cuesta College and Ventura College agriculture program coordinators		Ongoing Ongoing Ongoing Ongoing Ongoing
Related Community Plans 1. The wine sales can improve participation in the community and promote the overall program. 2. One possibility to study would be to offer, together with Culinary Arts, a series of dinners served by our students, pairing food and wine. 3. We could also use funnier wine labels. We could possibly represent different programs with one label dedicated to each, e.g. dance, automotive, ceramics, music, biology, etc.	SLS 6, 7, I1 SLS 6, 7, I1 SLS 6, 7, I1	Ongoing Fall 2024 Fall 2024

RECOMMENDATIONS THAT REQUIRE ADDITIONAL RESOURCES	**Strategic Plan Goa**	**TARGET DATE**
Facilities 1. Operational greenhouse (Electricity and others). Estimated cost ($20K) 2. Clonal demonstration and different trellis systems at the campus vineyard. Estimated cost ($2K) 3. Signage on vineyard and winery. Inside vineyard, signage of different clones and cultivars. ($3K) 4. Signage on student farm 5. Automated irrigation to all farm areas – fruit orchard, greenhouse, vegetable garden	SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2	Fall 2023 Fall 2025 Fall 2025
Equipment 1. Vineyard sprayer to replace ($10K) 2. Electricity upgrades at winery ($5K) 3. Pick up truck for agriculture and viticulture ($35K) 4. Kegs and carboys are needed at the winery. ($2K) 5. One fermentation tank for red wine. ($13K) 6. Barrel ozone cleaner. ($12K) 7. Dish washer (15K) 8. Wine Analysis Equipment including heat and cold stability equipment 9. Hopper for grape crush (12K) 10. ORP sensors 5K 11. NTU sensors 3K	SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2	Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2024 Fall 2025

12. Semiautomatic Bottling Equipment (35K) 13. Sundry tools and equipment (Appendix C) 14. Program microscopes 15. Student farm supplies 16. Student farm tools and equipment	SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2 SLS 2, 6, IR 2	Fall 2025 Fall 2024 Fall 2025 Fall 2025 Ongoing Ongoing
Staffing 1. Full time AG Instructor ($92,000) Lastly, without qualified instructors in place, we can't offer Agriculture courses. We can become the main community college in Agriculture in SLO, SB and Ventura counties, but we do need a dedicated AG instructor. 2. Winemaking instructor ($92,000) 3. Hire a classified farm/laboratory technician	 IR 1, IR 2 IR 1, IR 2 IR 1, IR 2	 Fall 2024 ASAP. Now requested already in previous Program Review. Spring 2023

EXHIBITS

- Survey used to Collect Student Data
- Student Data Summary
- Student Data
- Statistics
- Articulation Status of Courses
- Course Review Verification Sheet

SURVEY USED TO COLLECT STUDENT DATA

Survey:	AG/VEN Program Review Survey
Instructions:	Please have all students complete the program review survey in class or online using mobile device, lab or classroom computers, post on Canvas and/or email to students.
Survey link:	https://bit.ly/AHC_PR_AG_VEN
QR Code:	Point your camera at the QR Code
QR Code Instructions:	Users can scan the above code with a QR Reader app or using the camera app on their mobile device. For iPhones with iOS 11, the camera app allows you to scan QR codes. All you need to do is open the camera app, point the camera at the QR code and the camera will read the QR code and provide you with a notification to access the content. For Android phones, you can open the camera, focus it on QR code and press and hold the Home button. The URL for the survey should appear and you can click on the link. If this does not work for your phone, download QR reader.

STUDENT DATA SUMMARY

AGRICULTURE

Out of 59 respondents who selected Agriculture as their program of study, 61% were male, 39% were female. 55% identified as Latinx, 29% as White, 14% more than 2 ethnicities, and 2% Asian – there were 0% identifying as Black, Filipino, Native American, or Pacific Islander. 68% were 24 years old or younger and 59% are first-generation college goers. 45% are children of agricultural farmworkers and 22% are agricultural farmworkers themselves. 36% of the students selected transfer with an associate's degree as their ultimate goal while nearly as many (34%) are seeking to complete a certificate at AHC as their final goal. 79% of respondents are working while attending college, with an average of 27 hours/week and a maximum of 65 hours/week.

Positive factors identified by students

- 97% of respondents were either somewhat or highly satisfied with the quality of instruction within the program.
- 95% of respondents were either somewhat or highly satisfied with the program's contribution towards their intellectual growth
- 97% of respondents were either somewhat or highly satisfied with the clarity of course goals and learning objectives
- 97% of respondents were either somewhat or highly satisfied with the content of courses offered
- 95% of respondents would recommend taking courses in the agriculture/viticulture & enology program

Negative factors identified by students

- 74% of respondents have never participated in any AHC outreach activities
- 68% of respondents are not involved in any AHC Student Clubs
- common comments regarding barriers to success were related to COVID-19 restrictions, transportation issues/costs – particularly from Lompoc, personal struggles/lack of family support, and work obligations

Implications for planning

Overall, student satisfaction for the program appears to be very positive, with minor dissatisfaction in areas addressed via the student survey. The challenges with which we are presented as we attempt to improve student success are largely due to the fundamental socioeconomic status of many of the students at Allan Hancock College. The overall lack of economic stability underlies the fact that students are trying to balance work and school obligations, they are challenged by expensive transportation costs, and they often do not have free time to be involved in student activities which could help with retention and success. While

42% of respondents prefer in-person, face to face instruction, 54% indicated a desire to have some options for alternative learning formats – with 21% selecting "Hybrid – replace some portion of the in-person class with online learning" and the other 33% choosing "Hyflex – student can choose be live online or in class". The challenge is to find a balance where students are afforded the flexibility they need given their life circumstances while ensuring that they remain connected and engaged to the campus community, which we know is critical for student success.

VITICULTURE AND ENOLOGY

The Positive

1.Quality of instruction

2. Contribution towards intellectual growth

3. Once in the program, students seem to like it even more.

4. Instructional equipment

The Negative

Nothing negative.

But areas for improvement are preparation of labs, availability of online courses, and availability of classes.

Therefore, the preparation of a five-year class schedule is planned for completion in Fall 2022.

In VEN, 29 students were surveyed.

a) The results of the student survey are discussed in this section. 29 students from all of the classes represented by the Agribusiness Program participated in the survey.

Quality of instruction in the program:

Of the 29 students that responded to this question, ~83% reported being highly satisfied or close to highly satisfied, while ~13% were moderately satisfied, and 3% had no opinion. In general, it would appear that students are satisfied with the quality of instruction.

The way textbooks and other materials in the course help student learning:

Of the 29 students that responded to this question, ~72% were highly satisfied or close to highly satisfied, while ~17% were moderately satisfied, 7% had no opinion and 3% were dissatisfied. This indicates general satisfaction with the teaching materials.

Advice about the program from counselors:

Of the 29 students that responded to this question, ~71% were highly satisfied or close to highly satisfied, while ~13% were moderately satisfied, ~4% were dissatisfied, and ~13% had no opinion. This reflects the fact that most of the viticulture and winemaking students have a clear educational path or do not see counselors for assistance.

The way the program meets educational goals of the student:

Of the 29 students that responded to this question, ~84% of students reported being "highly satisfied or close to highly satisfied" that the program was meeting their educational goals, 12 % reported being "moderately satisfied", and only 1 % reported being less than "moderately satisfied", and 3% reported "no opinion". This demonstrates that in general the students feel that their educational goals are being met.

Contribution toward intellectual growth:

Of the 29 students that responded to this question, ~86% reported being highly satisfied or close to highly satisfied, while ~10% were moderately satisfied, and ~3% had no opinion. The students are possibly encouraged by the amount of information and the situation analysis in different viticultural and winemaking conditions.

Clarity of course goals:

Of the 29 students that responded to this question, ~82% reported being "highly satisfied or close to highly satisfied" with the clarity of course goals and learning objectives, 17 % were "moderately satisfied", and 1% had "no opinion". Goals are presented in syllabus and at the beginning of each class.

Feedback and assessment of progress toward learning objectives:

Of the 29 students that responded to this question, 72% of students reported being "highly satisfied or close to highly satisfied", ~10% reported being "moderately satisfied", 8 % were dissatisfied, and ~10% had "no opinion".

Course Availability:

Of the 29 students that responded to this question, 59% were highly satisfied or close to highly satisfied, while 29% were moderately satisfied, 11% were dissatisfied, and 7% had no opinion. Further research is needed to investigate if this is just a problem of meeting various individual needs or if it is related to a time when most students are able to attend. This may indicate the difficulty of scheduling classes. In previous surveys students expressed preference for evening classes meeting only once a week.

Course Content:

Of the 29 students that responded to this question, 79% of students were highly satisfied or close to highly satisfied, while 7% of students were moderately satisfied, 0% were dissatisfied, and 14% had no opinion. Course contents are varied and the aim is to attract most students although their interests may differ.

Coordination of courses in Agribusiness and with other disciplines:

Of the 29 students that responded to this question, 70% report being highly satisfied or close to highly satisfied, 13% were moderately satisfied, 4% were dissatisfied, and 13% had no opinion.

It is possible that some students did not understand the question or were not taking other courses in Agribusiness or other disciplines, since 13% of the students did not express any opinion.

The physical facilities and space:

Of the 29 students that responded to this question, 89% were highly satisfied or close to highly satisfied, 11% were moderately satisfied, and 0% were dissatisfied. The classrooms and labs in Building M and Campus winery are fabulous.

Instructional Equipment:

Of the 29 students that responded to this question, 77% were highly satisfied or close to highly satisfied, 6% were moderately satisfied, 0% was dissatisfied, and 4% had no opinion. We are providing excellent equipment that is appropriate to our circumstances and opportunities.

Presentation of classes via the college's Canvas course management system:

Of the 29 students that responded to this question, 65% were highly satisfied or close to highly satisfied, 23% were moderately satisfied, 4% were dissatisfied, and 8% had no opinion. The Canvas system is extensively used and analysis of possibilities to include additional software, embedded quizzes and games are under way.

Course assistance through tutorial services:

Of the 29 students that responded to this question, 75% were highly satisfied or close to highly satisfied, 6% were moderately satisfied, 0% were dissatisfied, and 19% had no opinion. Agribusiness is not currently offering tutorials. It may be possible to offer perhaps once a week a combined office hour with part time instructors.

Availability of appropriate resources in the library:

Of the 29 students that responded to this question, 70% were highly satisfied or close to highly satisfied, 10% were moderately satisfied, 0% were dissatisfied, and 20% had no opinion. Almost all resources are online.

Students in the program are usually enthusiastic and helpful. New sets of handouts in courses Ag 102 and Ag 101 were also requested by students. This was partially solved with updated material, but the preparation of completely new handbooks for each class is recommended.

Good news is that 93% of students surveyed would recommend the program, 80% plan to take more classes, 80% have improved attitude towards the V&E program after taking classes. Again, the problem is to attract students to start in the program.

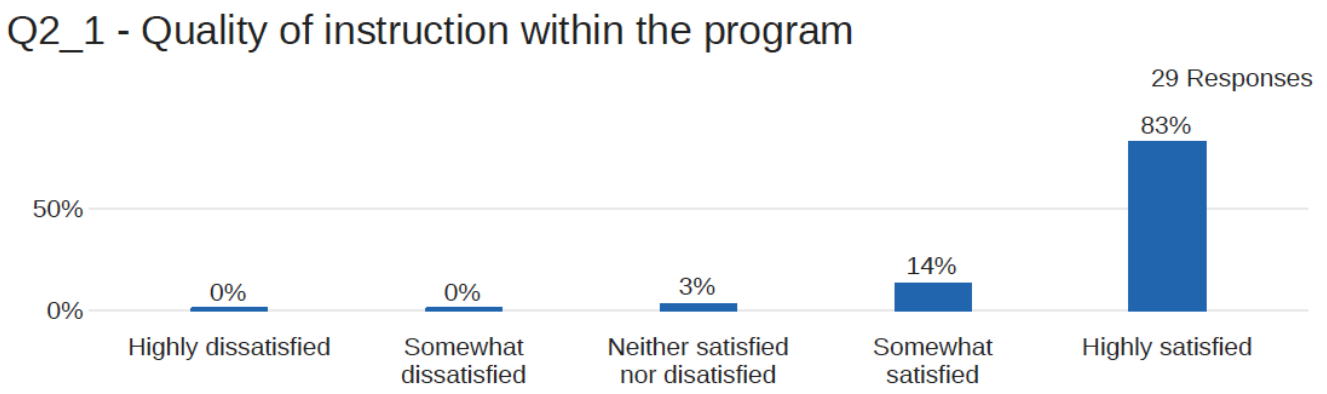
65% are male, 64% are white, 35% are 55+ years old, only 12% are below 20 and 12% 20-24 yrs old, so reaching out to all the high schools' ag programs is very important. 31% are first generation students and only 12% participated in outreach activities, there is a need to increase participation with events, club activities, guest speakers, etc.

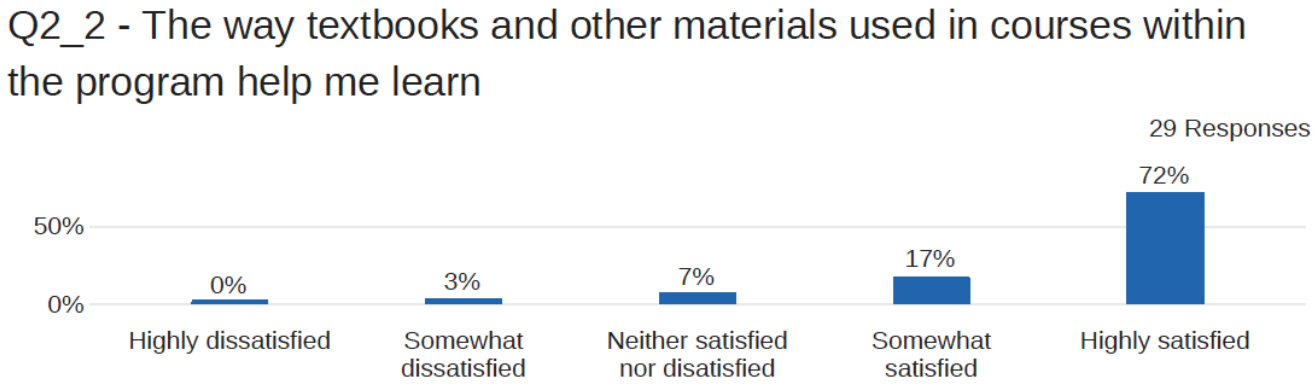
Only 50 have their Student Educational Plan prepared. Need to invite counselors to talk to students to everybody has a SEP ready.

