AG and Envronmental Sciences
A.S. Degree: Agriculture Laboratory Techician

Program Inactivated

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Associate of Science Degree the student will be able to:		
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation			
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.			
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.			
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11			
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11			
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			
PLSC 200	CLO's are missing			
ANSC 200	1. identify and state the function of the major body systems on a written test. F10			
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10			
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill F10			

AG and Envronmental Sciences
A.S. Degree: Agriculture Laboratory Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Associate of Science Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.			
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			
NR 200	2. discuss this on a written exam.			
NR 200	3. discuss practical soil management on a written exam.			
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.			
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.			
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11			
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11			
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			

AG and Envronmental Sciences
A.S. Degree: Agriculture Laboratory Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Associate of Science Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.			
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.			
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.			
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			
AG 376	1 Identify and/or define the terminology on a written or practical exam.			
	2. identify these items and provide an explanation of their use in a practical lab setting.			
AG 280	1 calculate and compute volume by using mathematical equations. F10			
AG 280	2. compute and complete necessary calculations using mathematical equations. F10			
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10			
FDP 376	No CLO's Found			
FDP 378	No CLO's Found			

AG and Envronmental Sciences
A.S. Degree: Agriculture Laboratory Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Associate of Science Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
CHEM 101	1.the student will compute the probability of finding an electron at a certain location in an atom relative to finding the electron at the nucleus,			
CHEM 101	2.the student will compute the fraction of molecules of a gas within a given range of speeds at a specific temperature ,			
CHEM 143	1. the student will be able to convert between grams and moles for any element or compound			
CHEM 143	2. the student will be able to apply the ideal gas law under a given set of conditions			
CHEM 143	3. the student will be able to balance and classify chemical equations			
CHEM 144	1. the student will identify and name aldehydes, ketones, carboxylic acids, esters, and amides at the 70% level of proficiency			
CHEM 144	2. the student will predict or identify products of addition to alkenes at the 70% level of proficiency			
CHEM 144	3. the student will draw a tri- or tetra-peptide with the correct protonation state at the given pH			
MICRO 101	1. The student will understand the differences between different types of microorganisms.			
MICRO 101	2. The student will understand the principles of microbial metabolism and genetics.			
MICRO 101	3. The student will understand how microorganisms grow and what factors influence their growth.			
MICRO 101	4. The student will understand how the host's immunity works to prevent disease and how the microorganisms interact with host cells.			
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10			

AG and Envronmental Sciences
A.S. Degree: Agriculture Laboratory Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Associate of Science Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10			
FDP 200	No CLO's Found			
FDP 379-387	No CLO's Found			

Associate of Science Degree: Agriculture Laboratory Technician
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

JAVIS BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

This program has been discontinued + inactivated.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Associate of Science Degree: Agriculture Laboratory Technician
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AG and Envronmental Sciences
Certificate: Agriculture: Sales, Service Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓	✓	✓		✓
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.		✓	✓	✓	✓
AG 349 A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓	✓	✓	•	✓
AG 349 A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓			
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11	✓	✓	✓		✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11		✓			
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			✓		
PLSC 200	CLO's are missing					

AG and Envronmental Sciences
Certificate: Agriculture: Sales, Service Techician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*
ANSC 200	1. identify and state the function of the major body systems on a written test. F10		✓			✓
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10		✓	✓	✓	✓
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10		✓	✓	✓	✓
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.		✓			✓
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓	✓		✓
NR 200	2. discuss this on a written exam.		✓	✓		✓
NR 200	3. discuss practical soil management on a written exam.		✓	✓		✓
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.					
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.					

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able** to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.	✓	✓	✓	✓	✓
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.	✓				✓
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				✓	✓
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.		✓	✓	✓	✓
AGEC 215	1. analyze current marketing strategies and create a working marketing plan. S11		✓		✓	✓
AGEC 215	2. develop a flow chart, and through this charted information interpret the marketing options available. S11		✓		✓	✓
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.		✓	✓		✓
AGEC 280	2. complete a semester long lab notebook.		✓	✓		✓

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11		✓	✓	✓	✓
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11		✓	✓	✓	✓
SPCOM 100	1. demonstrate proficiency in reading and writing the International Phonetic Alphabet.		✓			
SPCOM 100	2. identify the forty-four sounds of the English language.		✓			
SPCOM 100	3. understand the mechanics of voice production.		✓			
SPCOM 100	4. Demonstrate a correct pronunciation of English words.		✓			
SPCOM 102	1. prepare and deliver speeches which demonstrate adaptation to audience and correct use of research, organizational, and delivery skills.		✓		✓	✓
SPCOM 102	2. (a) identify the various roles occurring in a small group and (b) respond and adapt to the roles displayed in the group.		✓			
SPCOM 102	3. utilize appropriate verbal and nonverbal messages to promote effective interpersonal relationships.		✓			

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10		✓	✓	✓	
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10		✓	✓	✓	

Associate of Science Degree: Agriculture: Sales, Service

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

BILL HOBBY		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* The CLOs do a fine job of representing the courses to the Certificate.
~~The CLO's~~

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* Most of the PLO's work fine. The AGM 200 do not relate to those CLO's in any way.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.* The AGM 200 CLO's do not align with the PLO's. For this degree evaluation of the course in this degree requirement needs to be re-evaluated

Associate of Science Degree: Agriculture: Sales, Service
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs? The data suggests appropriate success for the certificate, with exception to the ABM200 class

5. In reviewing the questions above, please identify an action plan.

Action Plan: Course requirements may need to be revisited in this degree especially the ABM200 class.

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓	✓	✓		✓	✓	
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.		✓	✓	✓	✓	✓	✓
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓	✓	✓		✓	✓	✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓				✓	
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11	✓	✓	✓		✓	✓	
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11		✓				✓	

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.						✓	
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.						✓	
ANSC 200	1. identify and state the function of the major body systems on a written test. F10		✓			✓		✓
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10		✓	✓	✓	✓	✓	✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10		✓	✓	✓	✓	✓	✓
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.		✓			✓		✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the internet, and other technology as they relate to agri-business.*	**7.** Recognize world markets and describe their effect on local agriculture economies.
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓	✓		✓		✓
NR 200	2. discuss this on a written exam,		✓	✓		✓		✓
NR 200	3. discuss practical soil management on a written exam.		✓	✓		✓		✓
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			✓				✓
PLSC 200	CLO's are missing							

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.	✓	✓	✓	✓	✓	✓	
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.	✓				✓	✓	
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				✓	✓	✓	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.		✓	✓	✓	✓		✓
AGEC 215	1. analyze current marketing strategies and create a working marketing plan. S11		✓		✓	✓		✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 215	2. develop a flow chart, and through this charted information interpret the marketing options available. S11		✓		✓	✓	✓	✓
AGEC 215	3. define the role of the government in the marketing of agricultural commodities. S11		✓	✓	✓			✓
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.		✓	✓		✓		✓
AGEC 280	2. complete a semester long lab notebook.		✓	✓		✓		✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11		✓	✓	✓	✓	✓	
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11		✓	✓	✓	✓	✓	

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AG 280	1. calculate and compute volume by using mathematical equations. F10							
AG 280	2. compute and complete necessary calculations using mathematical equations. F10		✓		✓		✓	
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10		✓	✓			✓	
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10		✓	✓	✓		✓	

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10		✓	✓	✓		✓	
AGEC 220	1. define, analyze and evaluate the best farm structures/ownership for targeted situations.		✓		✓	✓	✓	
AGEC 220	2. develop and analyze a calendar of operations.		✓		✓	✓	✓	

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 220	3. define sources and principles of acquiring agriculture credit.		✓				✓	
AGEC 220	4. understand various business operations and have the knowledge to run or operate an ag business. S10	✓	✓			✓	✓	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11	✓	✓				✓	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		✓		✓	✓	✓	

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓				✓	
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11		✓				✓	
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		✓		✓	✓	✓	✓

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓				✓	
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.		✓	✓	✓	✓	✓	✓
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.					✓	✓	

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.		✓	✓	✓	✓	✓	
SPCOM 100	1. demonstrate proficiency in reading and writing the International Phonetic Alphabet.		✓					
SPCOM 100	2. identify the forty-four sounds of the English language.		✓					
SPCOM 100	3. understand the mechanics of voice production.							

AG and Envronmental Sciences
A.S. Degree: Agriculture: Sales, Service

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture: Sales, Service Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy.*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	7. Recognize world markets and describe their effect on local agriculture economies.
SPCOM 100	4. Demonstrate a correct pronunciation of English words.		✓				✓	
SPCOM 102	1. prepare and deliver speeches which demonstrate adaptation to audience and correct use of research, organizational, and delivery skills.		✓			✓	✓	
SPCOM 102	2. (a) identify the various roles occurring in a small group and (b) respond and adapt to the roles displayed in the group.					✓	✓	
SPCOM 102	3. utilize appropriate verbal and nonverbal messages to promote effective interpersonal relationships.					✓	✓	

...te of Science: Agriculture, Sales and Service

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

BILL HOBBY		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* The CLO s represent gunte well the purpose of the courses

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* Generally the PLO s do represent the purpose well. With the exception of the elective courses a. b. with courses

Associate of Science: Agriculture, Sales and Service

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Again quite well in the major core and career classes. not so well in some of the elective classes & health classes.

With that said, there is benefit in those classes to making a student more successful, just not in that PLO area.

Associate of Science: Agriculture, Sales and Service

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

They are well written & thought out. Some don't align in a measurable fashion, however the classes are beneficial to students for job readiness & skill development.

5. In reviewing the questions above, please identify an action plan.

Action Plan: I don't think every PLO will match w/ a CLO especially in elective/breadth courses. This does not mean they aren't beneficial. I recommend they stay and that we try harder to be broader in our elective interpretations of the PLO's.

AG and Envronmental Sciences
A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture Industry.*	*4. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	X		X	X			
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.				X			
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.			X				
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			X				

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.	2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.	3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.	4. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers..	5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.	6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11	X	X	X		X		X
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11		X	X	X	X		X
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.	X				X		
PLSC 200	CLO's are missing							
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.	X	X	X				
NR 200	2. discuss this on a written exam.	✓	✓	✓				

AG and Envronmental Sciences
A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
NR 200	3. discuss practical soil management on a written exam.	X				X		
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.	X	X		X			
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.	X	X		X			
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11	X		X		X		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11	X		X		X		
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11					X		

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11	X		X		X		
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11					✓		
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11					✓		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			X		✓		
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.					✓		

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.	X		X				X
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			X			X	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure			X		X		
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.			X		X		
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			X		X	X	

AG and Envronmental Sciences
A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
ANSC 200	1. identify and state the function of the major body systems on a written test. F10	X		X	X	X	X	X
ANSC 200	2. Identify and quantify the nutritional needs of animals on a written test and term project. F10	X		X	X	X	X	X
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	X		X	X	X	X	X
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.	X		X	X	X	X	X
ANSC 201	1. categorize events based on the major eras of the US beef industry in which they fall, when given those specific events on a test.	X				X	X	X

AG and Envronmental Sciences

A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
ANSC 201	2. write an essay comparing and contrasting the four systems citing at least four major attributes of each system and select the one they would choose to establish and justify why.			X	X	X	X	
ANSC 201	3. After student is given instruction on the cattle management practices utilized in the beef industry the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports. S10		X	X			X	X
ANSC 202	1. After student is given instruction on the function on sow herd management practices utilized in the swine industry. F10	X	X	X	X	X		X
ANSC 202	2. After student is given instruction on the criteria utilized in swine carcass evaluation (cutability and quality). F10	X	X	X	X	X	X	X
ANSC 202	3. After student is given instruction on the techniques and practices utilized in swine herd health. F10	X	X	X	X	X	X	X

AG and Envronmental Sciences

A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	CLO#/ Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	**7.** Describe basic management techniques used by the Animal Science Industry to produce wholesome, safe, environmentally responsible animal products.
ANSC 203	1. Identify sheep breeds, their adaptability to climatic conditions, differentiate types of operations, and discuss the relationship between consumer-packer-retailer.						✓	
ANSC 207	1. identify, explain and give adequate detail in regards to raising, handling and caring for equines.	✓		✓				
ANSC 207	2. identify and explain major disease causing agents specific to equines as well as their effect on the body as a whole							✓
ANSC 210	1. discuss, compare, describe and analyze the value of physical traits as they relate to form and function					✓	✓	
ANSC 210	2. observe, compare, discuss and justify their reasons for placing several classes of 4 head of Beef, Sheep, or Swine as compared to the ideals based on established criteria as discussed and presented in class under timed, individual conditions and culminating with sets of oral reasons for each class as identified. F09			✓			✓	
ANSC 211	No CLO's Found							

AG and Envronmental Sciences

A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
ANSC 214	1. After student is given instruction on the identification and composition of feedstuffs. S11	X		X	X	X	X	
ANSC 214	2. After the student is given instruction on the digestive systems found in livestock nutrition. S11	X	X	X	X	X	X	X
ANSC 214	3. After the student is given instruction on balancing feed rations and selecting least cost rations. S11	X		X	X	X	X	X
ANSC 215	1. After student is given instruction on the role animal behavior plays in individual and herd health the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.	X	X	X	X	X	X	X
ANSC 215	2. After student is given instruction on identifying physiological changes which alter susceptibility to various health issues the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.	X		X	X	X	X	

A.S. Degree: Animal Science

		PLOs: Upon satisfactory completion of the course requirements for the Animal Science Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.*	*4. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*	7. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
ANSC 215	3. After student is given instruction on identifying common diseases in U.S. animal agriculture production and establish control programs the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.	X			X	X	X	X

Associate of Science Degree: Animal Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

John Mendes		
Amanda Schnoor		
Mrs. Boyd		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* Yes, the CLO's represent the overall purposes of the courses. However, some CLO data is missing even though the CLO's have been evaluated.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

The PLO's in the animal science represent the program very well with the exception of PLO #2: Revised to emphasize safety and practical management rather than IPP (Injury Prevention Illness Plan).