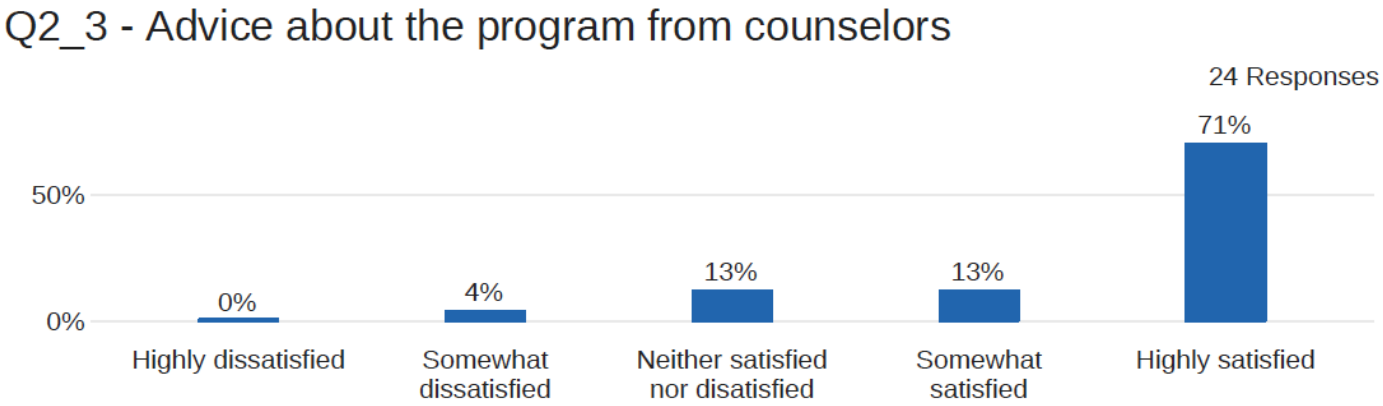
Most students like to take classes in morning (28 early morning, 24% late morning) or 24% afternoons. Then 54% in person and 23% hyflex (choosing to come in person or online as needed).

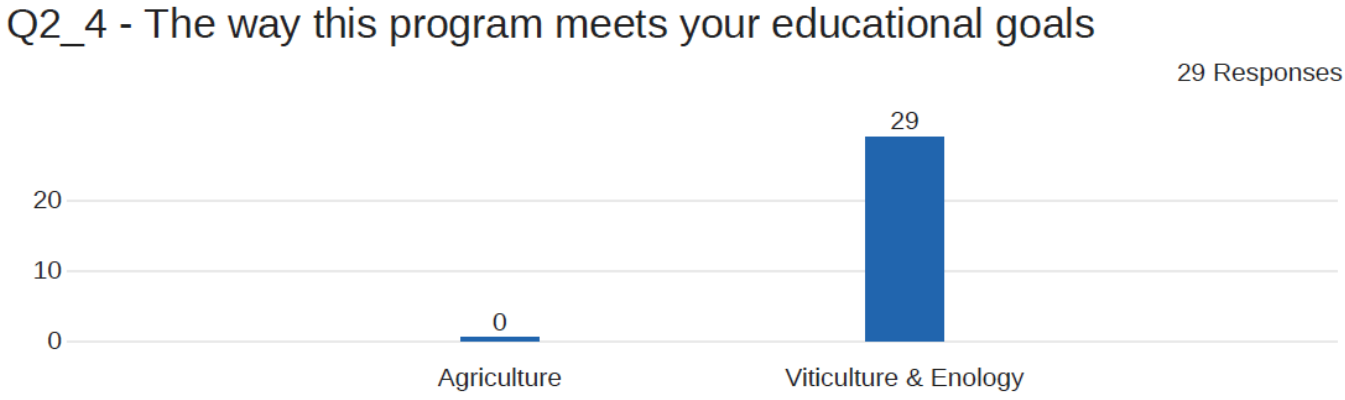
STUDENT DATA AND STATISTICS

VITICULTURE AND ENOLOGY

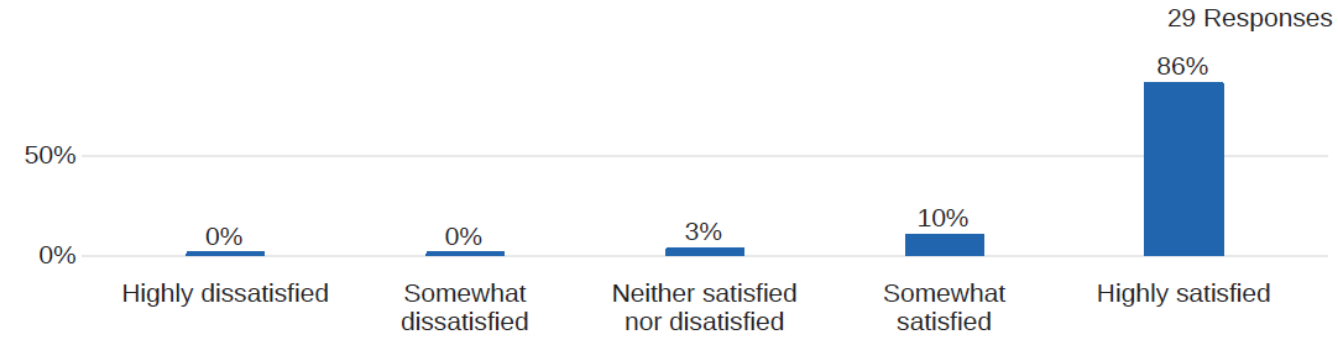




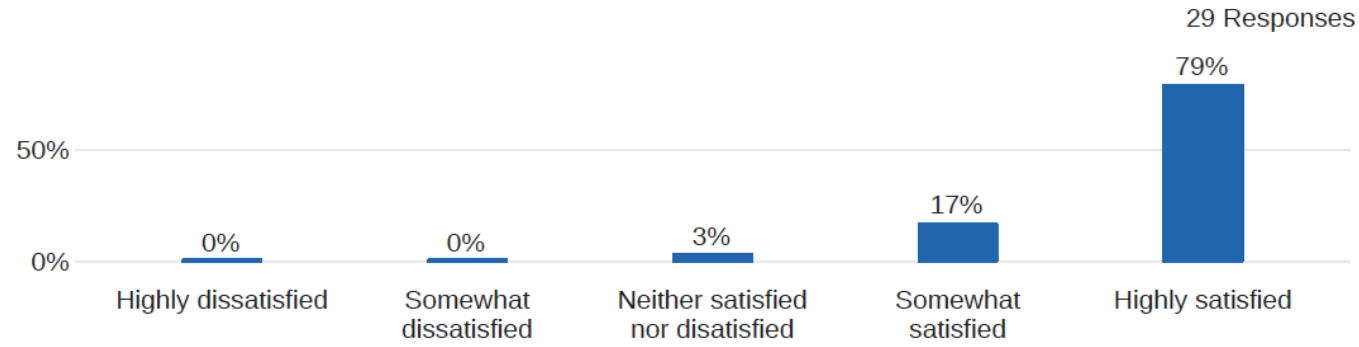




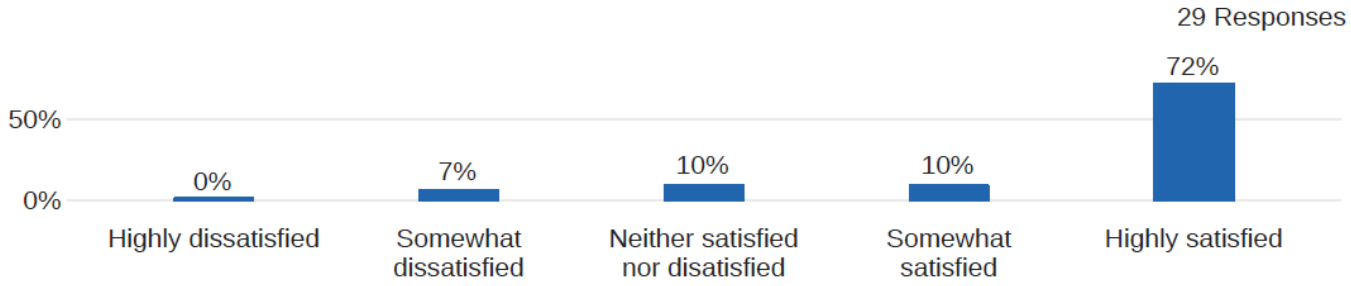
Q2_5 - Contribution towards your intellectual growth



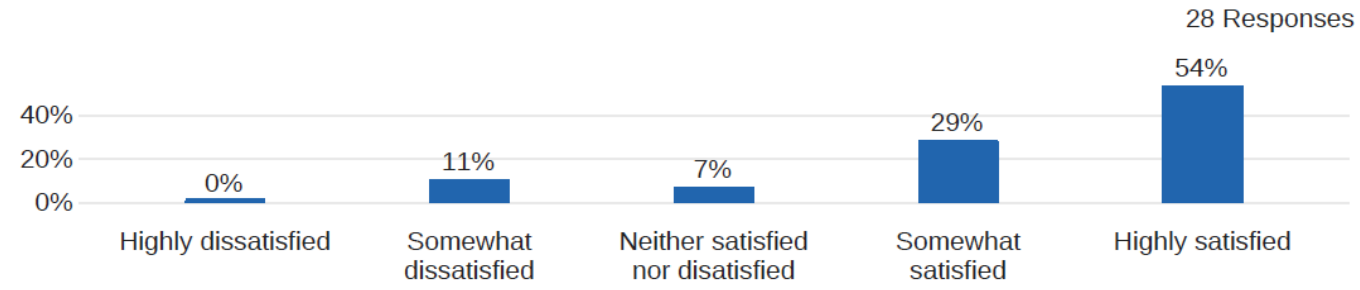
Q2_6 - Clarity of course goals and learning objectives



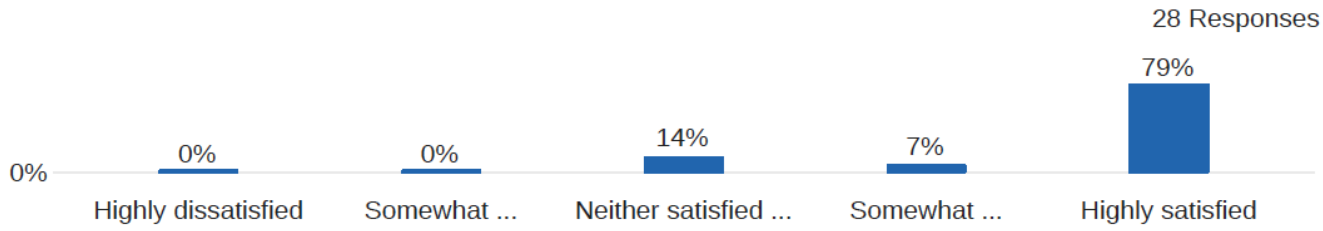
Q2_7 - Feedback and assessment of progress towards learning objectives



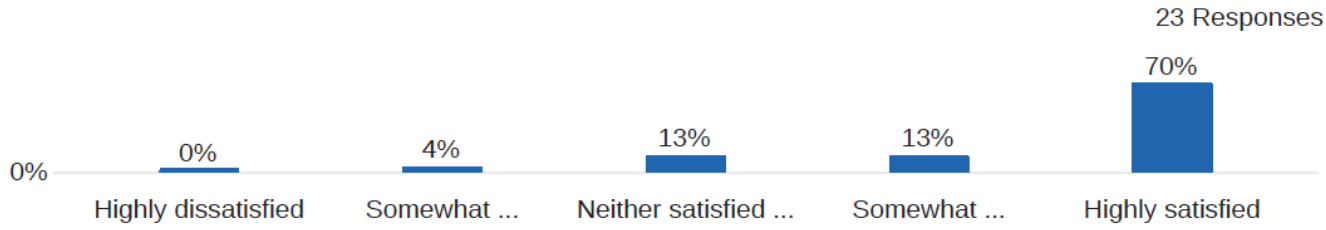
Q2_8 - The availability of courses offered in the Agriculture/Viticulture & Enology program.



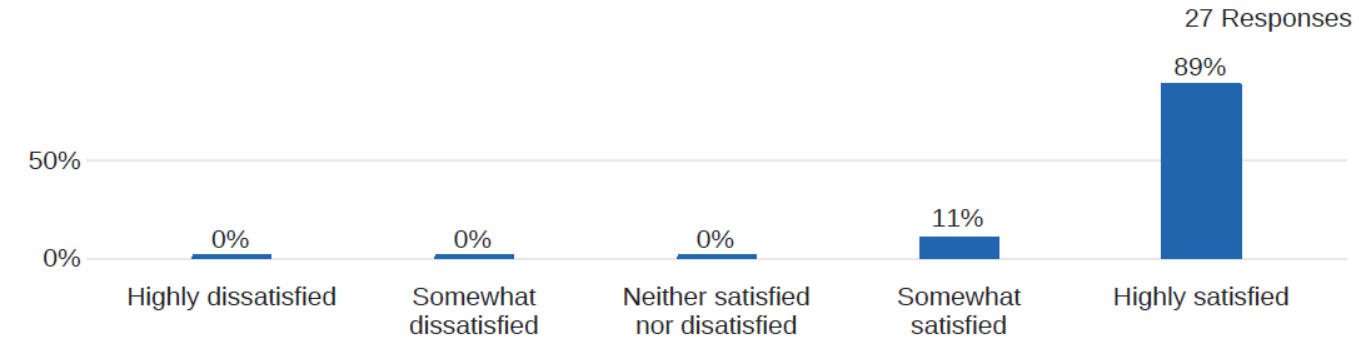
Q2_9 - The content of courses offered in the Agriculture/Viticulture & Enology program.



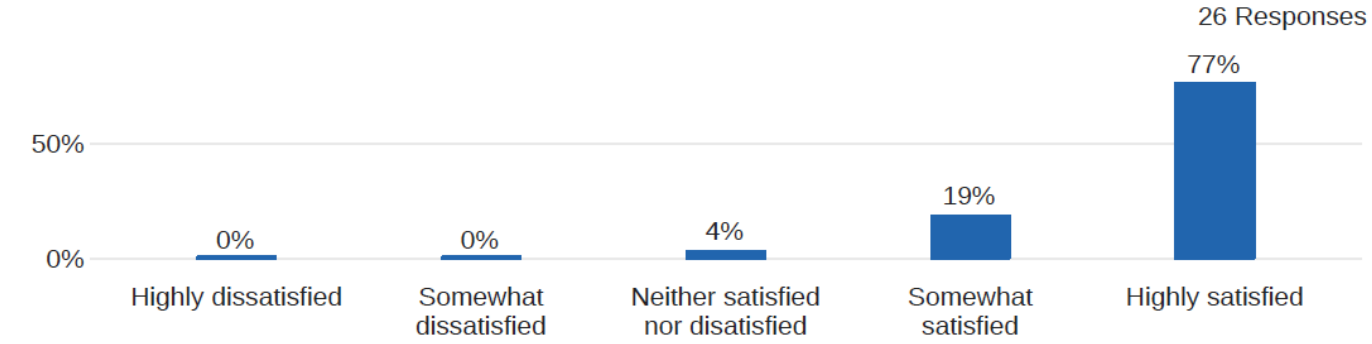
Q2_10 - The coordination of courses offered in the Agriculture/Viticulture & Enology program and courses offered in other departments that may be required for your major.



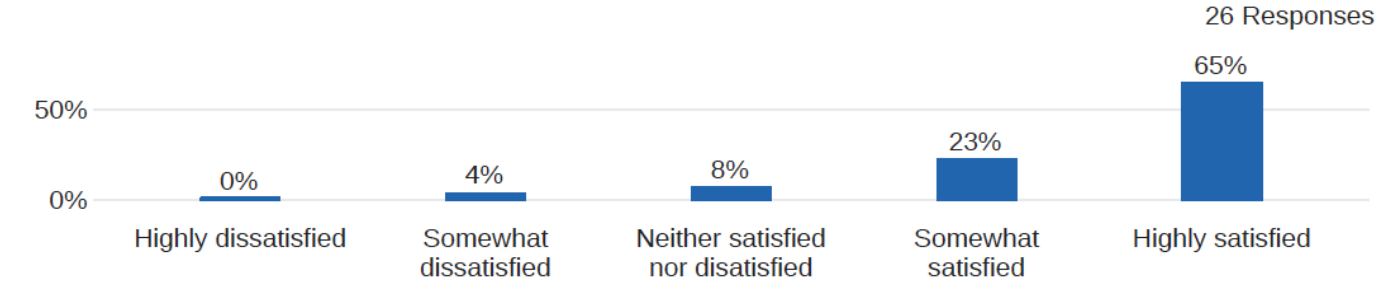
Q2_11 - The physical facilities and space (e.g., classrooms, labs)



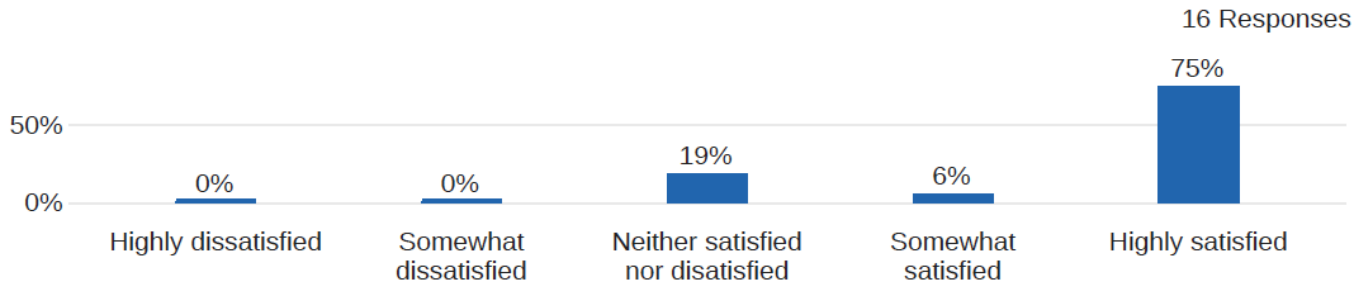
Q2_12 - Instructional equipment (e.g., computers, lab equipment)



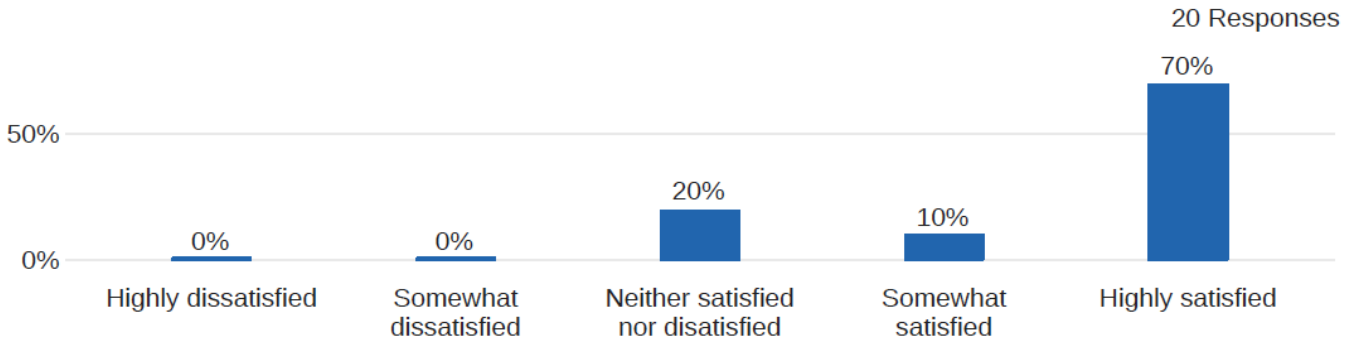
Q2_13 - Presentation of classes via the college's Canvas course management system



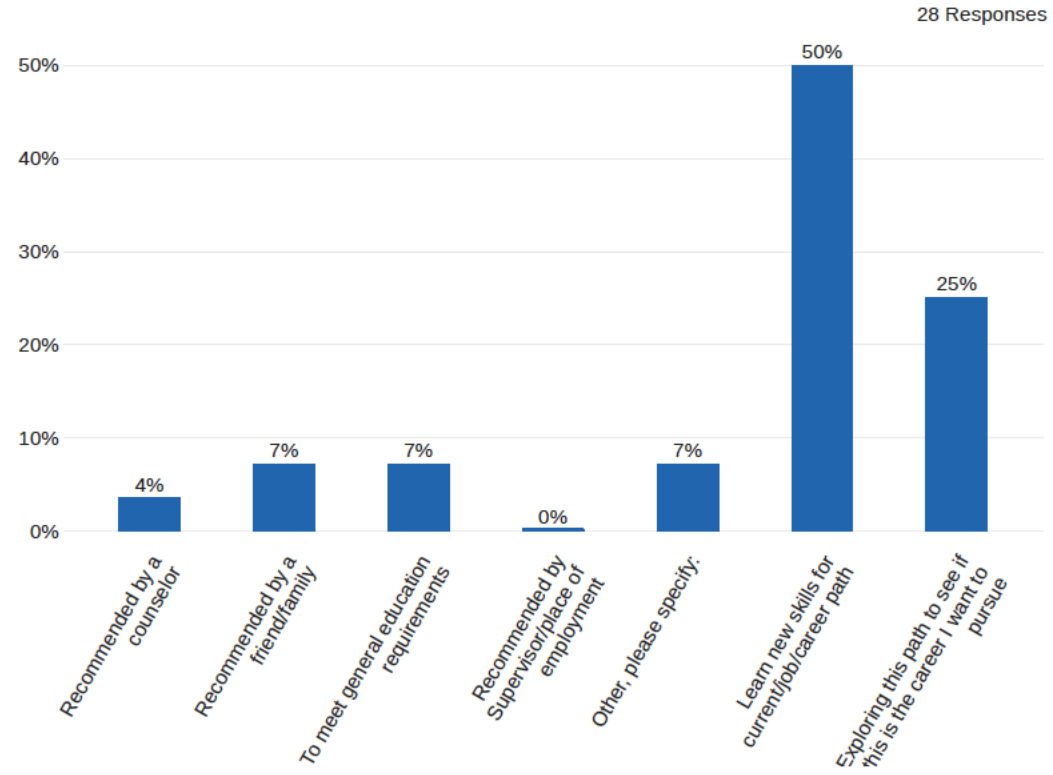
Q2_14 - Course assistance through tutorial services (e.g through the Tutorial Center, Math Lab, Writing Center)



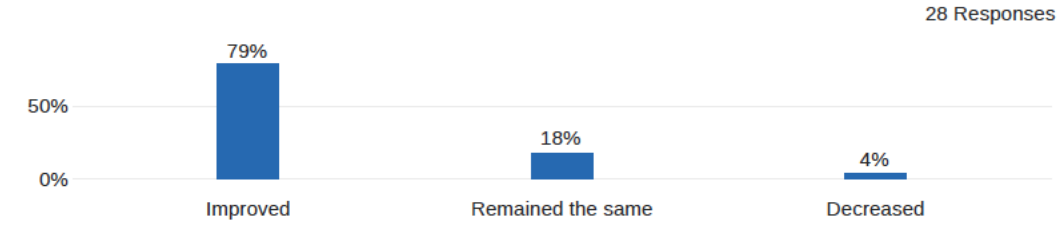
Q2_15 - Availability of appropriate resources in the libraries



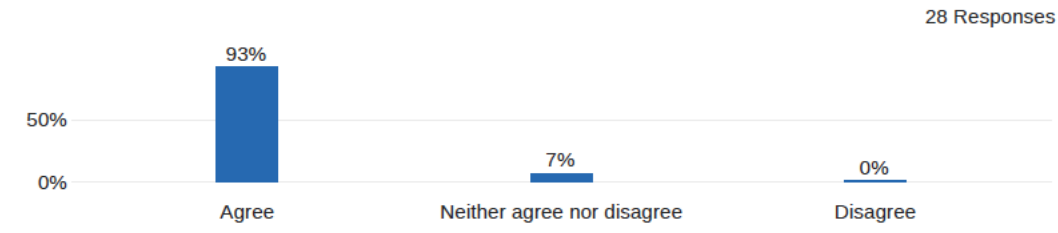
Q4 - Which of the following best describes your reason for taking this and other courses in Agriculture/Viticulture & Enology program?



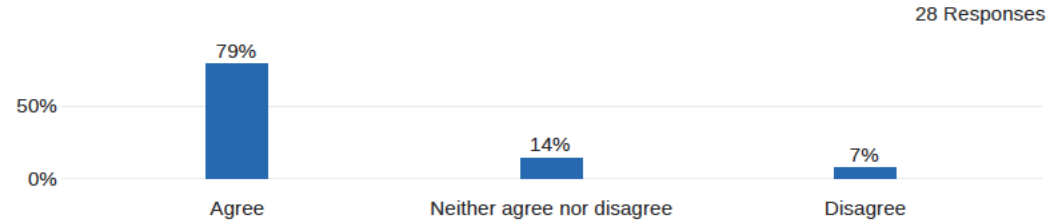
Q5 - Compared to the beginning of the semester, your attitude about Agriculture/Viticulture & Enology program has...



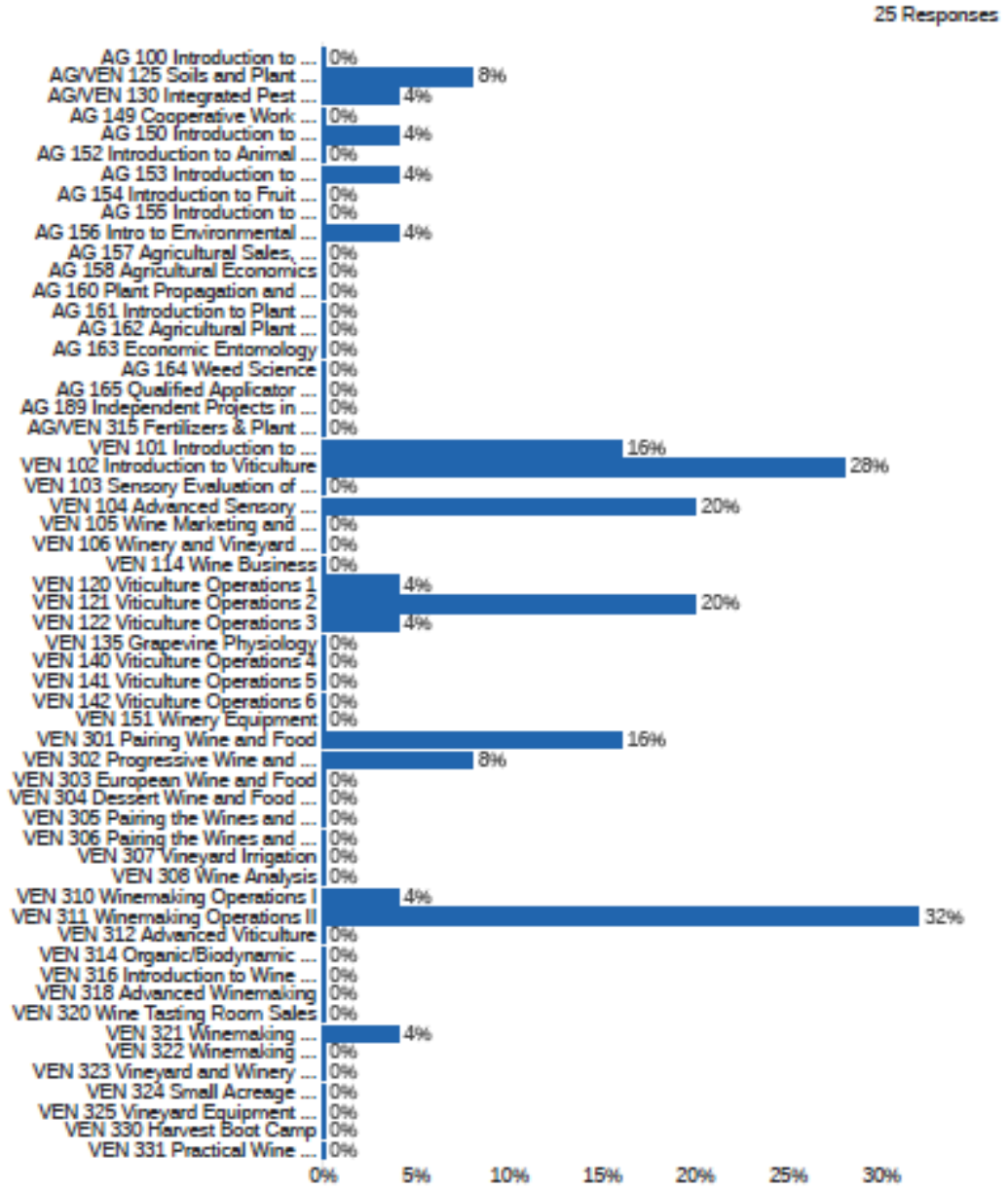
Q7_1 - I would recommend taking courses in Agriculture/Viticulture & Enology program



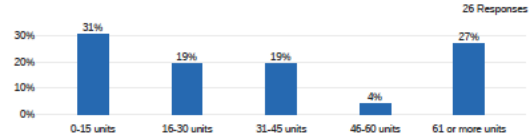
Q7_2 - I plan on taking additional courses in Agriculture/Viticulture & Enology program



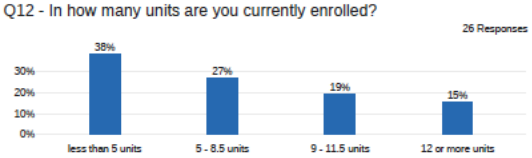
Q9 - Which of the following courses are you taking this semester in the Agriculture/Viticulture & Enology program?



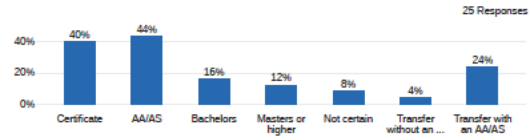
Q11 - How many units have you completed prior to this semester?



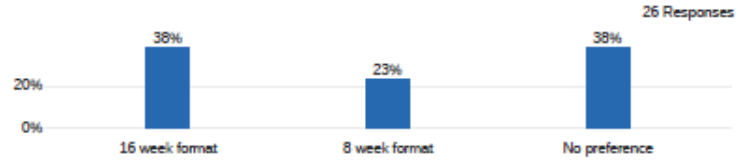
Q12 - In how many units are you currently enrolled?