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

CLOS were established from input generated from the animal science industry. Each CLO helps develop the basic skills that represent in the animal science industry. Most CLO's align w/ the PLO's, however the CLO's from Plant Science were difficult to match.

Associate of Science Degree: Animal Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

Overall, students are successful in completing the CLO's in Animal Science. The PLO that reflects safety needs to be revised from developing an IIPP - Illness, Injury Prevention Program to emphasizing safety.

The CLO's for Plant Science are difficult to match to the PLO's in Animal Science. This is also true for the NR 200 CLO's and Animal Science PLO's.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1. Revise PLO #2 IIPP to reflect overall safety.
2. CLO's for An Sci 211 need to be inserted
3. Revise An Sc 214 so the CLO's are complete.

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.			X		
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		X	X		
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11		X	X		
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11					

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	X				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.	X			X	
NR 200	2. discuss this on a written exam.					
NR 200	3. discuss practical soil management on a written exam.				X	

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		X	X		
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment		X	X		
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				X	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11	X				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11					
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11					

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop Integrated pest management programs for specific crops.*
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11					
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			Y		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.					
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.					
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.					

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09					
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.					
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.					
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.					
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			X		
PLSC 200	CLO's are missing					
PLSC 205	1. After the student is given instruction on the importance of field crop regions of California and the United States they will be able to explain and give examples on a written test.				X	
PLSC 205	2. After the student is given instruction on the importance of the leading field crop grown in the United States and California they will be able to explain their importance to the nations and California's economy on a written test.				X	

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or olericulture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
PLSC 205	3. select or design a plant nutrition program for several different field crops.			✓	✓	✓
PLSC 205	4. design a field preparation plan for several different types of field crops.			✓	✓	
PLSC 215	1. After the student is given instruction on the importance of vegetable crop regions of California and the United States they will be able to explain and give examples on a written test.			✓	✓	
PLSC 215	2. After the student is given instruction on the importance of the leading vegetable crop grown in the United States and California they will be able to explain their importance to the nations and California's economy on a written test.			✓	✓	
PLSC 215	3. select or design a plant nutrition program for several different vegetable crops.			✓	✓	
PLSC 215	4. design a field preparation plan for several different types of vegetable crops.			✓	✓	
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.			✓	✓	

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.			X	X	
PLSC 250	3. able to complete a fertilizer trail as a term project.	X			X	
AG 280	1. calculate and compute volume by using mathematical equations. F10				X	
AG 280	2. compute and complete necessary calculations using mathematical equations. F10	X			X	
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10	X			X	
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11				X	X
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.				X	X

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.		X	X		X
AGM 235	1. identify various irrigation methods and give the advantages and disadvantages of each. S12			X	X	
AGM 235	2. develop an irrigation schedule for a specific situation. They will be required to use crop evapotranspiration rates along with irrigation system information to determine a proper schedule.			X	X	
AGM 235	3. design and install a basic irrigation system. S12			X	X	
PLSC 260	1. Given lectures, labs or activities on the history and significance of plant pathology and diseases, types of plant diseases, basic plant pathology terminology, classification of plant diseases, parasitism and disease development, pathogens and their effect on plants, and diagnostic procedures, students will be given written and practical exams designed to test their knowledge of common plant diseases and their classification.				X	

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
PLSC 260	2. After participating in weekly laboratory/field trips to local vegetable and fruit farms, private research farms, UC Davis Foundation Plant Materials Service, CDFA Plant Disease Diagnostic Labs, UC Farm Advisor presentations, Stanislaus County Agriculture Commissioner, and other experiences designed to provide students with experience in gathering, organizing and evaluating plant diseases, students will score an average of 70% on written laboratory reports that include: (a) description of the lab/field trip including the specific plant diseases and controls observed; (b) identification/discussion of those plant diseases, including signs, symptoms, and life cycles; (c) description of disease management practices					

AG and Envronmental Sciences
A.S. Degree: Crop Science

		PLOs: Upon satisfactory completion of the course requirements for the Crop Science Associate of Arts Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Be able to employ safe work habits as prescribed in the "Injury, Illness Prevention" (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.*	*3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agronomy, Pomology, Viticulture, and enology, or oleoculture.)*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	*5. Develop integrated pest management programs for specific crops.*
PLSC 260	3. Given lectures, videos, laboratories, and demonstrations covering plant disease control methods, students will score at least a 70% on the development of a complete disease management plan for a central valley crop that includes: a management calendar defining the timing of management practices and cultural, biological and chemical control applications for anticipated diseases; a complete list and description of the plant diseases for the commodity, including written and graphics descriptions of their signs and symptoms, causal agent, lifecycle and control options; and chemical control application methods and the laws and regulations governing their application. F10					X
PLSC 260	1. correctly identify and classify plant pathogen examples infecting common central valley crops by common and Latin (genera and species) names.				X	
PLSC 260	2. develop a complete disease management plan for a central valley crop.				Y	

Associate of Science Degree: ~~**Soil Science**~~ Crop Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Mike Morales		
David Baggett		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   The CLO's need to be reviewed by All staff the teach the Ag course that a student can take in this degree area to come up with a consistant CLO for all the classes.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   There is a gap between the Ag Core & Ag Major/Elective CLO's. we need to add general CLO's of the Breath courses

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   They aligned very well in the Major courses & Major elective course areas

Associate of Science Degree: Soil Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

They show that the students did very well with outcomes. Once we make the few changes it will hopefully increase the student performance.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

we need to revise the CLO's for the Ag Core class to be consistant with the Major/Elective classes.

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	X		X	
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	X	X	X	X
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	X	X	X	
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.	X	X	X	
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	X	Y	X	
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.	X	Y	X	
ANSC 200	1. Identify and state the function of the major body systems on a written test. F10	X	X	X	

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10	X	X	X	
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	X		X	X
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.	X			X
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.	X	X	X	X
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.	X	X		X
PLSC 200	CLO's are missing				

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.	X	X	X	X
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.	X		X	
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.			X	
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.			X	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X	X
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		X	X	X
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11	X	X	X	

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11	X	X	X	
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11			X	
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X	X
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.	X		X	X
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.			X	X

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.	X	X	X	X
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09	X	X	X	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.	X			X
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.	X		X	X
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.				X
DAIND 301	No CLO's Found				
DAIND 302	No CLO's Found				
DAIND 303	No CLO's Found				
DAIND 304	No CLO's Found				
DAIND 305	No CLO's Found				
DAIND 306	No CLO's Found				
DAIND 307	1. identify and list the uses for a homogenizer.				
DAIND 307	2.Identify, list and explain the importance and uses of actual Material Safety Data Sheets				

AG and Envronmental Sciences
A.S. Degree: Dairy Science

		PLOs: Upon satisfactory completion of the course requirements for the Dairy Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
DAIND 308	1.demonstrate proper equipment techniques				
DAIND 309	1. outline and discuss the steps of product movement : from plant to consumer.				
DAIND 309	2. outline and discuss the various steps of dairy products promotional organizations and campaign effectiveness.				
DAIND 310	No CLO's Found				
DAIND 311	No CLO's Found				
DAIND 312	No CLO's Found				
ANSC 222	No CLO's Found				

Associate of Science Degree: Dairy Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Bill Hobby		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* The CLO's have been derived from various staff advisory groups and instructors. They reflect a majority of the skills needed to succeed in discipline

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* The PLO'S in the core classes represent quite well the program purposes.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

The CLO'S align with the PLO'S and assist students with success for job performance and readiness.

Associate of Science Degree: Dairy Science
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

That the programs dovetail well and aim the student towards sucess in the job market. A broad knowledge base is obtained by the students that allow them to alalyze, perform, achieve and complete tasks safely & efficiently.

5. In reviewing the questions above, please identify an action plan.

Action Plan: To become more aware of other course CLO's & work towards a higher level student success

AG and Environmental Sciences
A.S. Degree: Environmental Horticultural Science

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓			✓
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓			✓
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓			
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				✓
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.	✓			✓
ANSC 200	1. identify and state the function of the major body systems on a written test. F10				
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10				

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.				
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.				
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on. textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.				
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.				
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.				
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.				

AG and Environmental Sciences
A.S. Degree: Environmental Horticultural Science

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and interpersonal communication skills that employers demand
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				✓
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11	✓			
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11				
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.				

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.				
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.				
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.				
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.				
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.				
PLSC 200	CLO's are missing				

AG and Environmental Sciences
A.S. Degree: Environmental Horticultural Science

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
EHS 201	1. correctly identify and tell the cultural characteristics of the Spring plant list.			✓	
EHS 201	2. identify and tell the function of the various plant descriptors.			✓	
EHS 201	3. correctly identify and tell the cultural characteristics of the Fall plant list. F09			✓	
EHS 202	1. identify and tell the cultural characteristics of the Fall plant list.			✓	
EHS 202	2. identify and tell the function of the various plant descriptors.			✓	
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills..	✓	✓		✓
EHS 210	identify and tell the function of the various physiological and structural components of a plant		✓		✓
AGM (Any)	Chose 1 elective in AGM				
EHS 212	No CLO's Found				
EHS 215	1. complete three drafting exercises: (a) Lettering Plate, (b) Scale Problems, (c) Line Drawing and two sketches: (a) Setting up the Drawing Board, (b) Drawing a Plan S11				
EHS 215	2. draw an original, complete landscape design and formally present it to the class and, possibly, the client.			✓	
EHS 215	3. create six original landscape designs, a midterm landscape design project, and a group project and presentation designed to apply the design process to solving real-life landscape design problems. S11				

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
EHS 215	4. apply the elements and principles of landscape design covered in class during the semester in (a) selecting plant materials appropriate to the design concept and the environmental conditions of the site, (b) addressing the problems presented by the site and (c) in meeting the needs of the client. S11				
EHS 220	1. Given lectures on Turfgrass growth and development, primary and secondary cultural practices, soils and fertilizers, and golf course management, students will students will be given written and practical exams designed to test their knowledge of Turfgrass production and management and the relationship between soil, turf and climate.				
EHS 220	2. collect, preserve and label 20 Turfgrass samples and weeds, create a table of contents and bind the pages together to create a permanent reference collection.				
EHS 235	1. demonstrate various strategies of plant propagation, including various asexual techniques, seeding, cuttings, budding and grafting to the satisfaction of the instructor. S11				
EHS 250	No CLO's Found				
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.				
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.				
EHS 280	1. correctly identify plant, flower and foliage material.		✓	✓	

AG and Environmental Sciences
A.S. Degree: Environmental Horticultural Science

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
EHS 280	2. create a design using this theory and identify the principles.				
EHS 280	3. : Student will be given information on tools and equipment and by demonstration be given information of correct use.				
EHS 281	No CLO's Found				
NR 222	No CLO's Found				
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.				
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.				
PLSC 250	3. able to complete a fertilizer trail as a term project.				
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11				
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.				

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.				
PLSC 260	1. Given lectures, labs or activities on the history and significance of plant pathology and diseases, types of plant diseases, basic plant pathology terminology, classification of plant diseases, parasitism and disease development, pathogens and their effect on plants, and diagnostic procedures, students will be given written and practical exams designed to test their knowledge of common plant diseases and their classification.				

AG and Environmental Sciences
A.S. Degree: Environmental Horticultural Science

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
PLSC 260	2. After participating in weekly laboratory/field trips to local vegetable and fruit farms, private research farms, UC Davis Foundation Plant Materials Service, CDFA Plant Disease Diagnostic Labs, UC Farm Advisor presentations, Stanislaus County Agriculture Commissioner, and other experiences designed to provide students with experience in gathering, organizing and evaluating plant diseases, students will score an average of 70% on written laboratory reports that include: (a) description of the lab/field trip including the specific plant diseases and controls observed; (b) identification/discussion of those plant diseases, including signs, symptoms, and life cycles; (c) description of disease management practices observed; and evaluation of the activity. F10				✓

		PLOs: Upon satisfactory completion of the course requirements for the Environmental Horticultural Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification,identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	4. Demonstrate good work habits and inter-personal communication skills that employers demand
PLSC 260	3. Given lectures, videos, laboratories, and demonstrations covering plant disease control methods, students will score at least a 70% on the development of a complete disease management plan for a central valley crop that includes: a management calendar defining the timing of management practices and cultural, biological and chemical control applications for anticipated diseases; a complete list and description of the plant diseases for the commodity, including written and graphics descriptions of their signs and symptoms, causal agent, lifecycle and control options; and chemical control application methods and the laws and regulations governing their application. F10		✓		
PLSC 260	1. correctly identify and classify plant pathogen examples infecting common central valley crops by common and Latin (genera and species) names.		✓		
PLSC 260	2. develop a complete disease management plan for a central valley crop.		✓		

Associate of Science Degree: Environmental Horticultural Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Dr. Baggett		
Mrs. Brumley		
Mr. Pollard		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

They represent the skills and knowledge necessary to be successful in the Environmental Horticulture industry based on industry partners input.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

with these skills & knowledge our students will be successful in the industry.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

- Perfectly, when meeting with industry partners they have communicated these skills & characteristics and we have applied these inputs throughout our program & classes

Associate of Science Degree: Environmental Horticultural Science
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

The PLO are right on. We will want to strengthen our CLO's & improve those areas that have been identified as could be improved

5. In reviewing the questions above, please identify an action plan.

Action Plan:

Through improvement in presentations, resources and stronger student expectations we will be able to raise the students success.

After review of CLO's & PLO's they appear to represent our college mission statements as well as our horticulture industry.

Needed hand tools, small power equipment, lighting transplanting table, New roof on greenhouse, replace sprayer and other equipment that is in need of replacement

AG and Envronmental Science
A.S. Degree: Food Processing

inactivated

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation				
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.				
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activites, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				

AG and Envronmental Science
A.S. Degree: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.				
PLSC 200	CLO's are missing				
ANSC 200	1. Identify and state the function of the major body systems on a written test. F10				
ANSC 200	2. Identify and quantify the nutritional needs of animals on a written test and term project. F10				
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.				

AG and Envronmental Science
A.S. Degree: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.				
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.				
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.				
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.				
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.				
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11				
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.				
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the Internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.				
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.				

AG and Envronmental Science
A.S. Degree: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.				
AGEC 200	make accurate debit and credit entries in a journal and ledger				
FDP 200	No CLO's Found				
AG 376	1. Identify and/or define the terminology on a written or practical exam.				
AG 376	2. identify these items and provide an explanation of their use in a practical lab setting.				
FDP 300	No CLO's Found				
FDP 301	No CLO's Found				
FDP 376	No CLO's Found				
FDP 378	No CLO's Found				
FDP 379	no CLO's Found				
FDP 380	No CLO's Found				
FDP 381	No CLO's Found				
FDP 382	No CLO's Found				
FDP 383	No CLO's Found				
FDP 386	No CLO's Found				
FDP 387	No CLO's Found				
AG 280	1. calculate and compute volume by using mathematical equations. F10				
AG 280	2. compute and complete necessary calculations using mathematical equations. F10				
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10				

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able** to:	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10				
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10				
MICRO 101	1. The student will understand the differences between different types of microorganisms.				
MICRO 101	2. The student will understand the principles of microbial metabolism and genetics.				
MICRO 101	3. The student will understand how microorganisms grow and what factors influence their growth.				

AG and Envronmental Science
A.S. Degree: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific method to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injury Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
MICRO 101	4. The student will understand how the host's immunity works to prevent disease and how the microorganisms interact with host cells.				

Associate of Science Degree: Food Processing

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

This program has been discontinued and inactivated.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Associate of Science Degree: 'Food Processing

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.	3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.	4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.				X	X
NR 220	2. use selected forestry tools, and technology to complete Field and lab reports, showing a level of skill needed to evaluate and manage a forest site.		X	X		
NR 222	No CLO's Found					
NR 376	1. compare and contrast various silvicultural practices through a visual Forester interactive CD program with presentations on their results.			X	X	
NR 376	2. apply the basic and more advanced methods of timber measurement and stand evaluation complete field lab evaluation reports and evaluate and conduct a forest stocking survey and prepare a modified Timber Harvest Plan.		X	X		
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.					X
PLSC 200	CLO's are missing					

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			X		
AG 280	1. calculate and compute volume by using mathematical equations. F10			X		
AG 280	2. compute and complete necessary calculations using mathematical equations. F10			X		
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10					

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.	3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.	4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MIC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10					
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.			X	X	
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			X	X	
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			X	X	

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			X	X	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X	X	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			X	X	
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X	X	
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11			X	X	
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11			X	X	
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X	X	

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			X	X	
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.			X	X	
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.			X	X	
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		X	X	X	
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		X	X	X	
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		X	X	X	
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		X	X	X	

AG and Envronmental Sciences
A.S. Degree: Forestry

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the Instructor given the materials, tools, and equipment. S12			X	X	
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the Instructor given the materials, tools, and equipment.			X	X	
ENSCI 108	1. debate the viability of a choosing a future primary power source for the United States while addressing equally weighted evaluation criteria.	X				X
ENSCI 108	2. write a reflective essay evaluating their lifestyle in terms of meeting the tenets for creating a sustainable future.					X
ENSCI 108	3. demonstrate, or investigate an environmental conservation practice. S10			X		X
ENSCI 109	No CLO's Found					
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			X	X	
NR 200	2. discuss this on a written exam.				X	
NR 200	3. discuss practical soil management on a written exam.			X	X	

Associate of Science Degree: Forestry

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

Some courses have too many CLOs' (AGEC 225), or too few CLOs. Many are poorly written and seem somewhat narrow.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

The PLOs #1 & #5 appear to lack CLOs' directly related to them. Inividual courses should be identified where these are taught & the CLOs' written to link them.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Very poorly.

Associate of Science Degree: Forestry

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

There is little connection between the CLOs and the PLOs.

This program will be inactivated.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1) This program is being considered to be inactivated. It was voted on by the division to inactivate (May 2012) and transitional plans are being considered.

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleocultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		Y	X		
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		Y	Y		
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		Y	Y		
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		Y	Y		
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.					

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleocultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.				X	
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				X	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.					
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X	X	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11	X				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11					
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11	√			X	

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleoculture.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11					
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			X		
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.					
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.					
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		X	X		

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleocultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		X	X		
AGM 235	1. identify various irrigation methods and give the advantages and disadvantages of each. S12		X	X	X	
AGM 235	2. develop an irrigation schedule for a specific situation. They will be required to use crop evapotranspiration rates along with irrigation system information to determine a proper schedule.			X	X	
AGM 235	3. design and install a basic irrigation system. S12			X	X	
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	X				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleoculture.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.					
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.				X	
NR 200	2. discuss this on a written exam.					
NR 200	3. discuss practical soil management on a written exam.				X	
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			X		
PLSC 230	1. After the student is given instruction on how plants are affected by their surrounding environment and the changes to that environment in relationship to photosynthetic process within the plant on a written test.			Y	X	
PLSC 230	2. design a nut or fruit tree plot plan for several different fruit and nut crop varieties.			X	Y	
PLSC 230	3. go out into the laboratory setting and properly demonstrate the steps of proper pruning and training a young vine and tree.			X	Y	

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleocultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
PLSC 235	1. demonstrate various strategies of plant propagation, including various asexual techniques, seeding, cuttings, budding and grafting to the satisfaction of the instructor. S11			X	X	
PLSC 241	No CLO's Found					
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.			X	X	
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.			X	X	
PLSC 250	3. able to complete a fertilizer trail as a term project.	X			X	
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11				X	X
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.				X	X

AG and Envronmental Sciences
A.S. Degree: Fruit Science

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleoculture.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.		X	X		
PLSC 260	1. Given lectures, labs or activities on the history and significance of plant pathology and diseases, types of plant diseases, basic plant pathology terminology, classification of plant diseases, parasitism and disease development, pathogens and their effect on plants, and diagnostic procedures, students will be given written and practical exams designed to test their knowledge of common plant diseases and their classification.			X	X	

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleocultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
PLSC 260	2. After participating in weekly laboratory/field trips to local vegetable and fruit farms, private research farms, UC Davis Foundation Plant Materials Service, CDFA Plant Disease Diagnostic Labs, UC Farm Advisor presentations, Stanislaus County Agriculture Commissioner, and other experiences designed to provide students with experience in gathering, organizing and evaluating plant diseases, students will score an average of 70% on written laboratory reports that include: (a) description of the lab/field trip including the specific plant diseases and controls observed; (b) identification/discussion of those plant diseases, including signs, symptoms, and life cycles; (c) description of disease management practices observed; and evaluation of the activity. F10			X	X	

		PLOs: Upon satisfactory completion of the course requirements for the Fruit Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the field.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.*	*3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture, and enology, or oleoacultur.*	*4. Apply the principles of ecology, soil science, and plant science to crop management problems.*	5. Develop integrated pest management programs for specific crops.
PLSC 260	3. Given lectures, videos, laboratories, and demonstrations covering plant disease control methods, students will score at least a 70% on the development of a complete disease management plan for a central valley crop that includes: a management calendar defining the timing of management practices and cultural, biological and chemical control applications for anticipated diseases; a complete list and description of the plant diseases for the commodity, including written and graphics descriptions of their signs and symptoms, causal agent, lifecycle and control options; and chemical control application methods and the laws and regulations governing their application. F10			Y	Y	
PLSC 260	1. correctly identify and classify plant pathogen examples infecting common central valley crops by common and Latin (genera and species) names.				Y	
PLSC 260	2. develop a complete disease management plan for a central valley crop.				Y	

Associate of Science Degree: Fruit Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Mike Morales		
David Baggett		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

After reviewing the CLO's we need to review them as a group of all Area's that are involved to create consistency. Also we need to review the intent of the Agriculture Science Breath Core CLO's. to make them fit more uniformly

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

There is a gap between the Ag Science Core & Ag Major courses & Ag major electives. we may need to add general CLO's of the Breath courses.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

They were very well aligned in the Major courses & major electives Course areas.

Associate of Science Degree: Fruit Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to ~~reflect on, consider and analyze~~ the data you have. What does your CLO data tell you about your PLOs?

Sorry this was for crop science.
They show that the students did very well with the outcomes. Once we make the few changes suggested, success rate. should go up even higher.

This course is schedule to be reviewed Fall. 2012. But the other courses showed good results by the students.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

PLO's need to be revised to add

Add ~~#3~~ Apply the principles of pomology, viticulture, enology.

Add #4 Apply the principles of ecology, soil science, & plant science to tree/vine management problems.

Add #3 Develop an Intergated Pest Management program for a specific tree/vine crop.