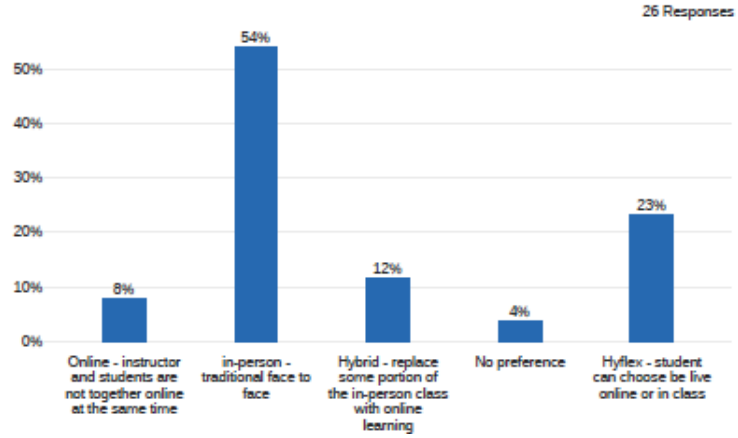
Q13 - What is your final academic goal? (Select all that apply)



Q14 - Which course length would you prefer to enroll in for the Agriculture/Viticulture & Enology program:

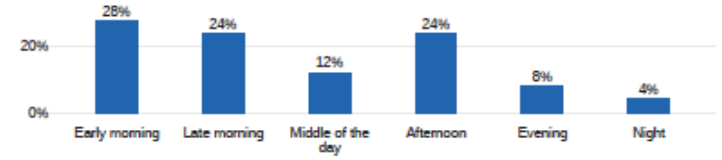


Q15 - Which type of course format would you most likely enroll in for the Agriculture/Viticulture & Enology program:



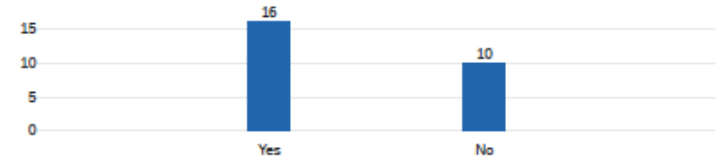
Q16 - What time of day do you prefer to attend classes?

25 Responses



Q17 - Are you working while attending Allan Hancock College?

26 Responses



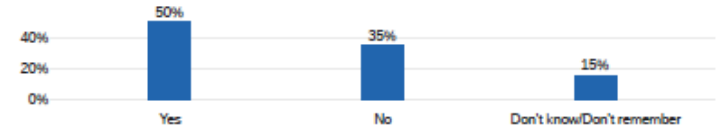
Q18_1 - Hours Per week

17 Responses

Field	Min	Max	Mean	Standard Deviation	Variance	Responses	Sum
Hours Per week	1	65	30	17	285	17	505

Q19 - Have you worked with a counselor to create an academic plan (student education plan - SEP) for your time in college?

26 Responses

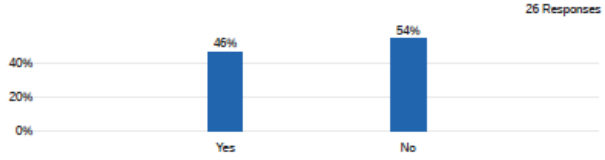


Q20 - Did you participate in any AHC outreach activities (i.e., Bulldog Bound, Hancock Hello, Week of Welcome, AHC events at local high school)?

26 Responses

Q21 - Are you involved in any AHC Student Clubs?

26 Responses



Q22 - What presents the greatest obstacle to your success at AHC?

What presents the greatest obstacle to your success at AHC?
My work and travel schedule
Just wish I could attend full-time!
Managing study time and work
Time management
Money
None
Covid testing every week
distance between home and school
NA
Working full time and going to school

hard to remember things
trouble with focus

Can't really think of anything specifically. Maybe availability and accessibility of useful help/information with degree work (counseling).

More options on how you attend class. Online, in class or hybrids. That would help those who work or want to work.

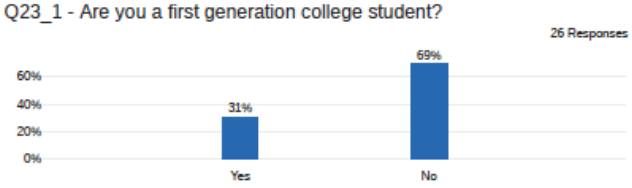
Covid

Time to take classes.

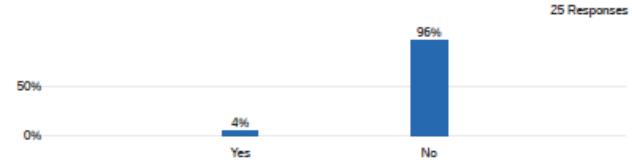
Stress

Nothing

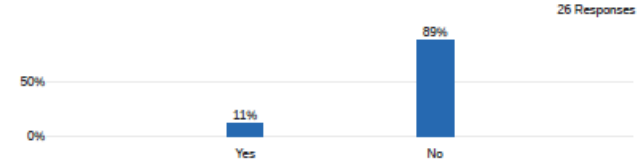
Q23_1 - Are you a first generation college student?



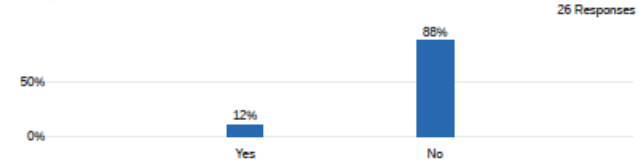
Q23_2 - Are you a child of an agricultural field worker?



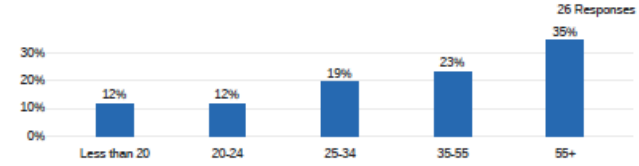
Q23_3 - Are you an agricultural field worker?



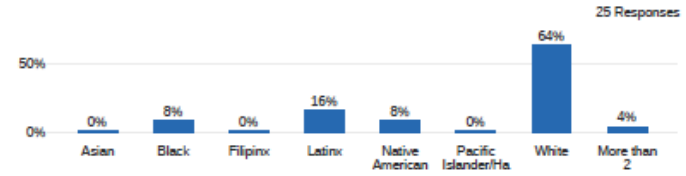
Q23_4 - Are you a Veteran?



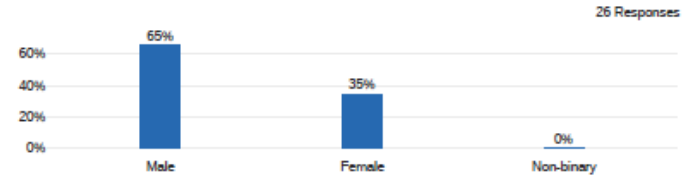
Q24 - What is your age?



Q25 - What is your ethnicity?



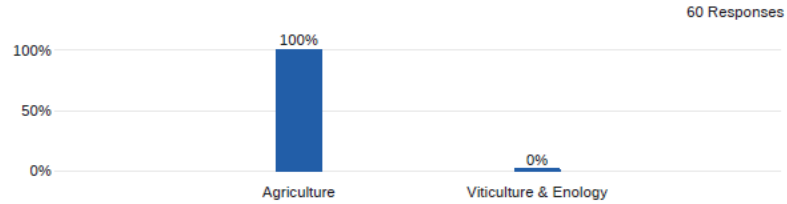
Q26 - What is your gender?



AGRICULTURE

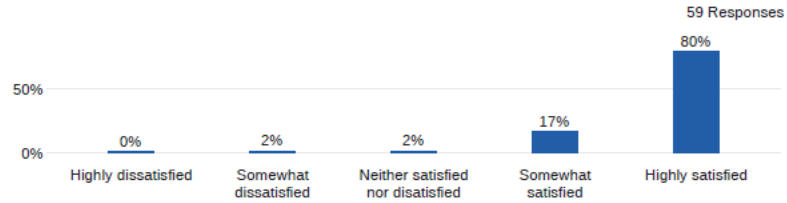
AG Program Review
Spring 2022

Q1 - Which academic program have you selected to study?



Please answer the following questions as they pertain to your experience in this course and all other courses in the Agriculture/Viticulture & Enology program at Allan Hancock College.

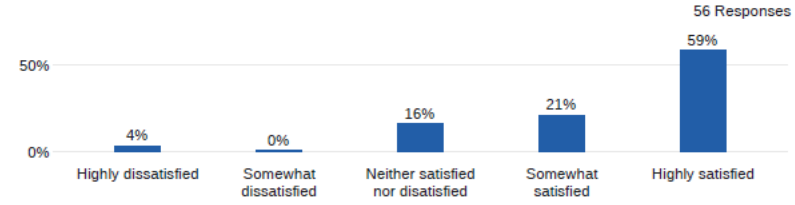
Q2_1 - Quality of instruction within the program



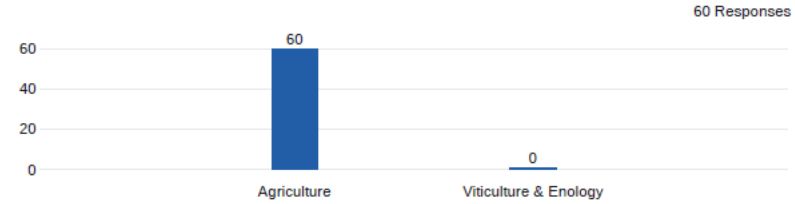
Q2_2 - The way textbooks and other materials used in courses within the program help me learn

2

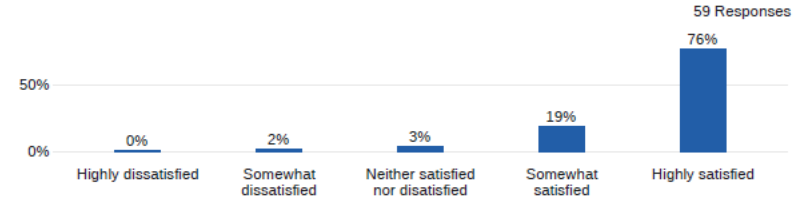
Q2_3 - Advice about the program from counselors



Q2_4 - The way this program meets your educational goals



Q2_5 - Contribution towards your intellectual growth

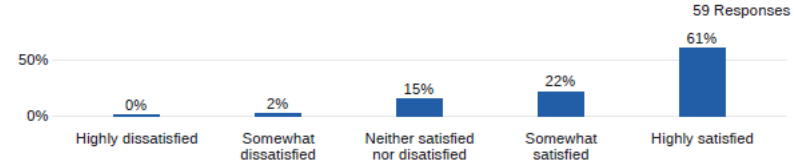


3

Q2_6 - Clarity of course goals and learning objectives

Q2_7 - Feedback and assessment of progress towards learning objectives

Q2_8 - The availability of courses offered in the Agriculture/Viticulture & Enology program.

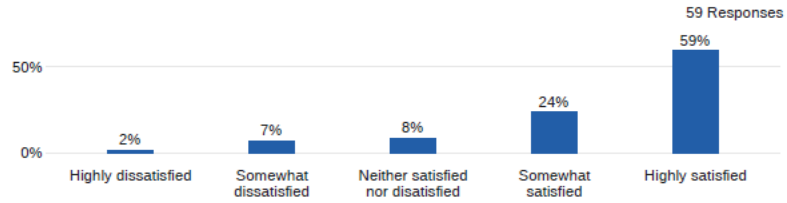


4

Q2_9 - The content of courses offered in the Agriculture/Viticulture & Enology program.

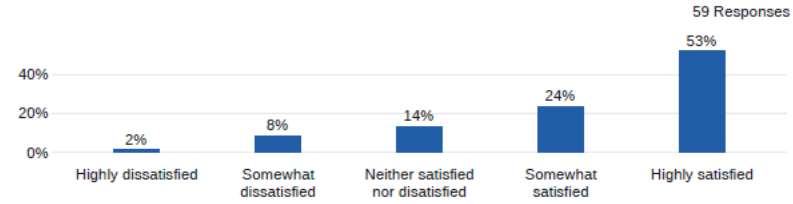
Q2_10 - The coordination of courses offered in the Agriculture/Viticulture & Enology program and courses offered in other departments that may be required for your major.

Q2_11 - The physical facilities and space (e.g., classrooms, labs)



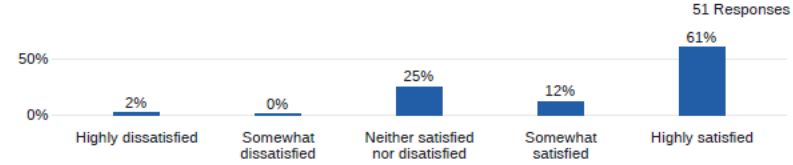
5

Q2_12 - Instructional equipment (e.g., computers, lab equipment)

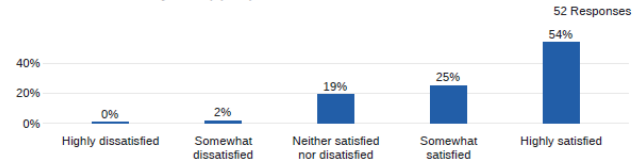


Q2_13 - Presentation of classes via the college's Canvas course management system

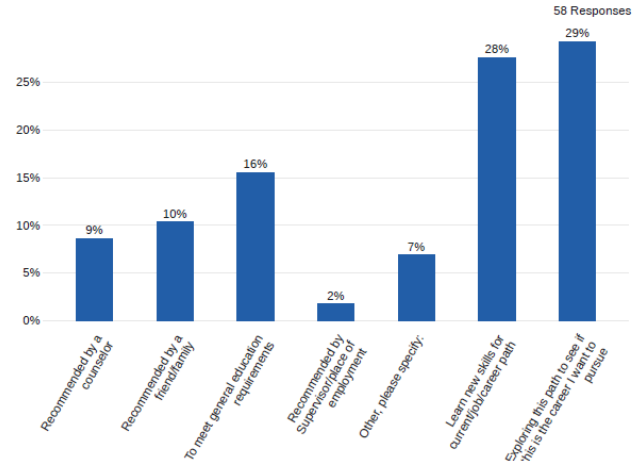
Q2_14 - Course assistance through tutorial services (e.g through the Tutorial Center, Math Lab, Writing Center)



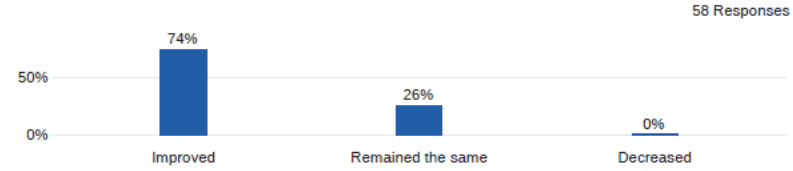
Q2_15 - Availability of appropriate resources in the libraries



Q4 - Which of the following best describes your reason for taking this and other courses in Agriculture/Viticulture & Enology program?



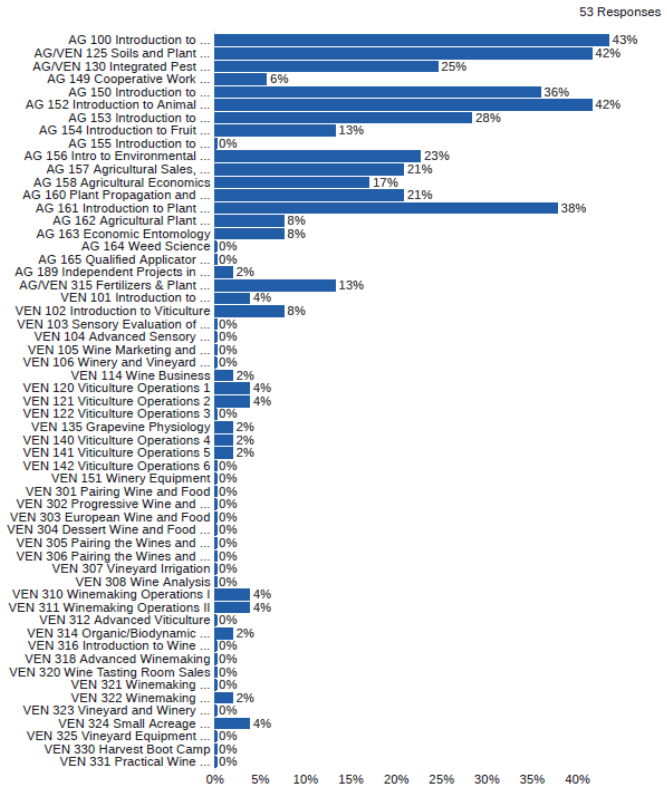
Q5 - Compared to the beginning of the semester, your attitude about Agriculture/Viticulture & Enology program has...



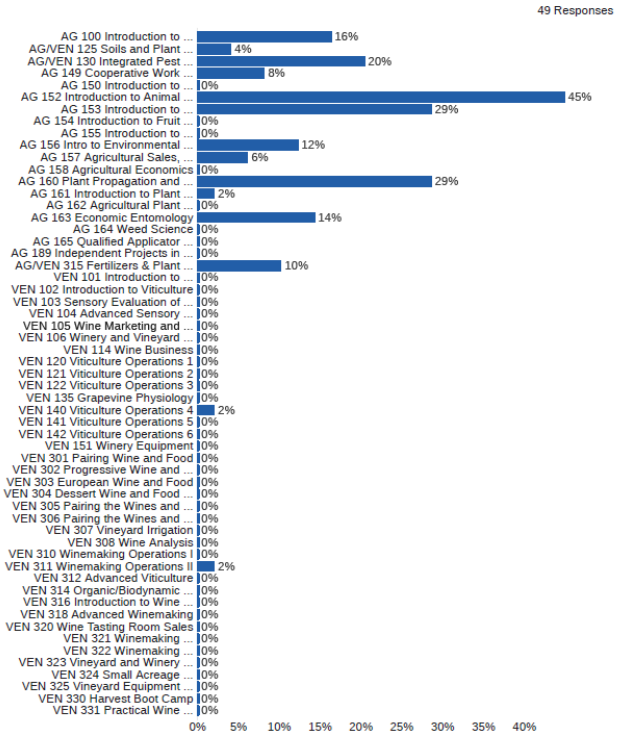
Q7_1 - I would recommend taking courses in Agriculture/Viticulture & Enology program

Q7_2 - I plan on taking additional courses in Agriculture/Viticulture & Enology program

Q8 - Which of the following courses have you taken in the Agriculture/Viticulture & Enology program?

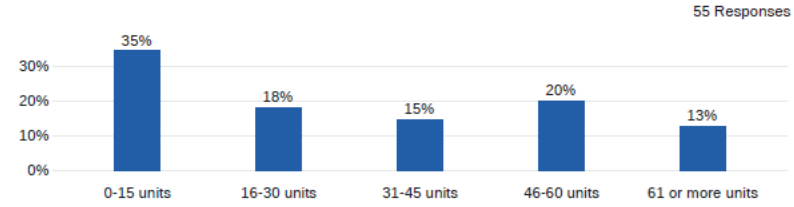


Q9 - Which of the following courses are you taking this semester in the Agriculture/Viticulture & Enology program?

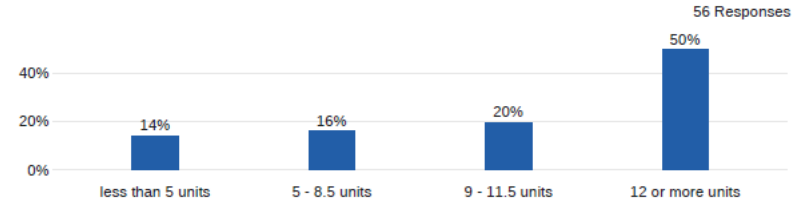


10

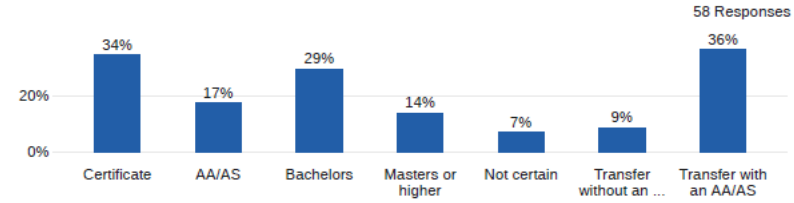
Q11 - How many units have you completed prior to this semester?



Q12 - In how many units are you currently enrolled?

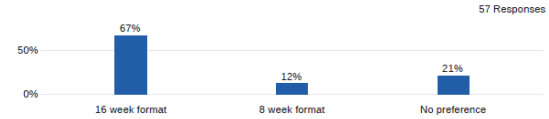


Q13 - What is your final academic goal? (Select all that apply)

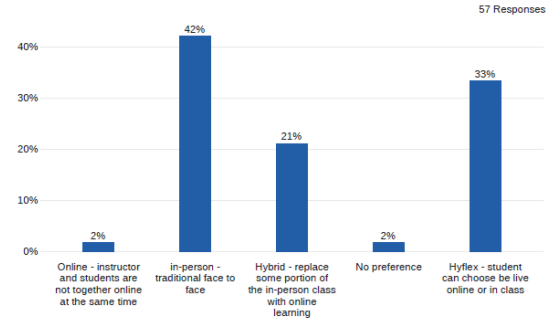


11

Q14 - Which course length would you prefer to enroll in for the Agriculture/Viticulture & Enology program:



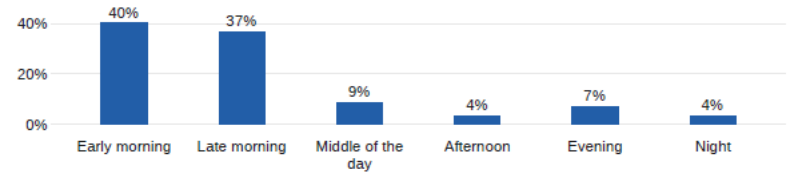
Q15 - Which type of course format would you most likely enroll in for the Agriculture/Viticulture & Enology program:



--

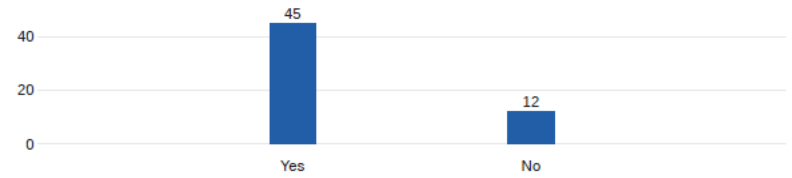
Q16 - What time of day do you prefer to attend classes?

57 Responses



Q17 - Are you working while attending Allan Hancock College?

57 Responses



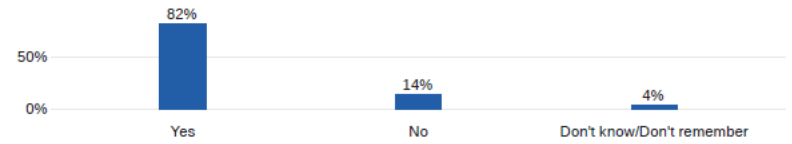
Q18_1 - Hours Per week

48 Responses

Field	Min	Max	Mean	Standard Deviation	Variance	Responses	Sum
Hours Per week	1	65	27	15	237	48	1276

Q19 - Have you worked with a counselor to create an academic plan (student education plan - SEP) for your time in college?

57 Responses

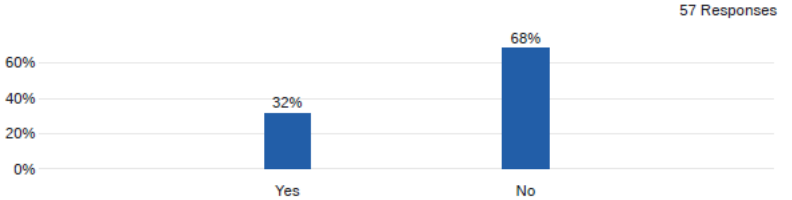


Q20 - Did you participate in any AHC outreach activities (i.e., Bulldog Bound, Hancock Hello, Week of Welcome, AHC events at local high school)?

57 Responses

Q21 - Are you involved in any AHC Student Clubs?

57 Responses



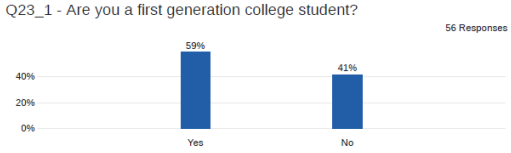
Q22 - What presents the greatest obstacle to your success at AHC?

What presents the greatest obstacle to your success at AHC?
Covid
Vaccine requirements/ sticker checkin
Myself.
Drive to get to school
Commuting time and cost from Lompoc.
Ag Science program is not listed as an approved EPTL program on EDD's CalJobs website. Another student in one my classes was able to get his claim manager to accept Ag Science as an approved program for his voucher, so I'm going to look into that once the weekend is over, like tomorrow.
Not enough programs on list of EPTLs from EDD
time overlap
Chemistry class

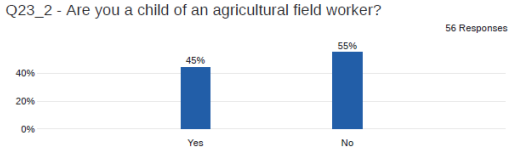
14

Time management
Support from family
So far, I have no problems or obstacles.
My own doubts about what career I want to pursue. Also management of how to study efficiently and not work too hard (study too much).
The times of the classes I want to take
My personal struggles
Procrastination is my biggest challenge.
Nothing, I am excited to roll through my classes.
Work.
My life outside of school
I live in Lompoc and most of the classes I need are strictly in Santa Maria.

Q23_1 - Are you a first generation college student?

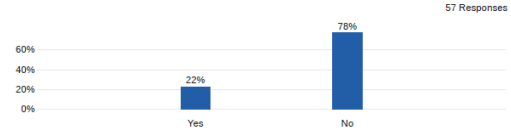


Q23_2 - Are you a child of an agricultural field worker?



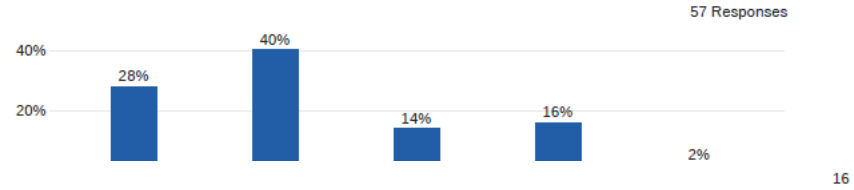
15

Q23_3 - Are you an agricultural field worker?

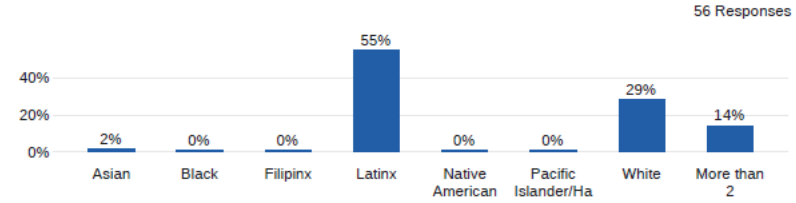


Q23_4 - Are you a Veteran?

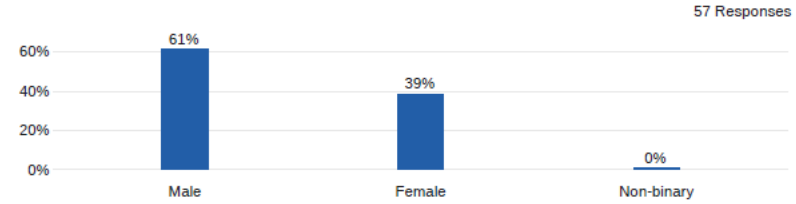
Q24 - What is your age?



Q25 - What is your ethnicity?



Q26 - What is your gender?



ARTICULATION STATUS OF COURSES

Viticulture & Enology

VEN 101 Introduction to Winemaking/Enology (3)
09/20/22

An examination of the principles of enology (winemaking) including history, grape growing, chemistry, wine microorganisms, fermentation, winemaking operations, cooperage, physiology and sociology of wine, and health and legal issues. This course is not open to students who have received credit for AG 101.

CATALOG DESCRIPTION

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	WVIT 202	Fundamentals of Enology (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	**NEED**	ENOL 15, Introduction to Enology
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	VEN 003	Introduction to Winemaking (3)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 102 Introduction to Viticulture (3)
09/20/22

CATALOG DESCRIPTION
An introduction to viticulture including grape growing, biology, anatomy, history, distribution, propagation, varieties, wine types, climate, common diseases and pests. This course is not open to students who have received credit for AG 102.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	**NEED to Change from AG 102 to VEN 102**	WVIT 232, Basic Viticulture (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	VIT 1	World Viticulture
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	Yes	
	UC Berkeley		
	UC Davis	VEN 002	Introduction to Viticulture (3)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 103 Sensory Evaluation of Wine (3)
09/20/22

CATALOG DESCRIPTION

An exploration of the principles of sensory wine evaluation. Demonstrates how wine quality is affected by climate, viticulture practices, production techniques, grape varieties, vineyard location, oak aging, and storage conditions. Participants will survey and evaluate commercial wine styles. Limitation on enrollment: students must be 21 years of age or older. This course is not open to students who have received credit for AG 103.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	ENOL 45	Wine Evaluation Techniques (2)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 104 Advanced Sensory Evaluation of Wine (3)
09/20/22

CATALOG DESCRIPTION

An investigation of Bordeaux, Burgundian, and Rhone varietals from regions where they occur worldwide -- France, USA, Chile, Italy, Australia, New Zealand, and Germany. Focuses on geography/soils, enological considerations, viticulture practices, wine production techniques and styles produced. This course is not open to students who have received credit for AG 104.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 105 Wine Making and Sales (3)
09/20/22

CATALOG DESCRIPTION
An introductory overview of the wine industry, production, planning, marketing channels, advertising, promotion, packaging, pricing, retail/wholesale distribution, and public relations. This course is not open to students who have received credit for AG 105.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 106 Winery Organization (3)
09/20/22

CATALOG DESCRIPTION

Presents the many aspects of operating a small to medium-sized winery in today's business environment. Topics include an overview of the California grape and wine industry, government compliance, financial planning (capital and operating budgets), grape supply options, grape contracts, financial and managerial accounting for vineyards and wineries. Includes the basics of vineyard and winery financial management e.g. using financial statements and what they mean, cash flow management, financial and investment analysis, banking and funding sources. The class combines short lecture and hands-on experience to gain practice with, and examine the limitations of, each analysis. Some basic understanding of Microsoft Excel is recommended. This course is not open to students who have received credit for AG 106.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 114 Wine Business
09/20/22

Catalog Description
The course will cover the basics of wine business for commercial wine production, sales, marketing, logistics, compliance and administration. The class combines short lecture and hands-on experience to gain practice with, and examine the limitations of, each analysis. The student will work in small groups analyzing regional wine industries. This course is not open to students who have received credit for AG 114.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 120 Viticulture Operations 1 (3)
09/20/22

CATALOG DESCRIPTION

Vineyard practices for the fall and winter seasons, including harvest, pruning, fertilization, weed control, erosion control, and propagation. Laboratory work will stress practical applications of viticulture theory. Operations in commercial vineyards will be studied through field trips. This course is not open to students who have received credit for AG 120.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 121 Viticulture Operations 2 (3)
09/20/22