In Addition we need to revise the CLO's for the Ag Core class to be consistent with the Major/Elective classes

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓				
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓				
AG 249	1 be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		✓	✓	✓	✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓	✓	✓	✓
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		✓	✓	✓	✓
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓	✓	✓	✓
PLSC 200	1 After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.					✓
PLSC 200	CLO's are missing					

tab]

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					✓
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					✓
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10					✓
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					✓
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.					✓
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.					✓
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.					✓
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09					✓

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.					✓
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11					✓
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11					✓
AGEC 225	3. Evaluate and compare computer hardware ; systems against minimum requirements, then propose a choice, and support by writing. S11					✓
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11					✓
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11					✓

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		✓	✓	✓	✓
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		✓	✓	✓	✓
AGM 210	1. complete a series of arc welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓		
AGM 210	2. complete a series of oxy-fuel welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓		
AGM 210	3. Be able to perform various SMAW welding procedures properly. F09		✓	✓		
AGM 210	4. effectively use various measurement and layout devices. F10		✓	✓	✓	
AGM 211	1. identify different metal samples and determine the proper welding method to be used to join the material. S10		✓	✓		✓
AGM 211	2. pass an American Welding Society certification test. S10		✓	✓		
AGM 214	1. recognize common agriculture production hazards and be able to correct dangerous situations. S11		✓		✓	
AGM 214	2. operate a forklift in a safe accurate manner.		✓		✓	
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		✓	✓	✓	

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		✓	✓		
AGM 225	1. properly design, install and construct common residential branch circuits radiating from a common service panel as per industry standards.		✓	✓		✓
AGM 225	2. determine the machine needs and requirements of an electrical motor and order a suitable replacement motor.		✓	✓		✓
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12		✓	✓		✓
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		✓	✓		✓
AGM 240	1. disassemble, inspect, adjust, and reassemble the given equipment back to proper operational status. S10		✓	✓		
AGM 241	1. describe diesel engine operating principles used on compression ignition engines through exams, quizzes, and lab assignments.		✓			

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AGM 241	2. Interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what : work and or repairs were performed.		✓	✓		
AGM 241	3. disassemble, inspect, adjust, and reassemble the given engine back to proper operational status. F09		✓			
AGM 251	1. develop a bill of materials and a working drawing for common agriculture shop project.		✓			✓
AGM 251	construct an agriculture project of their choice		✓	✓	✓	
AGM 252	1. properly select construction materials based on their strength, size and strength.					
AGM 252	2. construct an advanced agriculture project of their choice.					
AGM 262	1. identify various components of a complete hydraulic system and be able to tell each components function. S1D		✓			
AGM 262	2. calculate hydraulic cylinder speeds and forces.		✓			✓
AGM 280	1. complete a series labs pertaining checking, replacing, and adjusting common heavy machinery hydraulic systems meeting industry standards as judged by the instructor given the materials, tools, and equipment. F10		✓			

AG and Enronmental Sciences
A.S. Degree: Mechanized Agriculture

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Associate of Science the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
AGM 280	2. complete a series skill sets relating to heavy machinery hydraulic system troubleshooting meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓		
AGM 289	1. describe diesel engine operating principles used on spark ignition engines through exams, quizzes, and lab assignments.		✓			
AGM 289	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what work and or repairs were performed.		✓			
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.					✓
NR 200	2. discuss this on a written exam.					✓
NR 200	3. discuss practical soil management on a written exam.					✓

tab]

Associate of Science Degree: Mechanized Agriculture

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Steve Amador		
Todd Caveda		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

The CLOs have been developed with input from all program stakeholders (instructor, student, advisory committee) and reflect skills needed to succeed in the appropriate discipline.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

As with CLOs, PLOs have been developed to ensure program completers obtain required skills for future success. That future success can consist of employability skills, preparation for future continued education, or personal enrichment

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

CLOs were written as building blocks for the program and PLOs. Each CLO leads to development of skills that make up what is learned in the obtainment of the degree

Associate of Science Degree: Mechanized Agriculture

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

At the completion of each area of study I Reflect on the Appropriate CLOs and analyze what went well and what improvements may be needed to ensure Student Success. Once the CLOs are met the PLOs come naturally in the way that the are written

5. In reviewing the questions above, please identify an action plan.

Action Plan:

My Action Plan is to Continue daily Assessment and action to improve my teaching and improve the students ability to reach the CLOs and PLOs

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	**5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.**
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.	X			X	
PLSC 205	1. After the student is given instruction on the importance of field crop regions of California and the United States they will be able to explain and give examples on a written test.					X
PLSC 205	2. After the student is given instruction on the importance of the leading field crop grown in the United States and California they will be able to explain their importance to the nations and California's economy on a written test.	X				Y
PLSC 205	3. select or design a plant nutrition program for several different field crops.	X			Y	
PLSC 205	design a field preparation plan for several different types of field crops		X		Y	
PLSC 230	1. After the student is given instruction on how plants are affected by their surrounding environment and the changes to that environment in relationship to photosynthetic process within the plant on a written test.				X	X
PLSC 230	2. design a nut or fruit tree plot plan for several different fruit and nut crop varieties.				X	X
PLSC 230	3. go out into the laboratory setting and properly demonstrate the steps of proper pruning and training a young vine and tree.		P			

AG and Envronmental Sciences
A.S. Degree: Soil Science

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
PLSC 241	No CLO's Found					
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.				X	X
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.	X			X	X
PLSC 250	3. able to complete a fertilizer trail as a term project.	X				
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. 511		X		X	X
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.		X			X

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.		X			
PLSC 260	1. Given lectures, labs or activities on the history and significance of plant pathology and diseases, types of plant diseases, basic plant pathology terminology, classification of plant diseases, parasitism and disease development, pathogens and their effect on plants, and diagnostic procedures, students will be given written and practical exams designed to test their knowledge of common plant diseases and their classification.				X	

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
PLSC 260	3. Given lectures, videos, laboratories, and demonstrations covering plant disease control methods, students will score at least a 70% on the development of a complete disease management plan for a central valley crop that includes: a management calendar defining the timing of management practices and cultural, biological and chemical control applications for anticipated diseases; a complete list and description of the plant diseases for the commodity, including written and graphics descriptions of their signs and symptoms, causal agent, lifecycle and control options; and chemical control application methods and the laws and regulations governing their application. F10			X	X	
PLSC 260	4. correctly identify and classify plant pathogen examples infecting common central valley crops by common and Latin (genera and species) names.					
PLSC 260	5. develop a complete disease management plan for a central valley crop.			X	X	

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
PLSC 260	2. After participating in weekly laboratory/field trips to local vegetable and fruit farms, private research farms, UC Davis Foundation Plant Materials Service, CDFA Plant Disease Diagnostic Labs, UC Farm Advisor presentations, Stanislaus County Agriculture Commissioner, and other experiences designed to provide students with experience in gathering, organizing and evaluating plant diseases, students will score an average of 70% on written laboratory reports that include: (a) description of the lab/field trip including the specific plant diseases and controls observed; (b) identification/discussion of those plant diseases, including signs, symptoms, and life cycles; (c) description of disease management practices observed; and evaluation of the activity. F10				X	X

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11					
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.					
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.					
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.					
AGGE 146	1. write an essay on the relationship between agriculture and society and the subsequent impact of that society's agriculture on the environment. F09					

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
	2. In a small group of 4 to 5 students, research, prepare and present a current agricultural related problem, practice, or issue preferably one relevant to California's Central Valley. This research should take the form of an oral and poster presentation and include: an overview of the issue including an abbreviated history, sources and scope of the problem, key dilemmas associated with the issue, and possible solutions.					X
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		X	X		
	2. complete a basic metalworking project with the given materials, tools, and equipment.		X	X		
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12		X			
	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		X			
AGM 235	1. identify various irrigation methods and give the advantages and disadvantages of each. S12	X			X	

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. *Employ the scientific method to solve problems in the laboratory and in the natural environment.*	2. *Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	3. *Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	4. *Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
AGM 235	2. develop an irrigation schedule for a specific situation. They will be required to use crop evapotranspiration rates along with irrigation system information to determine a proper schedule.	X	X			
AGM 235	3. design and install a basic irrigation system. S12	X	X			
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10					
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					
ANSC 200	5.After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge					
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.				X	

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			✓	✓	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			✓		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			✓		
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			✓		
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11					
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11					

AG and Envronmental Sciences
A.S. Degree: Soil Science

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. *Employ the scientific method to solve problems in the laboratory and in the natural environment.*	2. *Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	3. *Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	4. *Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09					

		PLOs: Upon satisfactory completion of the course requirements for the Soil Science Associate of Science Degree the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural recourses, and wildlife management.
EHS 210	2. Identify and tell the function of the various physiological and structural components of a plant.					
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.	X	X		X	
NR 200	2. discuss this on a written exam.					
NR 200	3. discuss practical soil management on a written exam.			X	X	X
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.					
NR 220	2. use selected forestry tools, and technology to complete field and lab reports, showing a level of skill needed to evaluate and manage a forest site.					
NR 222	No CLO's Found					
NR 224	No CLO's Found					

Associate of Science Degree: ~~Crop Science~~ Soil Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Mike Morales		
David Baggett		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

Some of the courses are ~~one~~ need to be review ed. & revised to make the fit the PLO goals.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

~~No they do not~~ Yes they do but we need to revise the CLO's of the Ag Core & Ag Major/Elective Areas.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

we need to review & realign the ~~the~~ Ag core & Ag Major/Elective area to show more consistancy.

Associate of Science Degree: Crop Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

Students performed very well on each individual CLO. However, after we revise the CLO in a few classes the PLO's will improve.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

We need to revise the CLO's for the Ag Core classes to be more consistant with the Ag Major/Elective classes.

AG and Envronmental Sciences
A.S. Degree: Agriculture Business

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Business Associate of Science Degree the student will be able to:						
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.	2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.	3. Describe the economic significance of California Agriculture and its relationship to the global economy.	4. Explain supply and demand as it relates to local and regional agriculture business industries	5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally	6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.	7. Recognize world markers and describe their effect on local agriculture economies
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a farm project that will incorporate the above knowledge and skill. F10		✓			✓		✓
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge					✓		✓
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity and reactivity.		✓					
NR 200	2. discuss this on a written exam		✓		✓			
NR 200	3. discuss practical soil management on a written exam.		✓					
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.							
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment							
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results	✓	✓					
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.	✓	✓					
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09		✓					
AGEC 210	2. explain the characteristics of various types of market structures how each type of market allocates price and the efficiency of each market structure.		✓					

AG and Envronmental Sciences
A.S. Degree: Agriculture Business

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Business Associate of Science Degree the student will be able to:						
COURSE ID	CLOs: Students successfully completing this course will be able to:	1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.	2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.	3. Describe the economic significance of California Agriculture and its relationship to the global economy.	4. Explain supply and demand as it relates to local and regional agriculture business industries.	5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.	6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.	7. Recognize world markets and describe their effect on local agriculture economies.
AGEC 220	1. define, analyze and evaluate the best farm structures/ownership for targeted situations	✓	✓	✓		✓		
AGEC 220	2. develop and analyze a calendar of operations					✓	✓	
AGEC 220	3. define sources and principles of acquiring agriculture credit.		✓			✓		
AGEC 220	4 understand various business operations and have the knowledge to run or operate an ag business S10	✓	✓					
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11	✓	✓				✓	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				✓		✓	✓
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11						✓	
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11						✓	
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations S11					✓	✓	✓
AGEC 225	6 Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing S11							
AGEC 225	7. demonstrate how to calculate and find averages highest selling items selling trends extended pricing, profit margin, and create graphs and charts						✓	✓

Repeat #3

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Business Associate of Science Degree the student will be able to:						
COURSE ID	CLOs: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.*	*2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures*	*3. Describe the economic significance of California Agriculture and its relationship to the global economy*	*4. Explain supply and demand as it relates to local and regional agriculture business industries.*	*5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.*	*6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.*	*7. Recognize world markets and describe their effect on local agriculture economies.*
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.						✓	✓
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience						✓	✓

AG and Environmental Sciences
A.S. Degree: Agriculture Business

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Business Associate of Science Degree the student will be able to:						
COURSE ID	CLOs: Students successfully completing this course will be able to:	1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.	2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.	3. Describe the economic significance of California Agriculture and its relationship to the global economy.	4. Explain supply and demand as it relates to local and regional agriculture business industries.	5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.	6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.	7. Recognize world markets and describe their effect on local agriculture economies.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation						✓	
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.							✓
AG 349 A-D	1. be evaluated on the completion of a Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary		✓					
AG 349 A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer		✓					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11		✓					
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11		✓					
PLSC 200	1 After the student is given instruct on on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			✓				
PLSC 210	CLO's are missing							
ANSC 200	1. identify and state the function of the major body systems on a written test. F10			✓				✓
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project F10			✓				✓

Associate of Science Degree: Agriculture Business
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Morris Boyd		
Gail Brumley		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   Yes. The CLO's represent the overal purposes of the courses however CLO #3 & #6 for AgEc225 are the same. Some of the AnSc 200 CLO's are vague and need to be more specific in terms of their evaluation. Also, there are too many CLO's for the AgEc 225 and perhaps the total # needs to be reduced.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   Yes the PLO's for Ag Economics are excellent and represent the overall purposes of the program. However, perhaps there should be a PLO that addresses careers in Agri-Business.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   The CLO's align & support the PLO's fairly well. As mentioned previously, the # of CLO's for the AgEc 225 course need to be analyzed and consolidated. The Ag 115 CLO's would be better represented of there was a "Career" PLO such as "Students will be able to identify careers in Ag Business and describe entry-level requirements/skills for these careers". Some of the Ag Mech (AgM 200) CLO's aren't a very good match to the PLO's for Ag Business.

Associate of Science Degree: Agriculture Business
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

For the most part, the CLO's that have been assessed show that overall student success is excellent. Some CLO's have not been assessed. As I mentioned in #3, CLO's are not always a perfect match for the PLO's in Ag Business.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1. Adjust PLO in Ag Business to address career options covered in Ag 115
2. Adjust, consolidate CLO's for Ag Ec 225 - eliminate redundancy #3 & #6.
3. Evaluate - whether Ag M 200 should be a course option in the Ag Business degree since it's difficult to match the CLO's to the PLO's.
4.

AG and Envronmental Science
A.S. Degree: Agriculture Science

2 PLOs were omitted

COURSE ID	CLO#: Students successfully completing this course will be able to:	PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to: 1. *Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	2. *Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	3. *Describe the importance of the agriculture industry to the local, state and national economy.*	4. Apply principles from [illegible]	5. [illegible]
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation		X			
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	X		X		
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	X	X		X	
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		X		X	
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11		X		X	
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11		X		X	
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.	X		X		X
PLSC 200	CLO's are missing					
ANSC 200	1. identify and state the function of the major body systems on a written test. F10		X			
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10	X				

AG and Envronmental Science
A.S. Degree: Agriculture Science

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to:			4	5
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*		
ANSC 202	2. After student is given instruction on the criteria utilized in swine carcass evaluation (cutability and quality). F10		X		X	
ANSC 202	3. After student is given instruction on the techniques and practices utilized in swine herd health. F10		X		X	
ANSC 203	1. Identify sheep breeds, their adaptability to climatic conditions, differentiate types of operations, and discuss the relationship between consumer-packer-retailer.	X	X	X		X
ANSC 230	1. Design, carry out and present a report on a student-run research project that utilizes the principles of the scientific method.		X		X	
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.		X		X	
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant		X			
PLSC 230	1. After the student is given instruction on how plants are affected by their surrounding environment and the changes to that environment in relationship to photosynthetic process within the plant on a written test.		X	X		X
PLSC 230	2. design a nut or fruit tree plot plan for several different fruit and nut crop varieties.		X		X	
PLSC 230	3. go out into the laboratory setting and properly demonstrate the steps of proper pruning and training a young vine and tree.		X		X	

AG and Envronmental Science
A.S. Degree: Agriculture Science

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to:			4	5
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*		
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10		X		X	
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.	X				
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		X		X	
NR 200	2. discuss this on a written exam.					
NR 200	3. discuss practical soil management on a written exam.		X			
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.,		X		X	
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		X		X	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11		X		X	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		X		X	
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		X		X	

AG and Environmental Science
A.S. Degree: Agriculture Science

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to:			4	5
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*		
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11		X		X	
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		X		X	
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		X		X	
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.		X		X	
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.		X		X	
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.	X	X		X	
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09		X		X	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.		X			

AG and Envronmental Science
A.S. Degree: Agriculture Science

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*	4. 5
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.		X		X
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.		X		X
AGM 210	1. complete a series of arc welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		X		X
AGM 210	2. complete a series of oxy-fuel welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		X		X
AGM 210	3. Be able to perform various SMAW welding procedures properly. F09		X		X
AGM 210	4. effectively use various measurement and layout devices. F10		X		X
EHS 280	1. correctly identify plant, flower and foliage material.		X		X
EHS 280	2. create a design using this theory and identify the principles.	X	X		X
EHS 280	3. Student will be given information on tools and equipment and by demonstration be given information of correct use.		X		
ANSC 201	1. categorize events based on the major eras of the US beef industry in which they fall, when given those specific events on a test.	X		X	X
ANSC 201	2. write an essay comparing and contrasting the four systems citing at least four major attributes of each system and select the one they would choose to establish and justify why.		X		X
ANSC 201	3 After student is given instruction on the cattle management practices utilized in the beef industry the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports. S10		X		
ANSC 202	1. After student is given instruction on the function on sow herd management practices utilized in the swine industry. F10	X	X		

AG and Envronmental Science
A.S. Degree: Agriculture Science

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*	
ANSC 220	1. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.	X	X		
ANSC 220	2. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.	X	X	X	X
ANSC 220	3. Given lectures, readings, power points, videos, internet research, field trips, discussions, demonstrations and laboratory activities related to the history, development projections of the dairy industry, information on economics of dairying, facts, trends, selection determinants, genetics, handling, fitting, showing, judging, feeding and health, facilities, management systems, and career opportunities related to the environments of California and the United States, students will complete a semester long lab notebook scoring greater than 70 percent on the criteria listed below: F09	X	X		X

Associate of Science Degree: Agricultural Science
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		
MIKE MORALES		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

The CLOs are in their first iteration and probably all need to be reviewed and then rewritten. Some seem to be targeting progress towards skill development and others appear to be info. based. There are many different disciplines contributing to this program, so there is a lack of consistent language and intent.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

AG 115, 349A-D, AG 249 clearly address the first 3 PLOs. The majority of the subject matter courses address PLO #2 & 4. PLO #5 is woven throughout the curriculum and is less likely to be targeted in the CLOs.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

The CLOs aligned with the PLOs for the most part. There is a gap in addressing PLO #5. Perhaps incorporating the emphasis in PLO #5 into several of the required courses would ensure that it is addressed adequately.

Associate of Science Degree: Agricultural Science
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

The majority of assessments were positive and no action was identified as being needed. This is highly unlike. Perhaps the CLOs are not addressing (the assessments) the outcomes that are most important. Although, the department does focus on student success, so it is possible the students are aquiring the outcomes expected.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1) Convene a working group of faculty who provide coursework leading to this degree for the purpose of reviewing CLOs for consistency w/ content.

2) Now that the initial efforts in outcome identification and assessment have been completed, small workshop presentation of how to construct a valid CLO + assessment should be offered.

3) Begin on-going CLO assessments on an annual basis.

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Give specific examples of careers in the Poultry Industry + describe requir for attaining that	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.* ? its
AG 115	1 utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation			✓	
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.			✓	
AG 249	1 be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.			✓	
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer			✓	
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.			✓	
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			✓	✓
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.		✓		
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.		✓		
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09		✓		

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Careers	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.*
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10		✓		
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	✓			
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.		✓		
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.		✓		
ANSC 214	1. After student is given instruction on the identification and composition of feedstuffs. S11		?		
ANSC 214	2. After the student is given instruction on the digestive systems found in livestock nutrition. S11		?		
ANSC 214	3. After the student is given instruction on balancing feed rations and selecting least cost rations. S11		?		
ANSC 215	1. After student is given instruction on the role animal behavior plays in individual and herd health the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Careers	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.*
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.		✓		
AGEC 220	1. define, analyze and evaluate the best farm structures/ownership for targeted situations.		✓		
AGEC 220	2. develop and analyze a calendar of operations.		✓		
AGEC 220	3. define sources and principles of acquiring agriculture credit.		✓		
AGEC 220	4. understand various business operations and have the knowledge to run or operate an ag business. S10		✓		
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11		✓		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		✓		
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11	✓			

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Carver	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.*
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		✓		
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.		✓		
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.		✓		
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.		✓		
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.	✓			✓
	2. complete a basic metalworking project with the given materials, tools, and equipment.	✓			✓
ANSC 200	1. identify and state the function of the major body systems on a written test. F10	✓			✓

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science Industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Careers	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.*
ANSC 215	2. After student is given instruction on identifying physiological changes which alter susceptibility to various health issues the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		
ANSC 215	3. After student is given instruction on identifying common diseases in U.S. animal agriculture production and establish control programs the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		
ANSC 230	1. Design, carry out and present a report on a student-run research project that utilizes the principles of the scientific method.	✓			
ANSC 232	1. Prepare brooding equipment and facilities used to raise a flock of meat birds or egg layers. F09		✓		✓
ANSC 235	No CLO's Found				
ANSC 236	1. demonstrate the ability to incubate eggs, hatch chicks and raise a small flock of chickens to maturity.		✓		
ANSC 236	2. recognize common breeds of chickens and accurately describe their attributes.		✓		
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓		
NR 200	2. discuss this on a written exam.		✓		
NR 200	3. discuss practical soil management on a written exam.		✓		

AG and Enronmental Sciences
A.S. Degree: Poultry Science

		PLOs: Upon satisfactory completion of the course requirements for the Poultry Science Associate of Science Degree the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.* Careero	*4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.*
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.				

Associate of Science: Poultry Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Marlies Boyd		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   Most CLO's represent the purposes of the courses, however there are several CLO's that appear unclear and incomplete.
   AgEc 225 CLO # 3 & 6 are exactly the same.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   Yes for the most part. PLO #3 is unclear - as an instructor I teach safe work habits however I'm not clear about where the IIPP is located? (Injury, Illness, Prevention Plan). This PLO needs to be reworded or clarified.
   One of the PLO's for Poultry Sci is repeated and the actual PLO was deleted.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   The CLO's for the most part align well with the PLO's.

Associate of Science: Poultry Science

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

The CLO's need some minor revision as to clarification but for the most part they represent the required knowledge a student receiving an AS Degree in Poultry Science should have. Several of the CLO's haven't been entered due to the fact the course hasn't been taught (An Sc 235). The CLO's for An Sc 236 were not entered even though this class was taught and evaluated.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1. Update, revise 2 PLO's -
   a. Eliminate redundancy (1 & 3)
   b. Check the reason for the "IIPP" and clarify in CLO's.

2. Clarify, update CLO's and eliminate redundancy
   a. Ag Ec 225 - CLO # 3 & 6 are the same.
   b. An Sc 200 - CLO # 4 & 5 - needs to be more specific.
   c. An Sc 214 - CLO's are incomplete - however they are complete on file w/ Mr. Arglin
   d. Write CLO's for An Sc 235

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10					
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10					
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	**5.** Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AG 280	1. calculate and compute volume by using mathematical equations. F10			X		
AG 280	2. compute and complete necessary calculations using mathematical equations. F10			X		
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10			X		

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.					
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			X	X	
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			X	X	
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			X	X	
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X	X	
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			X	X	

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		X	X	X	
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		X	X	X	
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12			X	X	
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.				X	
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10					
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.					
ANSC 230	1. Design, carry out and present a report on a student-run research project that utilizes the principles of the scientific method.	X				
HE 100	No CLO's Found					

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			X	X	
NR 200	2. discuss this on a written exam.				X	
NR 200	3. discuss practical soil management on a written exam.				X	
NR 215	1. complete a booklet containing information on common wildlife species of the Sierra Nevada's, designed to show the student's knowledge of common wildlife identification and needs. F10			X	X	
NR 215	2. complete an evaluation of several habitat sites specifically chosen to show the students knowledge and use of various wildlife management evaluation techniques involved in habitat modification and wildlife management concepts. F10			X	X	X

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.			X	X	X
NR 220	2. use selected forestry tools, and technology to complete Field and lab reports, showing a level of skill needed to evaluate and manage a forest site.		X	X	X	
NR 222	no CLO's Found					
NR 230	1. complete textbook assignments and create a time line of recreation and park development, designed to develop student awareness of the key theories and concepts of recreation and leisure and their application to the conduct of life, along with discussion of current trends in leisure that affect the demand for outdoor recreation experiences.				X	X

AG and Envronmental Sciences
A.S. Degree: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Associate of Science Degree the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 230	2. complete a 3 minute presentation using visuals and information from various resources including a personal interview. This is designed to develop student awareness of various facilities and services provided by federal, state, local and private recreation agencies and practice interpretive skills needed in the field of outdoor recreation.				X	
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test					X

Associate of Science Degree: Recreational Land Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   Many of the CLOs are poorly designed and are difficult to tie with the PLOs. The CLOs need to be re-designed and better assessments need to be built for them.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   The PLOs need to be re-written to better address the intended outcomes of the program.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   The CLOs & PLOs are out of alignment.