CATALOG DESCRIPTION

Vineyard practices for the spring season including cultivation, frost control, planting, training, irrigation, disease, and pest control. Laboratory work will stress practical applications of viticulture theory. Operations in commercial vineyards will be studied through field trips. This course is not open to students who have received credit for AG 121.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 122 Viticulture Operations 3 (1)
09/20/22

CATALOG DESCRIPTION
Vineyard practices for the summer season including canopy management, crop load assessment and adjustment, pest and disease monitoring and management, week control, irrigation, and grape quality improvement techniques.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 125 Soils and Plant Nutrition (4)
09/20/22

CATALOG DESCRIPTION

A study of the physical, chemical and biological properties of soils, including plant nutrition and factors affecting the availability of nutrients. Composition, value, use and application of fertilizer materials and soil amendments will be covered. The course is not open to students who are enrolled in or have received credit for AG 125.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona	PLT 2310 And PLT 2310L	Basic Soil Science (2) And Basic Soil Science Lab (1)
	Cal Poly San Luis Obispo	SS 120	Introductory Soil Science (4)
	CSU Bakersfield	AGBS 1010	Introduction to Soil Science (3)
	CSU Channel Islands		
	CSU Chico	PSSC 250	Introduction To Soil Science (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay	AGPS 128	Introduction to Soil Science (3)
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	SSC 010	Soil In Our Environment (3)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	C-ID AG-PS 128L	Introduction to Soil Science
	CSU GE	N/A	
	IGETC	N/A	

VEN 130 Integrated Pest Management (4)
09/20/22

CATALOG DESCRIPTION

A study of the various pests and diseases found in California vineyard, fruit, vegetable, nut and grain crops - emphasizing pest and disease identification, sampling and monitoring techniques, and control methods. Integrated pest management approaches will be emphasized, including the latest bio-control strategies, biotechnological advances, and disease modeling for risk management. Students will visit local vineyards and farms providing "hands-on" learning opportunities. Two separate lab sections will be offered in order to provide students the appropriate option for their agricultural field of interest. Section I will be for the Viticulture focus, Section II will be for the Agriculture focus. This course is not open to students who are enrolled in or have received credit for AG 130.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 135 Grapevine Physiology (1)
09/20/22

CATALOG DESCRIPTION

An advanced study of grapevine physiology and phenology. Topics include vine balance, flowering and fruit set, stages of berry growth and vine water status. This course is designed for those working in the wine grape industry and already familiar with vineyard operations. This course is not open to students who have received credit for AG 135.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 140 Viticulture Operations 4 (3)
09/20/22

CATALOG DESCRIPTION

Advanced vineyard practices for the fall season including crop projection, grape quality assessment, grape maturity monitoring, harvest coordination, post-harvest practices and budgeting. Management planning and financial aspects of the operations are emphasized.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 141 Viticulture Operations 5 (3)
09/20/22

CATALOG DESCRIPTION
Advanced vineyard practices for the winter and spring seasons including vine balance determination, pruning, cover crop management, frost protection, vine training, vineyard research trials and budgeting. Management planning and the financial aspects of operations are emphasized.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 142 Viticulture Operations 6 (1)
09/20/22

CATALOG DESCRIPTION

Advanced vineyard practices for the summer season including equipment operation and maintenance, vine training, vineyard research trials, and budgeting. Management planning and financial aspects of the operations are emphasized. This course is not open to students who have received credit for AG 142.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

VEN 151 Winery Equipment (2)
09/20/22

CATALOG DESCRIPTION

Presents all aspects of winery equipment; function, use, location, safe operation and repair. A strong emphasis is placed on safety and legal compliance. Production, storage and packaging equipment are included. This course is not open to students who have received credit for AG 151.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

Agriculture

AG 100 Introduction to Agricultural Studies and Careers (1)
09/20/22

Catalog Description
This course provides guidance for the educational pathways leading to degrees and certificates in the agricultural sciences. Emphasis also provided in the exploration of agriculture careers and employment opportunities. Assists students in setting both educational and career goals. Students develop an educational plan based on the curriculum requirements of agriculture majors. Students will learn the skills necessary for success in obtaining, maintaining and advancing in agriculture careers. Current issues that affect agriculture will be discussed.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	NEED	AEPS 101, Orientation to Horticulture and Crop Science (2)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 125 Soils and Plant Nutrition (4)
09/20/22

CATALOG DESCRIPTION
A study of the physical, chemical and biological properties of soils, including plant nutrition and factors affecting the availability of nutrients. Composition, value, use and application of fertilizer materials and soil amendments will be covered. The course is not open to students who are enrolled in or have received credit for VEN 125.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona	PLT 2310 And PLT 2310L	Basic Soil Science (2) And Basic Soil Science Lab (1)
	Cal Poly San Luis Obispo	SS 120	Introductory Soil Science
	CSU Bakersfield	AGBS 1010	Introduction to Soil Science (3)
	CSU Channel Islands		
	CSU Chico	PSSC 250	Introduction To Soil Science
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay	AGPS 128	Introduction to Soil Science (3)
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	SOILSCI 10	Concepts In Soil Science
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	C-ID AG-PS 128L	
	CSU GE	N/A	
	IGETC	N/A	

AG 130 Integrated Pest Management for Grapes (4)
09/20/22

CATALOG DESCRIPTION

A study of the various pests and diseases found in California vineyard, fruit, vegetable, nut and grain crops - emphasizing pest and disease identification, sampling and monitoring techniques, and control methods. Integrated pest management approaches will be emphasized, including the latest bio-control strategies, biotechnological advances, and disease modeling for risk management. Students will visit local vineyards and farms providing "hands-on" learning opportunities. Two separate lab sections will be offered in order to provide students the appropriate option for their agricultural field of interest. Section I will be for the Viticulture focus, Section II will be for the Agriculture focus. This course is not open to students who are enrolled in or have received credit for VEN 130.

AHC Special Notes	Articulation Institution	Prefix	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC Transferable	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 150 Introduction to Agribusiness (3)
09/20/22

Catalog Description
Provides a basic understanding of the business and economics of the agricultural industry; an introduction to the economic aspects of agriculture and their implications to the agricultural producer, consumer and the food system; management principles encountered in the day to day operation of an agricultural enterprise as they relate to the decision making process.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	ABM 2010	Agribusiness Management Fundamentals (3)
	Cal Poly San Luis Obispo	AGB 101	Introduction to Agribusiness (4)
	CSU Bakersfield	AGBS 1210	Introduction to Agribusiness (3)
	CSU Channel Islands		
	CSU Chico	ABUS 101	Introduction to Agriculture (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	AGBS 5	Survey of Agricultural Economics and Agribusiness (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	AG-AS 104	
	CSU GE	N/A	
	IGETC	N/A	

AG 152 Introduction to Animal Science (3)
09/20/22

Catalog Description
A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics and epidemiology. Emphasis on the origin, characteristics, adaptations and contributions of livestock to the modern agriculture industry. Field trips may be required.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	AUS 1112	Food Animal Production (3)
	Cal Poly San Luis Obispo	ASCI 112	Principles of Animal Science (4)
	CSU Bakersfield	AGBS 1020	Introduction to Animal Science (3)
	CSU Channel Islands		
	CSU Chico	ANSC 101	Introduction to Animal Science (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	ASCI 1	Introduction to Animal Science (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	**NEED**	ANS 2, Introductory to Animal Science (4)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	C-ID AG-AS 104	
	CSU GE	B2	
	IGETC	5B	

AG 153 Introduction to Sustainable Agriculture (3)
09/20/22

Catalog Description
Introduction to the history, definitions, concepts, principles and practices of sustainable agricultural systems. Includes an examination of case studies to connect sustainable agriculture principles to actual farming practices.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	**NEED**	PLS 015, Introduction to Sustainable Agriculture (4)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	

AG 154 Introduction to Fruit Science (3)
09/20/22

Catalog Description
The botany, taxonomy, and development of major fruit, vine, and nut crops in California including variety selection, production practices including site selection establishment, fertilization, pollination, irrigation, harvest, storage, processing, marketing, pest management, and pruning.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	**NEED**	PLT 2030, Pomology (2) And PLT 2030L. Pomology Lab (1)
	Cal Poly San Luis Obispo	AEPS 132	Pomology I (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	PLANT 30	Introduction to Fruit Science (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 155 Introduction to Mechanized Agriculture (3)
09/20/15

Catalog Description

Basic mechanical skills in woodworking, cold metal, electricity, plumbing, concrete, and project construction skills as related to farm maintenance and repair. Development of hand and power tool skills as well as emphasis on safety practices for all mechanical areas. Shop safety, Lab required.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico	Denied	AGRT 120, Introduction to Mechanized Agriculture (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	**NEED**	MEAG 1, Introduction to Agricultural Mechanics (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 156 Introduction to Environmental Horticulture (3)
09/20/22

Catalog Description
General course in environmental horticulture with emphasis on nursery operations, landscaping, turf management, and floral industries including: basic botany, cultural practices, propagation, structures and layout, pest management, planting, container gardening and houseplants, floral design, plant identification, turfgrass installation and care, and survey of career opportunities.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	AEPS 230	Environmental Horticulture (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	**NEED**	PLANT 40, Introduction to Ornamental Horticulture (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus	**NEED**	AGST 2200, Principles of Horticulture and Practices (3)
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 157 Agricultural Sales, Communication & Leadership (3)
09/20/22

Catalog Description
The study of principles and practices of the selling process: selling strategies and approaches, why and how people buy, prospecting, territory management, and customer service. Self-management, communication, and interpersonal skills necessary in developing managerial abilities, leadership qualities, and facilitating teamwork within the agribusiness sector will be explored. Students will gain experience through role-play, formal sales presentations, and job shadowing. The course content is organized to give students an in-depth understanding of the factors and influences that affect the agribusiness industry on a day-to-day basis.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	AGB 202	Introduction to Sales (4)
	CSU Bakersfield	AGBS 1220	Agricultural Sales and Services (3)
	CSU Channel Islands		
	CSU Chico	ABUS 211	Agriculture sales, communication & leadership (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	AG-AB 112	
	CSU GE	N/A	
	IGETC	N/A	

AG 158 Agricultural Economics (3)
09/20/22

Catalog Description
The place of agriculture and farming in the economic system; basic economic concepts and problems of agriculture; pricing and marketing problems, factors of production; and state and federal farm programs affecting the farmer's economic position.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	----------	Upper Division Equivalent ABM 3111, Applied Economics for Agriculture
	Cal Poly San Luis Obispo	AGB 212	Agricultural Economics (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico	ABUS 101	Introduction to Agriculture (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	AGBS 1	Introductory Agricultural Economics (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	ARE 001	Economic Basis of 6the Agriculture Industry (4)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 160 Plant Propagation and Production (3)
09/20/22

Catalog Description
Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest and disease control; structures and site layout; preparation and use of propagating and planting mediums; use and maintenance of common tools and equipment; regulations pertaining to plant production. Laboratory required.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	PLT 1130 And PLT 1130L	Plant Science II (3) And Plant Science II Lab (1)
	Cal Poly San Luis Obispo	AEPS 124	Plant Propagation (4)
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay	AGPS 216	Plant Propagation and Production (3)
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	C-ID AG 116	Plant Propagation
	CSU GE	N/A	
	IGETC	N/A	

AG 161 Introduction to Plant Science (4)
09/20/22

Catalog Description
Introduction to plant science including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona	PLT 1120 And PLT 1120L	Plant Science I (3) And Plant Science I Lab (1)
	Cal Poly San Luis Obispo	AEPS 120	Principles of Horticulture and Crop Science (4)
	CSU Bakersfield	**NEED**	AGBS 1040, Introduction to Plant Science (3)
	CSU Channel Islands		
	CSU Chico	PSSC 101	Introduction to Plant Science (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	NEED	PLANT 1, Introduction to Plant Science (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis	PLS 002	Botany and Physiology of Cultivated Plants (4)
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	C-ID AG-PS 104	Introduction to Plant Science
	CSU GE	B2/B3	
	IGETC	5B/5C	

AG 162 Agricultural Plant Pathology (4)
09/20/22

Catalog Description
A study of the nature and causes of disease in plants, with particular emphasis on agricultural commodities. This course will cover disease cycles, symptoms, host-parasite interactions, disease development in relation to the environment, methods of prevention, and methods of control such as cultural, chemical and biological. Industry-based field trips and/or guest speakers will be used to exemplify classroom knowledge.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno	**NEED**	PLANT 60, Introduction to Plant Health (3)
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	Yes	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 163 Economic Entomology (4)
09/20/22

Catalog Description
Introduction to insects and mites of economic importance to agriculture. Covers the morphology, taxonomy, identification, life cycles, hosts, habitat relationships and control methods for insects of economic importance. Industry-based field trips and/or guest speakers will be used to exemplify classroom knowledge.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 164 Weed Science (4)
09/20/22

Catalog Description
Introduction to the classification, identification and life cycles of common and poisonous weeds in California which are detrimental to cultivated crops, grasslands, animals and humans. Management practices to prevent and control weed population establishment will be covered. Industry-based field trips and/or guest speakers will be used to exemplify classroom knowledge.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo	AGB 202	Sales, Communication and Leadership in Agribusiness (4)]
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico	ABUS 211	Agriculture sales, communication & leadership (3)
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

AG 165 Qualified Applicator Training (2)
09/20/22

Catalog Description
This course will prepare students to take the Qualified Applicator License (QAL) or Qualified Applicator Certificate (QAC) exam as given by the California Department of Pesticide Regulation. Students will study pest management, pesticide labels and applications, safety, equipment, laws and regulations. Additional emphasis will be placed on exam categories based on student need.

AHC Special Notes	Articulation Institution	Prefix/No	Title
	Cal Poly Pomona		
	Cal Poly San Luis Obispo		
	CSU Bakersfield		
	CSU Channel Islands		
	CSU Chico		
	CSU Dominguez Hills		
	CSU East Bay		
	CSU Fresno		
	CSU Fullerton		
	CSU Long Beach		
	CSU Los Angeles		
	CSU Monterey Bay		
	CSU Northridge		
	CSU Sacramento		
	CSU San Bernardino		
	CSU San Marcos		
	CSU Stanislaus		
	Humboldt State		
	San Diego State		
	San Francisco State		
	San Jose State		
	Sonoma State		
	UC List	No	
	UC Berkeley		
	UC Davis		
	UC Irvine		
	UC Los Angeles		
	UC Merced		
	UC Riverside		
	UC San Diego		
	UC Santa Barbara		
	UC Santa Cruz		
	C-ID	N/A	
	CSU GE	N/A	
	IGETC	N/A	

COURSE REVIEW VERIFICATION SHEET

COURSE REVIEW VERIFICATION

Discipline: Viticulture & Enology and Agricutlure Year: 2021

As part of the program evaluation process, the self-study team has reviewed the course outlines supporting the discipline/program curriculum. The review process has resulted in the following recommendations:

1. The following course outlines are satisfactory as written and do not require modification (list all such courses)

   VEN 151, VEN 323, VEN 331

   AG 100, AG 130, AG 150, AG 153, AG 154, AG 155, AG 157, AG 158, AG 165

2. The following courses require minor modification to ensure currency.

   VEN 101, VEN 102, VEN 103, VEN 104, VEN 105, VEN 106, VEN 114, VEN 120, VEN 121, VEN 122, VEN 140, VEN 141, VEN 142, VEN 307, VEN 310, VEN 311, VEN 312, VEN 314, and VEN 324 had minor modifications, including new books, etc. and are still under course review in CurriQunet. (The self-study team anticipates submitting such modifications to the AP&P, FALL 2022 - SPRING 2023)

   AG 156 – addition of required textbook; AG 160 – textbook updated; AG 162 – recommended textbook added; AG 163 – textbook updated, lab manual added; AG 164 – lab manual added; AG 315 - lab content added; textbook updated, consolidated SLOs to more accurately represent learning outcomes as opposed to learning objectives; (The self-study team submitted and received approval of such modifications to the AP&P, SPRING 2022)

3. The following courses require major modification.

   VEN 325 (The self-study team anticipates submitting such modifications to the AP&P, FALL 2022 - SPRING 2023)

   AG 125 - name changed to more accurately reflect course content and eliminate confusion with the "Fertilizers & Plant Nutrition" course; textbook updated; semester offered updated; AG 152 - BIOL 100 advisory added, textbook updated; AG 161 – BIOL 100 advisory added, textbook updated (The self-study team submitted and received approval of such modifications to the AP&P, SPRING 2022)

GRADUATION REQUIREMENTS: General Education (GE), Multicultural/Gender Studies (MCGS) and Health & Safety (H&W) Courses.