Associate of Science Degree: Recreational Land Management
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1) Faculty have voted to discontinue + inactivate this program & the department is reviewing & discussing a transition. No classes are being offered & there is no lead faculty, or adjunct.

AG and Envronmental Sciences
Certificate: Basic Heavy Equipment Technician

		PLOs: Upon satisfactory completion of the course requirements for the Basic Heavy Equipment Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*
AGM 210	1. complete a series of arc welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.	✓	✓	✓	✓
AGM 210	2. complete a series of oxy-fuel welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓	✓
AGM 210	3. Be able to perform various SMAW welding procedures properly. F09		✓	✓	✓
AGM 210	4. effectively use various measurement and layout devices F10	✓	✓	✓	✓
AGM 214	1. recognize common agriculture production hazards and be able to correct dangerous situations. S11	✓	✓		
AGM 214	2. operate a forklift in a safe accurate manner.		✓	✓	✓
AGM 241	1. describe diesel engine operating principles used on compression ignition engines through exams, quizzes, and lab assignments.		✓		✓
AGM 241	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what work and or repairs were performed.	✓	✓	✓	✓
AGM 241	3. disassemble, inspect, adjust, and reassemble the given engine back to proper operational status. F09		✓	✓	✓
AGM 243	1. complete a series labs pertaining checking, replacing, and adjusting common heavy machinery electrical systems meeting industry standards as judged by the instructor given the materials, tools, and equipment. F11		✓	✓	✓

AG and Envronmental Sciences
Certificate: Basic Heavy Equipment Technician

		PLOs: Upon satisfactory completion of the course requirements for the Basic Heavy Equipment Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*
AGM 243	2. complete a series skill sets relating to heavy machinery electrical system troubleshooting meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓	✓
AGM 280	1. complete a series labs pertaining checking, replacing, and adjusting common heavy machinery hydraulic systems meeting industry standards as judged by the instructor given the materials, tools, and equipment. F10		✓	✓	✓
AGM 280	2. complete a series skill sets relating to heavy machinery hydraulic system troubleshooting meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓	✓
AGM 289	1. describe diesel engine operating principles used on spark ignition engines through exams, quizzes, and lab assignments.		✓	✓	✓
AGM 289	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what work and or repairs were performed.	✓	✓		

Certificate: ~~Heavy Machinery Management~~ BASIC HEAVY EQUIPM.

Qualitative Analysis and Reflection on Program PLOs WORKSHEET TECHNICIAN

Faculty Members Present:

TODD CONRADO		
STEVER		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

YES, THE CLO'S WERE DEVELOPED WITH INDUSTRY, FACULTY AND STUDENT INPUT RESULTING IN A VERY REALISTIC STUDENT/INDUSTRY EXPECTATION OF EACH COURSE AND ITS CLO'S

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

YES THEY DO BUT NOT TO THE LEVEL THAT I WOULD LIKE. THIS IS DUE TO THE VERY BROAD SCOPE OF THE AG MECHANICS PROGRAM. THE FACETS OF THE AG INDUSTRY THAT OUR STUDENTS ENTER IS VERY BROAD THEREFORE OUR PLO'S MUST REFLECT THIS

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

BECAUSE THE PROGRAM AND THEREFORE THE PLO'S ARE SO BROAD THEY ARE NOT ONLY FULFILLED BUT CONTINUOUSLY REINFORCED AT THE COURSE AND CLO LEVEL

Certificate: Heavy Machinery Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

THE FIRST ASPECT THAT COMES TO LIGHT IN CLO'S AND PLO'S REFLECTION IS HOW WELL EACH COURSES CLO'S REINFORCE AND DEVELOPE THE PROGRAM PLO'S

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AFTER REVIEW I FEEL THAT THE CLO'S ARE VERY STRONG. I ALSO FEEL THE PLO'S ARE QUITE BROAD BUT THE NATURE OF THE PROGRAM DICTATES THE BROAD APPROACH.

AG and Envronmental Sciences

Certificate: Heavy Machinery Management

		PLOs: Upon satisfactory completion of the course requirements for the Heavy Machinery Management Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.		✓		
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.		✓		
AGEC 220	1. define, analyze and evaluate the best farm structures/ownership for targeted situations.		✓		
AGEC 220	2. develop and analyze a calendar of operations.		✓		
AGEC 220	3. define sources and principles of acquiring agriculture credit.		✓		
AGEC 220	4. understand various business operations and have the knowledge to run or operate an ag business. S10	✓			
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11		✓		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		✓		
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		

		PLOs: Upon satisfactory completion of the course requirements for the Heavy Machinery Management Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able** to:	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11		✓		
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		✓		
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		✓	✓	✓
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		✓	✓	✓
AGM 214	1. recognize common agriculture production hazards and be able to correct dangerous situations. S11		✓	✓	✓
AGM 214	2. operate a forklift in a safe accurate manner.		✓	✓	✓
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		✓	✓	✓
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		✓	✓	✓

Certificate: Heavy Machinery Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Conrado		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

Yes, because this course is part of the Heavy Equipment Tech program and each course along with the program were developed concurently

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

Yes, because the program was developed with specific goals y learned from industry partnerships.

Certificate: Heavy Machinery Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Very closely because they were developed together as a package

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

That the program was developed properly. Industry and Community advisory groups were used and their inputs were infused into the CLO's AND PLO's.

Certificate: Heavy Machinery Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

5. In reviewing the questions above, please identify an action plan.

Action Plan:

To continue to infuse Industry support into the CLO's and PLO's as ~~deck~~ technology changes.

AG and Envronmental Sciences
Certificate: Veterinary Technician

		PLOs: Upon satisfactory completion of the course requirements for the Veterinary Technician Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANCS 215	1. After student is given instruction on the role animal behavior plays in individual and herd health the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		
ANCS 215	2. After student is given instruction on identifying physiological changes which alter susceptibility to various health issues the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		
ANSC 215	3. After student is given instruction on identifying common diseases in U.S. animal agriculture production and establish control programs the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.		✓		✓
ANSC 200	1. Identify and state the function of the major body systems on a written test. F10				
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10				
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10			✓	
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.				✓

AG and Envronmental Sciences
Certificate: Veterinary Technician

		PLOs: Upon satisfactory completion of the course requirements for the Veterinary Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.				
ANSC 250	1. locate, identify, and describe the function of the primary anatomical structures of each of the major organ systems in the body.				
ANSC 250	2. Given medical, anatomical, pharmaceutical and surgical terminology that is commonly used in the veterinary field, students will be able to identify, define and use those terms in an essay that mimics a patient hospital chart.				
ANSC 251	1. correctly calculate doses of medication for any given animal based on a veterinarian's instructions. F09			✓	
ANSC 251	Identify potential drug interactions in a patient as well as the symptoms that may appear in that patient during such a reaction		✓		
ANSC 252	1. Given general knowledge of radiology, ultrasound & anesthetic instruments students will be able to identify and explain care and operation of those instruments. S10			✓	
ANSC 252	2. identify and explain common safety precautions and measures taken to ensure a safe working environment.		✓		
ANSC 252	3. Identify, explain and give adequate detail as to the maintenance of the above mentioned equipment.			✓	

AG and Envronmental Sciences
Certificate: Veterinary Technician

		PLOs: Upon satisfactory completion of the course requirements for the Veterinary Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 253	1. Upon completion of a series of lectures, demonstrations, and discussions covering the general principles of veterinary laboratory procedures, including blood draws, fecal floats, white and red blood cell counts, micro urinalysis, and antibiotic sensitivity, students will demonstrate their mastery of the material by performing the lab procedures that are necessary to achieve test results in these areas.			✓	
ANSC 253	2. Upon completion of a series of lectures, videos, and discussions covering the general principles of lab safety and equipment maintenance, students will demonstrate their mastery of the material by scoring at least 70% on a written and oral examination.		✓		
ANSC 254	1. Give general knowledge of the veterinary industry, and the basic skills and knowledge required of a veterinary technician. S11	✓			
ANSC 254	2. identify, explain and give adequate detail as to the veterinary technician profession.	✓			
ANSC 254	1. Given basic knowledge of organ systems such as the respiratory, cardiac, pulmonary, circulatory, and immune systems, students will be able to identify and explain the function of each of the systems as individuals as well as their effect on the body as a whole. S11				
ANSC 255	1. describe essential skills and knowledge. S11				

AG and Envronmental Sciences
Certificate: Veterinary Technician

		PLOs: Upon satisfactory completion of the course requirements for the Veterinary Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 255	2. Identify, explain and give adequate detail as to different suture types, and surgical instrument recognition.			✓	
ANSC 255	3. Given basic knowledge of dental procedures such as prophylaxis and extraction, students will be able to identify and explain the roll and skill development required of a veterinary technician during those procedures. S11			✓	
ANSC 256	1. Upon completion of a series of lectures, videos, and discussions covering the general principles of veterinary medical emergencies, including shock, trauma, bleeding, and stress, students will demonstrate their mastery of the material by scoring at least 70% on a written examination.		✓		
ANSC 256	2. demonstrate their ability to identify normal, abnormal and problematic behavior in animals.		✓		
ANSC 257	1. demonstrate with adequate effectiveness, the restraint of a canine, feline, and exotic animal. S10		✓		
ANSC 257	2. identify and explain why animal restraint is an essential tool in helping to prevent zoo notic disease in a veterinary setting.		✓		
ANSC 55	1. Identify, explain and give adequate detail as to the veterinary technician profession. F10	✓			✓
ANSC 55	identify and explain the function of each of the systems as individuals as well as their effect on the body as a whole.		✓		
BIO 111	students will be able to use a compound microscope to locate, focus, and estimate the size of specimens on microscope slides			✓	

AG and Envronmental Sciences
Certificate: Veterinary Technician

			PLOs: Upon satisfactory completion of the course requirements for the Veterinary Technician Certificate the student will be able to:		
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
BIO 111	students will be able to identify and describe the phases of mitosis				
BIO 111	students will be able to compare and contrast animal and plant cell structures				

AGRICULTURE & ENVIRONMENTAL SCIENCES
STUDENT LEARNING OUTCOME
ASSESSMENT
Spring 2009

	Program	Course #	Course Name	Student Learning Outcome To Be Assessed	Method of Assessment	Findings	rcent of Students In Each Categ			Post Assment Plan
							Adv.	Prof.	Nds Imprv.	
4	ANSC	250	Veterinary Physiology, Anatomy & Terminology	Given specific anatomical information regarding small animals (cats and dogs), students will be able to locate, identify, and describe the function of the primary anatomical structures of each of the major organ systems in the body.	Animal Dissection	With this type of assignment, students must really put in the individual effort in order to get the desired results. Those students that take the dissection seriously, grasp the concept of the organ systems, completely by the time the assignment is complete	5.0%	65.0%	30.0%	More exposure to this classroom activity would greatly increase the percentage of students that become proficient in this area.

Certificate: Veterinary Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Marlies Boyd		
Julie Haynes		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

Most of the CLO's represent the PLO's. However the CLO's for ANSC 200 #'s 1 & 2, 5 do not have a corresponding PLO's. ANSC 250 #1 & 2 also do not have a PLO. ANSC 254 #1 as well as BIO 111 #2 & 3. All of these CLO's would be met by the PLO suggested below (question #2).

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

~~Mostly~~ The majority of the PLO's represent the overall purpose of the program. However one additional PLO should be written to state: ① Students will demonstrate understanding of biological and physiological systems. ② This would insure that the remaining CLO's are within the PLO's.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Overall the CLO's met well with the requirements set by the PLO's. The addition of the suggested PLO would serve to complete the fulfillment of all CLO's.

Certificate: Veterinary Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

The PLO's have shown that we left out a major PLO. The addition of ~~this~~ the 5th PLO will complete the CLO's. In reviewing the assessment data ANSC 250 needs the most improvement. With a 30% of the students needing improvment, 70% are advanced or proficient. The CLO may need to be adjusted in this course. The other option is that we increase the amount of class time spent on this CLO.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1. Add the additional PLO mentioned previously.
2. Improvement of ANSC 250 CLO.
3. Revise & clarify the ANSC 200 CLO's.

AG and Envronmental Sciences
Certificate of Achievement: Advanced Heavy Equipment Techician

		PLOs: Upon satisfactory completion of the course requirements for the Advanced Heavy Equipment Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		✓	✓	✓
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		✓	✓	✓
AGM 221	1. disassemble, inspect, adjust, and reassemble the given engine back to proper operational status. S10		✓	✓	✓
AGM 240	1. disassemble, inspect, adjust, and reassemble the given equipment back to proper operational status. S10		✓	✓	✓
AGM 242	No CLO's Found				
AGM 245	1. disassemble, inspect, adjust, and reassemble the given engine fuel system back to proper operational status.		✓	✓	✓
AGM 245	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill of materials, order replacement parts, and communicate in written form with the service writer and customer exactly what work and or repairs were performed.	✓	✓	✓	✓
AUTEC 317	1. Demonstrate an understanding of the construction and operation of automotive heating and air conditioning systems.		✓		
AUTEC 317	2. Demonstrate an understanding of diagnostic procedures for automotive heating and air conditioning systems.		✓		

Certificate: Advanced Heavy Equipment Technician
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

TODD CONRADO		
STEVE AMADOR		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

YES, THE CLO'S WERE DEVELOPED WITH INDUSTRY, FACULTY AND STUDENT INPUT RESULTING IN VERY REALISTIC STUDENT / INDUSTRY EXPECTATIONS OF EACH COURSE AND ITS CLO'S

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

YES THEY DO BUT NOT TO THE LEVEL THAT I WOULD LIKE. THIS IS DUE TO THE VERY BROAD SCOPE OF THE IAH MECHANICS PROGRAM. THE FACETS OF THE IAH INDUSTRY THAT OUR STUDENTS ENTER IS VERY BROAD THEREFORE OUR PLO'S MUST REFLECT THIS.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

BECAUSE THE PROGRAM AND THEREFOR THE PLO'S ARE SO BROAD THEY ARE NOT ONLY FULFILLED BUT CONTINUOUSLY REINFORCED AT THE COURSE AND CLO LEVEL

Certificate: Advanced Heavy Equipment Technician
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

THE FIRST ASPECT THAT COMES TO LIGHT IN CLO'S AND PLO'S REFLECTION IS HOW WELL EACH COURSES CLO'S REINFORCE AND DEVELOPE THE PROGRAM'S PLO'S.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AFTER REVIEW I FEEL THAT THE CLO'S ARE VERY STRONG. I ALSO FEEL THE PLO'S ARE QUITE BROAD BUT THE NATURE OF THE PROGRAM DICTATES THE BROAD APPROACH.

AG and Envronmental Sciences
Certificate: Agriculture Laboratory Technician

Program Inactivated

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Certificate the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation			
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.			
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.			
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11			
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11			
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			
PLSC 200	CLO's are missing			
ANSC 200	1. Identify and state the function of the major body systems on a written test. F10			
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10			
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10			

AG and Envronmental Sciences
Certificate: Agriculture Laboratory Technician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Certificate the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.			
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			
NR 200	2. discuss this on a written exam.			
NR 200	3. discuss practical soil management on a written exam.			
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.			
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.			
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11			
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11			

AG and Envronmental Sciences
Certificate: Agriculture Laboratory Technician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Certificate the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.			
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.			
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.			
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			
AG 376	1. identify and/or define the terminology on a written or practical exam.			
AG 376	2. identify these items and provide an explanation of their use in a practical lab setting.			
AG 280	1. calculate and compute volume by using mathematical equations. F10			
AG 280	2. compute and complete necessary calculations using mathematical equations. F10			

AG and Envronmental Sciences
Certificate: Agriculture Laboratory Technician

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Certificate the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10			
FDP 376	No CLO's Found			
FDP 378	No CLO's Found			
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10			
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10			
AG 378	No CLO's Found			
FDP 200	No CLO's Found			
CHEM 101	1.the student will compute the probability of finding an electron at a certain location in an atom relative to finding the electron at the nucleus.			
CHEM 101	2.the student will compute the fraction of molecules of a gas within a given range of speeds at a specific temperature .			
CHEM 143	1. the student will be able to convert between grams and moles for any element or compound			
CHEM 143	2. the student will be able to apply the ideal gas law under a given set of conditions			
CHEM 143	3. the student will be able to balance and classify chemical equations			
CHEM 144	1. the student will identify and name aldehydes, ketones, carboxylic acids, esters, and amides at the 70% level of proficiency			
CHEM 144	2. the student will predict or identify products of addition to alkenes at the 70% level of proficiency			
CHEM 144	3. the student will draw a tri- or tetra-peptide with the correct protonation state at the given pH			

		PLOs: Upon satisfactory completion of the course requirements for the Agriculture Laboratory Technician Certificate the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
MICRO 101	1. The student will understand the differences between different types of microorganisms.			
MICRO 101	2. The student will understand the principles of microbial metabolism and genetics.			
MICRO 101	3. The student will understand how microorganisms grow and what factors influence their growth.			
MICRD 101	4. The student will understand how the host's immunity works to prevent disease and how the microorganisms interact with host cells.			
FDP 379-387	No CLO's Found			

Certificate: Agriculture Laboratory Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

This program has been discontinued + inactivated.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Certificate: Agriculture Laboratory Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AG and Envronmental Sciences
Certificate: Artificial Insemination Technician

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	X		X	
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	X	X		
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	X	X		X
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			X	X
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		X		X
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.			X	X
AG 376	1. identify and/or define the terminology on a written or practical exam.		X		
AG 376	2. identify these items and provide an explanation of their use in a practical lab setting.			X	
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.	X		X	
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.	X	X	X	

AG and Envronmental Sciences
Certificate: Artificial Insemination Technician

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.	X		X	X
AGEC 280	2. complete a semester long lab notebook.	X	X	X	
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11	X		X	X
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11		X	X	X
ANSC 201	1. categorize events based on the major eras of the US beef industry in which they fall, when given those specific events on a test.		X		X
ANSC 201	2. write an essay comparing and contrasting the four systems citing at least four major attributes of each system and select the one they would choose to establish and justify why.		X	X	

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 201	3. After student is given instruction on the cattle management practices utilized in the beef industry the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports. S10	X	X	X	
ANSC 220	1. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.		X	X	X
ANSC 220	2. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.	Same as above			

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 220	3. Given lectures, readings, power points, videos, internet research, field trips, discussions, demonstrations and laboratory activities related to the history, development projections of the dairy industry, information on economics of dairying, facts, trends, selection determinants, genetics, handling, fitting, showing, judging, feeding and health, facilities, management systems, and career opportunities related to the environments of California and the United States, students will complete a semester long lab notebook scoring greater than 70 percent on the criteria listed below: F09	X	X	X	X
ANSC 217	1. Given lectures, readings, power points, videos, internet research, discussions, demonstrations and laboratory activities and practice related to the artificial insemination, and the evaluation of appropriate anatomical parts, the student will be able to discuss, compare, describe and successfully pass 40 cows with a breeding tube. S11	X	X	X	X
	2. Given lectures, readings, power points, videos, dissection labs, internet research, periodicals and discussions, the student will be able to identify, outline and discuss the function of the various parts of the reproductive anatomy of the bovine female. The student will be able to demonstrate their mastery of the topic material by scoring at least 70% on a written examination which includes correctly naming the reproductive parts on a diagram. S11	X	X	X	X

AG and Envronmental Sciences
Certificate: Artificial Insemination Technician

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 226	1. identify, outline and discuss the following areas of animal reproduction: Anatomy, function, and regulation of the male and female mammal, reproductive processes of the prior, artificial insemination applications, management for improved reproduction, and causes for reproductive failure.	X	X	X	X
ANSC 226	2. Given lectures, readings, power points, videos, internet research, field trips, discussions, demonstrations and laboratory activities related to the reproductive anatomy, function, and regulation of the male and female mammal, reproductive processes of the prior, artificial insemination applications, management for improved reproduction, and causes for reproductive failure of bovines, students will complete a semester long lab notebook scoring greater than 70 percent on the criteria listed below:	X	X	X	X
ANSC 216	No CLO's Found				
ANSC 224	1. recognize, outline and discuss the function of the various parts of the digestive anatomy of the dairy animal.		X	X	X

AG and Envronmental Sciences
Certificate: Artificial Insemination Technician

		PLOs: Upon satisfactory completion of the course requirements for the Artificial Insemination Technician Certificate the student will be prepared to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.*	*2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.*	*3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.*	*4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.*
ANSC 224	2. Given lectures, readings, power points, videos, internet research, field trips, discussions, demonstrations and laboratory activities related to the dairy nutrition requirements, cultural inputs, physiological development and functions, anatomical differences of species, importance of accessory organs, feed assimilation, commodity variation and value, feed identification, ration formulation and economics, and career opportunities related to the environments of California and the United States, students will complete a semester long lab notebook scoring greater than 70 percent on the criteria listed below:	X	X	X	X
ANSC 214	1. After student is given instruction on the identification and composition of feedstuffs. S11		X	X	X
ANSC 214	2. After the student is given instruction on the digestive systems found in livestock nutrition. S11		X	X	X
ANSC 214	3. After the student is given instruction on balancing feed rations and selecting least cost rations. S11	X	X	X	X

Certificate: Artificial Insemination Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

BILL HOBBY		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* The CLO's for classes are representitive of classes quite well. Some are more difficult to relate, but have general applications to a more general application.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* The PLO's are leading students to successful completion for job readiness and worker safety. Critical thinking on the job is important in that it makes productive workers and graduates.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.* The CLOS and PLOS align fairly well and should produce successful completers. Minor adjustments could be made to meet more specific outcomes, however to apply them over many programs the are acceptable.

Certificate: Artificial Insemination Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

That the CLO's are appropriate to meet PLO's and successful job readiness. The ultimate indicator is employability of which a majority of the students desiring a career in this area can be employed.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

Continue developing a curriculum that provides depth & breadth of knowledge. These currently are very acceptable.

AG and Envronmental Sciences
Certificate: Commercial Floristry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. ~~Identify 300~~ plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.* I.D 50 plants Flowers and tools	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓			✓
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓			
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				✓
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				✓
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Internship Documentation, and Internship Summary. S11				✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer. S11				✓
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			✓	
PLSC 200	CLO's are missing				

AG and Envronmental Sciences
Certificate: Commercial Floristry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify ~~300 plants~~ found in the Central Valley ~~of California~~ and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			✓	
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.			✓	
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.				✓
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.				✓
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11		✓		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11		✓		
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		

AG and Envronmental Sciences
Certificate: Commercial Floristry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the Business industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.* Business	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11				
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.				
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.				

AG and Envronmental Sciences
Certificate: Commercial Floristry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.				
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.				
AGEC 200	2. make accurate debit and credit entries in a journal and ledger				
EHS 201	1. correctly identify and tell the cultural characteristics of the Spring plant list.				
EHS 201	2. identify and tell the function of the various plant descriptors.				
EHS 201	3. correctly identify and tell the cultural characteristics of the Fall plant list. F09				
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.				
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant.				
EHS 212	No CLO's Found				
EHS 280	1. correctly identify plant, flower and foliage material.		✓		
EHS 280	2. create a design using this theory and identify the principles.			✓	
EHS 280	3. Student will be given information on tools and equipment and by demonstration be given information of correct use.		✓		
EHS 281	No CLO's Found				
EHS 282	No CLO's Found				

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
EHS 283	No CLO's Found				
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.				
AGEC 280	2. complete a semester long lab notebook.				
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11				
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11				
SPCOM 102	1. prepare and deliver speeches which demonstrate adaptation to audience and correct use of research, organizational, and delivery skills.				
SPCOM 102	2. (a) identify the various roles occurring in a small group and (b) respond and adapt to the roles displayed in the group.				

		PLOs: Upon satisfactory completion of the course requirements for the Commercial Floristry Technician Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
SPCOM 102	3. utilize appropriate verbal and nonverbal messages to promote effective interpersonal relationships.				
BUSAD 259	No CLO's Found				
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11				
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.				
PLSC 255	After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test				

Certificate: Commercial Floristry Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Gail Brumley		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

Yes ~ the CLOs have been written with keeping in mind the objectives of the given class. They represent the industry skills needed by students to be successful in the given career.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

No. the PLOs need to be altered to reflect Floral-Design industry.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

1- CLOs are written as a stepping stone to PLOs.

2. With the success of each CLO it is easy to make the alignment from CLOs → PLOs.

Certificate: Commercial Floristry Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

Upon completion of each class, after entering proper assessment & review and reflect upon CLO's and view the %s of student success. When my CLO's are on target and the PLO's are written to reflect the floral industry and not Horticulture industry CLO's meet PLOs.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

It is important to take action "if" action is necessary. And... this action must be a positive improvement to assure student success. In reviewing CLO's & PLOs it is necessary to alter and update the PLOs FOR Commercial Floral Design.