The following courses were reviewed as meeting an **AHC GE** requirement. The AP&P GE Criteria and Category Definitions (GE Learning Outcomes) forms were submitted to the AP&P for review in 2020.

AG 152, AG 161

The following courses were reviewed as meeting the **MCGS** requirement. The AP&P MCGS Criteria and Category Definitions (MCGS Learning Outcomes – To Be Developed) forms were submitted to the AP&P for review on:

_____

N/A

The following courses were reviewed as meeting the **H&W** requirement. The AP&P H&W Studies Criteria (To Be Developed) and Category Definitions (H&W Learning Outcomes – To Be Developed) forms were submitted to the AP&P chair for review on: _____

N/A

Course Review Team Members:

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
AP&P Chair	Signature	Date
Academic Dean	Signature	Date

APPENDICES

- Approved Course Outlines
- Degree and Certificate Requirements
- Advisory Committee

APPROVED COURSE OUTLINES

All VEN and AG course outlines are available via AHC myHancock

DEGREE AND CERTIFICATE REQUIREMENTS

All VEN degrees and certificates are available via the AHC website:
https://www.hancockcollege.edu/pathways/sciences-technologies/viticulture-enology.php

All AG degrees and certificates are available via the AHC website:
https://www.hancockcollege.edu/pathways/sciences-technologies/agriculture.php

ADVISORY COMMITTEE MEMBERSHIP

Department	Dean	Faculty/Staff	Advisory Committee Name	First	Last	Position/Title	School/Business
Viticulture	Sean Abel		Viticulture and Enology	Mark	Battany	Cooperative Extension Advisor	University of California
Viticulture	Sean Abel	Yes - PT	Viticulture and Enology	Douglas	Braun	-	-
Viticulture	Sean Abel		Viticulture and Enology	Chris	Brown		
Viticulture	Sean Abel		Viticulture and Enology	Phil	Carpenter	Director of Operations	Santa Barbara County Vinters Association
Viticulture	Sean Abel		Viticulture and Enology	Ric	Fuller		
Viticulture	Sean Abel		Viticulture and Enology	Chris	Hammell		Bien Nacido Vineyards
Viticulture	Sean Abel	Yes - FT	Viticulture and Enology	Alfredo	Koch	Coordinator, Viticulture and Enology	Allan Hancock College
Viticulture	Sean Abel		Viticulture and Enology	Michael	Larner		Larner Winery & Vineyard
Viticulture	Sean Abel		Viticulture and Enology	Kevin	Merrill		Mesa Vineyard Management
Viticulture	Sean Abel		Viticulture and Enology	Steve	Rasmussen	Consulting Winemaker	Talley Vineyards
Viticulture	Sean Abel		Viticulture and Enology	Jim	Stollberg	Enologist	Maverick Farming

Viticulture	Sean Abel		Viticulture and Enology	Andrew	Waterhouse	Professor, Viticulture and Enology	University of California Davis
Viticulture	Sean Abel		Viticulture and Enology	Norm	Yost		Flying Goat Cellars

Department	Dean	Faculty/ Staff	Advisory Committee Name	First	Last	Position/Title	School/Business
Agriculture	Sean Abel	Yes	Agriculture	Sean	Abel	Dean, Academic Affairs	Allan Hancock College
Agriculture	Sean Abel	Yes	Agriculture	Rita	Abi-Ghanem	Part-time Faculty, Agriculture	Allan Hancock College
Agriculture	Sean Abel		Agriculture	Mitch	Ardantz	Managing Partner	Bonipak Produce
Agriculture	Sean Abel		Agriculture	Dylan	Bognuda	Production Engineer	Bonipak Produce
Agriculture	Sean Abel		Agriculture	Teri	Bontrager	Executive Director	Santa Barbara County Farm Bureau
~~Agriculture~~	~~Sean Abel~~	-	~~Agriculture~~	~~Gregorio~~	~~Casillas~~	-	-
Agriculture	Sean Abel		Agriculture	Emma	Chow	District Conservationist	Natural Resources Conservation Service
Agriculture	Sean Abel		Agriculture	Rosemary	Cummings	FFA Advisor	Nipomo High School
Agriculture	Sean Abel		Agriculture	Marc	DeBernardi	FFA Advisor	Santa Maria High School
Agriculture	Sean Abel		Agriculture	Tom	Durant	Owner	Durant Distributing, Inc.
Agriculture	Sean Abel		Agriculture	Kevin	Dwyer	District Manager-Santa Maria/Oxnard	California Giant, Inc.

Agriculture	Sean Abel		Agriculture	Brenda	Farias	County Executive Director	USDA Farm Service Agency
Agriculture	Sean Abel		Agriculture	Cathy	Fisher	Agricultural Commissioner	County of Santa Barbara
Agriculture	Sean Abel		Agriculture	Jim	Glines	Chairman of the Board	Community Bank of Santa Maria
Agriculture	Sean Abel		Agriculture	Les	Graulich	Chief Financial Officer	Plantel Nurseries
Agriculture	Sean Abel		Agriculture	Eryn	Gray	Managing Partner	Ag Laboratory & Consulting
Agriculture	Sean Abel		Agriculture	Christo pher	Greer	Vice Provost	University of California Cooperative Extension
Agriculture	Sean Abel	Yes	Agriculture	Guiller mo	Guerra	FFA Advisor	Righetti High School
Agriculture	Sean Abel	Yes	Agriculture	Miguel	Guerra	FFA Advisor	Righetti High School
Agriculture	Sean Abel		Agriculture	Tom	Gulliver		
Agriculture	Sean Abel	Yes	Agriculture	Erin	Krier	Program Coordinator, Agriculture	Allan Hancock College
Agriculture	Sean Abel		Agriculture	Ron	Labastida	Food Safety Director	Babe Farms
Agriculture	Sean Abel		Agriculture	Larry	Lahr	President	Rincon Corporation
Agriculture	Sean Abel		Agriculture	Lacy	Litten	Field Operations Coordinator	Innovative Produce
Agriculture	Sean Abel		Agriculture	Jerry	Mahoney		Blosser Urban Garden
Agriculture	Sean Abel		Agriculture	Yeni	Martinez		
Agriculture	Sean Abel	Yes	Agriculture	Anjali	Misra	Faculty, Agriculture	Allan Hancock College

Agriculture	Sean Abel	Yes	Agriculture	Holly	Nolan Chavez	Regional Director: Ag, Water, Environment	Allan Hancock College
Agriculture	Sean Abel		Agriculture	Mark	Powell	FFA Advisor	Santa Maria High School
Agriculture	Sean Abel		Agriculture	Danilu	Ramirez, CCA, PCA		DRAM Agricultural Consulting
Agriculture	Sean Abel		Agriculture	Andrew	Rice	Vice President, Production	Reiter Affiliated Companies
Agriculture	Sean Abel		Agriculture	David	Rice	Pest Control Adviser	Nutrien Ag Solutions
Agriculture	Sean Abel		Agriculture	Jill	Vink	Pest Control Adviser; PT AHC ag faculty	
Agriculture	Sean Abel		Agriculture	Claire	Wineman	President	Grower Shipper Association
Agriculture	Sean Abel	Yes	Agriculture	Christine	Woodman Ready	FFA Advisor	Nipomo High School
Agriculture	Sean Abel		Agriculture	Montserrat	Zarate Antonio		

PROGRAM REVIEW -- VALIDATION TEAM MEMBERS

TO: Academic Dean Date:_____

From: Alfredo Koch and Erin Krier

We recommend the following persons for consideration for the validation team:

DEPARTMENT Life & Physical Sciences PROGRAM Viticulture/Enology & Agriculture

Board Policy requires that the validation team be comprised of the dean of the area, one faculty member from a related discipline/program, and two faculty members from unrelated disciplines.

Luke Blacqueire — Biology
(Name) (Related Discipline/Program)

Rob Jorstad — Physics
(Name) (Unrelated Discipline/Program)

Brent Darwin — Business
(Name) (Unrelated Discipline/Program)

At the option of the self-study team, the validation team may also include one or more of the following: a. someone from a four-year institution in the same discipline; someone from another community college in the same discipline; a high school instructor in the same discipline; a member of an advisory committee for the program. Please complete the following as relevant to your program review.

_____ _____
(Name) (Title)

Affiliation:_____ Telephone Contact Number:_____

Address_____
(Mailing) City/State/Zip email address

_____ _____
(Name) (Title)

Affiliation:_____ Telephone Contact Number:_____

Address_____
(Mailing) City/State/Zip email address

_____ _____
(Name) (Title)

Affiliation:_____ Telephone Contact Number:_____

Address_____
(Mailing) City/State/Zip email address

APPROVED:_____ _____
Academic Dean Date

AGRICULTURE AND VITICULTURE & ENOLOGY PROGRAM REVIEW
EXECUTIVE SUMMARY (Validation Team Report)

The Validation Team for the 2022 Agriculture and Viticulture & Enology six-year program review—consisting of Physics full-time faculty member Robert Jorstad, Accounting full-time faculty member Brent Darwin, and Biology full-time faculty member Luke Blacqueire—met with the authors, Agriculture temporary full-time faculty member Erin Krier and Viticulture/Enology full-time faculty member Alfredo Koch to review and discuss the comprehensive program review approximately for and hour and forty minutes on Friday, November 4th, 2022. It was clear that the members of the team had reviewed the document carefully and came prepared to provide feedback and suggestions to the document's authors.

1. MAJOR FINDINGS

Strengths of the program/discipline:

The team members discussed the attention to detail, consideration, and thought that was evident throughout the document. The team was able to understand the program well from the report and made a few suggestions regarding formatting and similar items to improve the flow and ease of reading for interested parties.

As the team discussed the document, they remarked upon the strengths, starting with the dedicated, highly qualified faculty. The two full-time faculty members spend many hours of their time to ensure students have optimal experiences and are engaged and involved in the program. This type of engagement is evident in the data, particularly shown in student interested as indicated by positive overall enrollment trends.

The second main topic the team discussed is the evidence of innovation, currency, and relevance in curriculum-including transfer articulation with regional universities, program connections, student activities, and regional involvement with high school students and programs. These downward and upward connections give students a clear, logical pathway from K-12 to Allan Hancock College and on to various four-year universities. A particular highlight of these connections is the Viticulture and Enology's program partnership with the University of Bordeaux for continuing education of our students.

The third main topic focused on the program's responsiveness to industry needs and changing regulations. This is especially important for students in terminal degree and certificate programs at the College. The Agriculture program and the Viticulture and Enology program meet once or twice a year with advisory committees comprised of industry and educational partners. These committees are important sources of information of ever-evolving industry needs and changing regulations. Additionally, full-time program faculty are in seminars, meetings, and conversations throughout the year providing a continuing exchange of information and ideas.

Both Agriculture and Viticulture and Enology are active with the campus community and our larger, regional community. Events and initiatives such as farm-to-table, campus-wide promotional events, and special events in the wineries are examples of program involvement in the campus community and on-campus and off-campus outreach. Additionally, the program is resourceful and collegial in terms of logistics, relationships, curriculum building, and the sharing of educational spaces with other programs.

Concerns regarding the program/discipline:

During the lengthy discussion on program strengths, areas of concern from the document were noted. There was concern from the team that the Agriculture discipline has been led and significantly grown by a temporary full-time faculty member who also is the program coordinator. Although the incumbent is enjoying the work, team members understand the need for permanence in this position.

A second concern mentioned by the team is that the full-time faculty members in the Agriculture program and the Viticulture and Enology program are having to spend time preparing/repairing irrigation equipment, tractor driving, weed pulling, and on other physical plant activities which takes away time from student assistance, program management, course preparation, and so forth.

The third concern focused on various types of funding. One issue the team discussed was that faculty members are using personal vehicles to transport materials, equipment, and things better suited for more rigorous vehicles. The team noted challenges with ongoing capital finances as the programs progress and old equipment wears out. There is a long list of prioritized equipment needs that should be funded in the near future. These items have a significant cost associated with them and planning how those items will be obtained is essential. Similarly, funding is needed for dedicated instructional space. Currently, instructional, storage, and office spaces for these and related programs is typically “borrowed” from other disciplines. This makes regularizing schedules from semester to semester and year to year very difficult which, therefore, impacts student planning, completion, and success.

Finally, the authors discussed issues with learning outcomes assessment. Learning outcomes assessment has been inconsistent, particularly with the part-time faculty. Some of this was attributed to the recent college-wide pause in assessments as the methodology and data collection tool was changed. It was emphasized that data collection from part-time faculty was a challenge prior to this pause.

2. RECOMMENDATIONS

The team is making a number of recommendations that are based on their interpretation of the information presented in the program review. These are all of the highest priority and indicate a strong need for dedicated resources for Agriculture and Viticulture & Enology which should be funded as soon as possible. They are listed here for consideration.

1. In order to ensure program longevity and continuity and provide proper recognition to the ongoing growth of the program and the importance of agriculture to the economy of the Santa Maria valley, it is recommended that the District promptly change the status of the temporary agriculture faculty member to permanent status with service credit given for the years already served as the full-time professor and coordinator. Failing that, it is recommended that the District approve, recruit for, and hire a permanent full-time agriculture faculty member.
2. In order to properly continue and expand these programs, ensure appropriate, adequate spaces and scheduling for student completion and success, it is recommended that the District approve, design, fund and build appropriate classroom, office, and indoor lab spaces to accommodate the Agriculture program and the Viticulture and Enology program. Please note that the Veterinary Technology program also needs such spaces.
3. To allow program faculty members to focus on student success, classroom teaching, program development and other faculty activities, it is recommended that the District approve, recruit for, and hire a permanent agriculture/viticulture lab assistant/farm manager.
4. For safety reasons as well as proper moving of materials, it is recommended that the District purchase a shared vehicle for hauling such items along with a proper plan for maintenance of that vehicle.
5. Based on the stated needs of the program, it is recommended that the program and District create, fund, and implement an equipment purchase/replacement plan to ensure all needs are met within a mutually agreeable timeframe.
6. In order to meet learning outcomes assessment expectations, it is recommended that the program partner with SLOAC to ensure that part-time faculty are trained and compensated for learning outcomes assessment.

Please note that the next set of program reviews for Agriculture and Viticulture & Enology will be developed and submitted separately as individual programs.

Summary prepared on behalf of the validation team by:
Sean J. Abel,
Dean, Academic Affairs

VALIDATION TEAM SIGNATURE PAGE

Alfredo Koch

Erin Krier

Robert Jorstad

Luke Blacquiere

Brent W. Darwin

Sean J. Abel

Plan of Action – Post-Validation

(Sixth-Year Evaluation)

DEPARTMENT Life & Physical Sciences PROGRAM Viticulture and Enology/ Agriculture

In preparing this document, refer to the Plan of Action developed by the discipline/program during the self-study, and the recommendations of the Validation Team. Note that while the team should strongly consider the recommendations of the validation team, these are recommendations only. However, the team should provide a rationale when choosing to disregard or modify a validation team recommendation.

Identify the actions the discipline/program plans to take during the next six years. Be as specific as possible and indicate target dates. Additionally, indicate by the number each institutional goal and objective which is addressed by each action plan. (See Institutional Goals and Objectives) The completed final plan should be reviewed by the department as a whole.

Please be sure the signature page is attached.

RECOMMENDATIONS TO IMPROVE **STUDENT LEARNING OUTCOMES** AND ACHIEVEMENT	Strategic Direction from AHC Strategic Plan	**TARGET DATE**
1. Coordinate with the local industry our College Internship program	SLS 2,3,4,6, I1	Ongoing
2. Establish Student Outcomes Assessments in all classes	SLS 1,2,3,4,6	Ongoing
3. Follow up with a Tutor's program to improve student achievement	SLS 2,3,4,6	Fall 2016
4. Promote work practices internships and student exchange with other institutions.	SLS 2,3,4,6	Ongoing
5. Broaden the use of Canvas as a supplement in all courses, with particular attention to training part-time faculty in the appropriate and effective use of Canvas.	SLS 6	Ongoing
6. Improve the engagement in all courses with updated materials, new lab manuals, new handbooks, videos, games and quizzes.	SLS 2,3,4,6	Ongoing

RECOMMENDATIONS TO ACCOMMODATE CHANGES IN **STUDENT CHARACTERISTICS**	**Strategic Plan Goal**	**TARGET DATE**
Enrollment Changes		
1. Promote classes extensively all year round and not only before semester starts.	SLS 5	Ongoing
2. Host program tours for local high school students to introduce them to the programs, instructors, facilities, and farm.	SLS 5	Ongoing
Demographic Changes		
1. Promote courses to more Hispanics and women.	SLS 5	Ongoing
2. Create presence at community and outreach events.	SLS 5	Ongoing

RECOMMENDATIONS TO IMPROVE THE **EDUCATIONAL ENVIRONMENT**	**Strategic Plan Goal**	**TARGET DATE**
Curricular Changes		
1. A new AS degree and Certificate is needed in Winemaking/Enology.	SLS 2,3,4, IR 2	Fall 2024
2. Send for approval the Winemaking AS and Certificate. Then the Online Certificate in Vineyard and Winery Administration, and the Sustainable Agriculture with emphasis in Viticulture certificate**.**	SLS 2,3,4, IR 2	Fall 2024
3. Conduct assessment about Winemaking/Enology Curriculum, Online Certificate in Vineyard and Winery Administration Curriculum and Sustainable AG/Viticulture Curriculum	SLS 1,2,3,4, IR 2	Fall 2023
4. Design distance learning introductory courses as needed for the new certificates. One in each discipline Viticulture, Winemaking, Wine Business. Add an Online Wine Financial management course.	SLS 1,2,3,4, IR 2	Fall 2024
5. Develop new Online courses for wine business	SLS 2,3,4, IR 2	Fall 2025
6. Make our website program access information more streamlined	SLS 2,3,4, IR 2	Ongoing
7. Prepare videos, games and activities for student engagement.	SLS 2,3,4, IR 2	Ongoing
8. Prepare more field trips, participation in industry activities.	SLS 2,3,4, IR 2	Ongoing
9. Add courses and certificates to meet emerging agriculture industry needs in food safety and agriculture technology.	SLS 2,3,4, IR 2	Fall 2025
10. Add a new AS degree in Agricultural Science that is specifically designed to meet transfer requirements to Cal Poly SLO.	SLS 2,3,4, IR 2	Fall 2023

11. Add new courses in Agriculture Enterprise, fall, spring, and summer to engage students in student farm maintenance and production.	SLS 2,3,4, IR 2	Fall 2023
12. Explore new curriculum concepts in agriculture laws & regulations; natural resource management; and certified crop adviser preparation and agriculture biotechnology	SLS 2,3,4, IR 2	Ongoing
Co-Curricular Changes		
12. Reevaluation and update class materials, including viticulture, wine analysis, winemaking class lab manuals.	SLS 4, IR 2	Ongoing
13. Prepare exercises for each class in Canvas and study materials.		
14. Update course outlines for instructors in selected classes e.g. Wine Analysi	SLS 4, IR 2	Ongoing
Food and Wine Pairing, Viticulture, Winemaking, and Wine Business	SLS 4, IR 2	Ongoing
15. Coordinate guest speakers and field trips in order to allow all students from the program to participate	SLS 4, IR 2	Ongoing
16. Adjust agriculture program courses to reflect content expected by university partners	SLS 4, IR 2	Onoing
Neighboring College and University Plans 1. Continue to partner with Cal Poly SLO to offer paid Summer Undergraduate Research Program opportunities to agriculture students 2. Continue to partner with Cal Poly SLO and Cuesta College agriculture programs to create projects, activities, and events that offer opportunities for students to engage with faculty and students from our neighboring institutions.		
Related Community Plans		
1. The wine sales can improve participation in the community and promote the overall program.	SLS 6, 7, I1	Ongoing
2. One possibility to study would be to offer, together with Culinary Arts, a series of dinners served by our students, pairing food and wine.	SLS 6, 7, I1	Fall 2024
3. We could also use funnier wine labels. We could possibly represent different programs with one label dedicated to each, e.g. dance, automotive, ceramics, music, biology, etc.	SLS 6, 7, I1	Fall 2024

RECOMMENDATIONS THAT REQUIRE ADDITIONAL RESOURCES	Strategic Plan Goal	TARGET DATE
Facilities		
1. Operational greenhouse (Electricity and others). Estimated cost ($20K)	SLS 2, 6, IR 2	Fall 2023
2. Clonal demonstration and different trellis systems at the campus vineyard Estimated cost ($2K)	SLS 2, 6, IR 2	Fall 2025
3. Signage on vineyard and winery. Inside vineyard, signage of different clones and cultivars. ($3K)	SLS 2, 6, IR 2	Fall 2023
4. Establish dedicated lab and instructional space for agriculture and viticulture/enology courses.		
5. Construct modern greenhouse with automated and climate-controlled technologies		
Equipment		
17. Vineyard sprayer to replace ($10K)	SLS 2, 6, IR 2	Fall 2024
18. Electricity upgrades at winery ($5K)	SLS 2, 6, IR 2	Fall 2024
19. Pick up truck for agriculture and viticulture ($35K)	SLS 2, 6, IR 2	Fall 2024
20. Kegs and carboys are needed at the winery. ($2K)	SLS 2, 6, IR 2	Fall 2024
21. One fermentation tank for red wine. ($13K)	SLS 2, 6, IR 2	Fall 2024
22. Barrel ozone cleaner. ($12K)	SLS 2, 6, IR 2	Fall 2024
23. Dish washer (15K)	SLS 2, 6, IR 2	Fall 2024
24. Wine Analysis Equipment including heat and cold stability equipment	SLS 2, 6, IR 2	Fall 2024
25. Hopper for grape crush (12K)	SLS 2, 6, IR 2	Fall 2024
26. ORP sensors 5K	SLS 2, 6, IR 2	Fall 2025
27. NTU sensors 3K	SLS 2, 6, IR 2	Fall 2025
28. Semiautomatic Bottling Equipment (35K)	SLS 2, 6, IR 2	Fall 2024
29. Sundry tools and equipment (Appendix C)	SLS 2, 6, IR 2	Fall 2025
30. Program microscopes	SLS 2, 6, IR 2	Fall 2025
31. Student farm supplies	SLS 2, 6, IR 2	Ongoing
32. Student farm tools and equipment	SLS 2, 6, IR 2	Ongoing
33. Mechanized agriculture equipment and supplies – woodworking, metal, concrete, electrical, plumbing, tools and equipment for broad workforce training, including table saw, drill press, miter saw, and concrete mixer	SLS 2, 6, IR 2	Ongoing
Staffing		

1. Full time AG Instructor ($92,000) - without qualified instructors in place, we can't offer Agriculture courses. We can become the main community college in Agriculture in SLO, SB and Ventura counties, but we do need a dedicated AG instructor.	IR 1, IR 2	Fall 2023
2. Winemaking instructor ($92,000)	IR 1, IR 2	ASAP. Now requested already in previous Program Review.
3. Hire a classified farm/laboratory technician	IR 1, IR 2	Spring 2023

PLAN OF ACTION – Post-Validation

Review and Approval

Plan Prepared By

Alfredo Koch Alfredo Koch Date:

Erin Krier Erin Krier Date:

Robert Jorstad Robert Jorstad Date:

Luke Blacquiere Luke Blacquiere Date:

Brent Darwin Brent W. Darwin Date:

Reviewed:

Department Chair*

Wendy Hadley Date:

*Signature of Department Chair indicates approval by department of Plan of Action.

Reviewed:

Dean of Academic Affairs

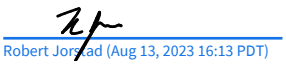
Sean J. Abel Date:

Vice President, Academic Affairs

Bob Curry Date:

Signature: 

Email: akoch@hancockcollege.edu

Signature: 
Robert Jorstad (Aug 13, 2023 16:13 PDT)

Email: rjorstad@hancockcollege.edu

Signature: 
Brent W. Darwin (Aug 15, 2023 13:21 PDT)

Email: bdarwin@hancockcollege.edu

Signature: 

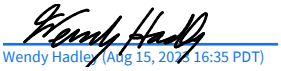
Email: sean.abel@hancockcollege.edu

Signature: 

Email: erin.krier@hancockcollege.edu

Signature: Luke Blacquiere

Email: luke.blacquiere@hancockcollege.edu

Signature: 
Wendy Hadley (Aug 15, 2023 16:35 PDT)

Email: wendy.hadley@hancockcollege.edu

Signature: 

Email: rcurry@hancockcollege.edu

2021-2022 Final Comprehensive Program Review VEN and AG

Final Audit Report 2023-08-15

Created:	2023-08-11
By:	Sean Abel (sean.abel@hancockcollege.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAaN1auYiyXOGt4Bno8B4AdCcvu0nVUWMF

"2021-2022 Final Comprehensive Program Review VEN and AG " History

Document created by Sean Abel (sean.abel@hancockcollege.edu)
2023-08-11 - 11:53:53 PM GMT- IP address: 209.129.94.61

Document emailed to Alfredo Koch (akoch@hancockcollege.edu) for signature
2023-08-11 - 11:58:37 PM GMT

Email viewed by Alfredo Koch (akoch@hancockcollege.edu)
2023-08-12 - 0:07:35 AM GMT- IP address: 47.7.50.179

Document e-signed by Alfredo Koch (akoch@hancockcollege.edu)
Signature Date: 2023-08-12 - 0:08:07 AM GMT - Time Source: server- IP address: 47.7.50.179

Document emailed to Erin Krier (erin.krier@hancockcollege.edu) for signature
2023-08-12 - 0:08:11 AM GMT

Email viewed by Erin Krier (erin.krier@hancockcollege.edu)
2023-08-12 - 0:28:04 AM GMT- IP address: 209.129.94.61

Document e-signed by Erin Krier (erin.krier@hancockcollege.edu)
Signature Date: 2023-08-12 - 0:29:14 AM GMT - Time Source: server- IP address: 209.129.94.61

Document emailed to rjorstad@hancockcollege.edu for signature
2023-08-12 - 0:29:18 AM GMT

Email viewed by rjorstad@hancockcollege.edu
2023-08-13 - 11:12:44 PM GMT- IP address: 66.215.55.19

Signer rjorstad@hancockcollege.edu entered name at signing as Robert Jorstad
2023-08-13 - 11:13:49 PM GMT- IP address: 66.215.55.19

Document e-signed by Robert Jorstad (rjorstad@hancockcollege.edu)
Signature Date: 2023-08-13 - 11:13:51 PM GMT - Time Source: server- IP address: 66.215.55.19

Document emailed to Luke Blacquiere (luke.blacquiere@hancockcollege.edu) for signature
2023-08-13 - 11:13:55 PM GMT

Email viewed by Luke Blacquiere (luke.blacquiere@hancockcollege.edu)
2023-08-14 - 9:45:25 PM GMT- IP address: 209.129.94.61

Document e-signed by Luke Blacquiere (luke.blacquiere@hancockcollege.edu)
Signature Date: 2023-08-14 - 9:45:53 PM GMT - Time Source: server- IP address: 209.129.94.61

Document emailed to bdarwin@hancockcollege.edu for signature
2023-08-14 - 9:45:57 PM GMT

Email viewed by bdarwin@hancockcollege.edu
2023-08-14 - 10:26:35 PM GMT- IP address: 209.129.94.61

Signer bdarwin@hancockcollege.edu entered name at signing as Brent W. Darwin
2023-08-15 - 8:21:25 PM GMT- IP address: 209.129.94.61

Document e-signed by Brent W. Darwin (bdarwin@hancockcollege.edu)
Signature Date: 2023-08-15 - 8:21:27 PM GMT - Time Source: server- IP address: 209.129.94.61

Document emailed to Wendy Hadley (wendy.hadley@hancockcollege.edu) for signature
2023-08-15 - 8:21:31 PM GMT

Email viewed by Wendy Hadley (wendy.hadley@hancockcollege.edu)
2023-08-15 - 11:11:12 PM GMT- IP address: 209.129.94.61

Document e-signed by Wendy Hadley (wendy.hadley@hancockcollege.edu)
Signature Date: 2023-08-15 - 11:35:19 PM GMT - Time Source: server- IP address: 209.129.94.61

Document emailed to Sean Abel (sean.abel@hancockcollege.edu) for signature
2023-08-15 - 11:35:22 PM GMT

Email viewed by Sean Abel (sean.abel@hancockcollege.edu)
2023-08-15 - 11:36:16 PM GMT- IP address: 209.129.94.61

Document e-signed by Sean Abel (sean.abel@hancockcollege.edu)
Signature Date: 2023-08-15 - 11:36:43 PM GMT - Time Source: server- IP address: 209.129.94.61

Document emailed to Robert Curry (rcurry@hancockcollege.edu) for signature
2023-08-15 - 11:36:46 PM GMT

Email viewed by Robert Curry (rcurry@hancockcollege.edu)
2023-08-15 - 11:37:02 PM GMT- IP address: 209.129.94.61

Document e-signed by Robert Curry (rcurry@hancockcollege.edu)

Signature Date: 2023-08-15 - 11:53:17 PM GMT - Time Source: server- IP address: 209.129.94.61

Agreement completed.

2023-08-15 - 11:53:17 PM GMT