#2. Demonstrate general floral design practices of the industry, including; creating floral arrangements, and recognizing disease issues with cut flowers and plants. Demonstrate general knowledge of floral Design practices in the industry. Demonstrates understanding of agriculture business.

#3. Identify 50 plants, 50 cut flowers and tools used in the floral industry as well as growth habits for each plant and flower.

With these PLO's - the CLO's match!!

AG and Envronmental Sciences
Certificate: Forestry Technician

PLOs:
Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:

COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	2. *Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	3. *Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	4. *Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 349A-D	1. be evaluated on the completion of a Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.					
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.					

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	**1.** Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	**5.** Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.					X
PLSC 200	CLO's are missing					
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10					
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10					
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.					
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.					

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			X	X	
NR 200	2. discuss this on a written exam.				X	
NR 200	3. discuss practical soil management on a written exam.				X	
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.			X		
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.			X		
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11			X		

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X		
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11			X		
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11			X		
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11			X		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.			X		
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.			X		

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	**1.** Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.			X		
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			X		
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			X		
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.			X		
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.			X		
ENSCI 108	1. debate the viability of a choosing a future primary power source for the United States while addressing equally weighted evaluation criteria.			X		X
ENSCI 108	2. write a reflective essay evaluating their lifestyle in terms of meeting the tenets for creating a sustainable future.					X

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
ENSCI 108	3. demonstrate, or investigate an environmental conservation practice. S10	X			X	X
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.			X	X	
NR 220	2. use selected forestry tools, and technology to complete Field and lab reports, showing a level of skill needed to evaluate and manage a forest site.			X	X	
NR 222	No CLO's Found					
NR 224	No CLO's Found					
NR 376	1. compare and contrast various silvicultural practices through a visual Forester interactive CD program with presentations on their results.			X		
NR 376	2. apply the basic and more advanced methods of timber measurement and stand evaluation complete field lab evaluation reports and evaluate and conduct a forest stocking survey and prepare a modified Timber Harvest Plan.			X	X	

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	**1.** Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 379	**1.** implement and know the basic fire standard orders for fire fighter safety, demonstrating the use of this knowledge to complete the Field Test.		X	X	X	
NR 379	**2.** explain the factors and interplay of fire behavior and fire control in relation to weather and topographic features.			X		
NR 379	demonstrate proper use of basic fire fighting hand tools and safety in line construction and mop up procedures		X	X	X	
ENSCI 109	No CLO's Found					
AG 280	1. calculate and compute volume by using mathematical equations. F10			X	X	
AG 280	2. compute and complete necessary calculations using mathematical equations. F10			X		
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10			X		
AGM 230	**1.** complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12			X		
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		X	X	X	

AG and Envronmental Sciences
Certificate: Forestry Technician

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	**1.** Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10					
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10					
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.			X	X	
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.			X	X	
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.			X	X	

		PLOs: Upon satisfactory completion of the course requirements for the Forestry Technician Certificate the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. Employ the scientific method to solve problems in the laboratory and in the natural environment	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants			X	X	

Certificate: Forestry Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

DAVID BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

The CLOs need to be re-evaluated & rewritten to better reflect the intended outcomes with solid assessments.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

The PLOs do not adequately address the CLOs and vice versa.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

It is very fractured, based upon the current CLOs.

Certificate: Forestry Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

There is little connection between the CLOs and the PLOs. This program will be inactivated.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

1) This program is being evaluated for possible inactivation. No classes are being offered. There is no lead faculty, or adjunct available for a legitimate review

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general ~~nursery~~ Landscape practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the ~~horticulture~~ Landscape industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.* Lawn care & Trees & shrub pruning	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓			✓
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓			
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓			
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				
AG 280	1. calculate and compute volume by using mathematical equations. F10		✓		
AG 280	2. compute and complete necessary calculations using mathematical equations. F10		✓		
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10		✓		
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10				✓

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10				✓
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experiance Summary.	✓			
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				✓
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.		✓		
AGEC 200	make accurate debit and credit entries in a journal and ledger				
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11				
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.		✓		

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.				
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.				
AGEC 280	2. complete a semester long lab notebook.				
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11				

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11				
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		✓		
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		✓		
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		✓		
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.		✓		
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12		✓		
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		✓		

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to: :**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
EHS 201	1. correctly identify and tell the cultural characteristics of the Spring plant list.		✓	✓	
EHS 201	2. Identify and tell the function of the various plant descriptors.			✓	
EHS 201	3. correctly identify and tell the cultural characteristics of the Fall plant list. F09			✓	
EHS 202	1. Identify and tell the cultural characteristics of the Fall plant list.			✓	
EHS 202	Identify and tell the function of the various plant descriptors		✓	✓	
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.		✓		
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant.		✓	✓	
EHS 215	1. complete three drafting exercises: (a) Lettering Plate, (b) Scale Problems, (c) Line Drawing and two sketches: (a) Setting up the Drawing Board, (b) Drawing a Plan S11		✓	✓	
EHS 215	2. draw an original, complete landscape design and formally present it to the class and, possibly, the client.		✓	✓	
EHS 215	3. create six original landscape designs, a midterm landscape design project, and a group project and presentation designed to apply the design process to solving real-life landscape design problems. S11		✓	✓	

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
EHS 215	4. apply the elements and principles of landscape design covered in class during the semester in (a) selecting plant materials appropriate to the design concept and the environmental conditions of the site, (b) addressing the problems presented by the site and (c) in meeting the needs of the client. S11		✓	✓	
EHS 220	1. Given lectures on Turfgrass growth and development, primary and secondary cultural practices, soils and fertilizers, and golf course management, students will students will be given written and practical exams designed to test their knowledge of Turfgrass production and management and the relationship between soil, turf and climate.		✓		
EHS 220	2. collect, preserve and label 20 Turfgrass samples and weeds, create a table of contents and bind the pages together to create a permanent reference collection.		✓	✓	
EHS 250	No CLO's Found		✓		
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.		✓		
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.		✓		
EHS 278	No CLO's Found				

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓		
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.		✓		
NR 222	No CLO's Found				
NR 230	1. complete textbook assignments and create a time line of recreation and park development, designed to develop student awareness of the key theories and concepts of recreation and leisure and their application to the conduct of life, along with discussion of current trends in leisure that affect the demand for outdoor recreation experiences.		✓		
NR 230	2. complete a 3 minute presentation using visuals and information from various resources including a personal interview. This is designed to develop student awareness of various facilities and services provided by federal, state, local and private recreation agencies and practice interpretive skills needed in the field of outdoor recreation.		✓		

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.		✓	✓	
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.		✓		
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.		✓		
PLSC 250	3. able to complete a fertilizer trail as a term project.		✓		
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11		✓		
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.		✓		

AG and Envronmental Sciences
Certificate: Landscape and Park Maintenance

		PLOs: Upon satisfactory completion of the course requirements for the Landscape and Park Maintenance Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.		✓		

Certificate: Landscape and Park Maintenance

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Dale Pollard		
Gail Brumley		
Dr. Buggett		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   Yes over the years the CLO's have been refined informally and now when we formally apply them to paper they have been focused on student success. for years and are appropriate for our class

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   Most do 1, 2, and 4 are but #3 will need to better represent the skill set needed for landscape & park maintenance certificate.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   Pretty good but need to refine the PLOs to address particular skills in the landscape industry.

Certificate: Landscape and Park Maintenance

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

More work is needed to ~~better reflect~~ industry needs in Landscape & Park Maintenance.

5. In reviewing the questions above, please identify an action plan.

Action Plan: will get together with other staff to better align the PLOs to industry standards

AG and Enronmental Sciences
Certificate: Mechanized Agriculture Technician

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓				
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓				
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		✓	✓	✓	✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓	✓	✓	✓
AG 280	1. calculate and compute volume by using mathematical equations. F10		✓	✓	✓	✓
AG 280	2. compute and complete necessary calculations using mathematical equations. F10		✓	✓	✓	✓
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10		✓	✓	✓	✓
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10					✓

AG and Enronmental Sciences
Certificate: Mechanized Agriculture Technician

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10					✓
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		✓	✓	✓	✓
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓	✓	✓	✓
AGEC 280	1. analyze and evaluate different personality characteristics and how they relate to potential buyers and sales people through a variety of self-analyses to better understand themselves and prospects thus potentially changing or modifying behavior.	✓				✓
AGEC 280	2. complete a semester long lab notebook.					✓

AG and Enronmental Sciences
Certificate: Mechanized Agriculture Technician

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.
AGEC 280	3. show in a lab notebook the various attributes of the personality traits evaluation, motivation inventory, sales evaluation recaps, and relationships of personalities, industry standards, management tools, and non-manipulative selling techniques. F11					✓
AGEC 280	4. answer questions on the various attributes of personality traits evaluation, motivation inventory, sales evaluation recaps, relationships of personalities, industry standards, management tools, and non-manipulative selling techniques, presented in class, from lecture, textbook, activities and field trips at 70% accuracy. F11					✓
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		✓	✓	✓	✓
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		✓	✓	✓	✓
AGM 210	1. complete a series of arc welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓		
AGM 210	2. complete a series of oxy-fuel welds meeting industry standards as judged by the instructor given the materials, tools, and equipment.		✓	✓	✓	

AG and Enronmental Sciences
Certificate: Mechanized Agriculture Technician

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	**5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.**
AGM 210	3. Be able to perform various SMAW welding procedures properly. F09		✓	✓		
AGM 210	4. effectively use various measurement and layout devices. F10		✓	✓	✓	
AGM 211	1. identify different metal samples and determine the proper welding method to be used to join the material. S10		✓	✓		✓
AGM 214	1. recognize common agriculture production hazards and be able to correct dangerous situations. S11		✓		✓	
AGM 214	2. operate a forklift in a safe accurate manner.		✓		✓	
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		✓	✓	✓	
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.					
AGM 225	1. properly design, install and construct common residential branch circuits radiating from a common service panel as per industry standards.					
AGM 225	2. determine the machine needs and requirements of an electrical motor and order a suitable replacement motor.					
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12					

AG and Enronmental Sciences
Certificate: Mechanized Agriculture Technician

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		✓	✓		✓
AGM 241	1. describe diesel engine operating principles used on compression ignition engines through exams, quizzes, and lab assignments.		✓			
AGM 241	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what work and or repairs were performed.		✓	✓		
AGM 241	3. disassemble, inspect, adjust, and reassemble the given engine back to proper operational status. F09		✓			
AGM 251	1. develop a bill of materials and a working drawing for common agriculture shop project.		✓			✓
AGM 251	2. construct an agriculture project of their choice.		✓	✓	✓	
~~AGM 252~~	1. properly select construction materials based on their strength, size and strength.					
~~AGM 252~~	2. construct an advanced agriculture project of their choice.					
AGM 262	1. identify various components of a complete hydraulic system and be able to tell each components function. S10		✓			

individual

		PLOs: Upon satisfactory completion of the course requirements for the Mechanized Agriculture Technician Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.*	*2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.*	*3. Select proper tools and equipment for various applications, staying within the desired financial restraints.*	*4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.*	5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, Math, Physics etc.) to help solve problems within the mechanized agriculture field.
AGM 262	2. calculate hydraulic cylinder speeds and forces.		✓			✓
AGM 289	1. describe diesel engine operating principles used on spark ignition engines through exams, quizzes, and lab assignments.		✓			
AGM 289	2. interpret an industry type job request, perform the needed task, and properly complete the work order, bill materials, order replacement parts, and communicate in written form with the service writer and the customer exactly what work and or repairs were performed.		✓			

Certificate: Mechanized Agriculture Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Steve Amador		
Todd Caredo		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

The CLOs have been developed with input from all program stakeholders (Instructors, Students, advisory Committee) and reflect skills needed to succeed in the appropriate discipline.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

As with CLOs, PLOs have been developed to ensure program completer obtain required skills for future success. That future success can consist of employability skills, Prepared for continued education or personal Enrichment

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

CLOs were written as building blocks for the program and PLOs. Each CLO leads to development of skills that make up what is learned in the obtaining of the degree

Certificate: Mechanized Agriculture Technician

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

At the completion of each area of study I Reflect on the appropriate CLO's and analyze what went well and what improvments may be needed to ensure student success. once the CLOs are met the PLOs will come naturally in the way that they are written

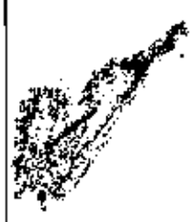
5. In reviewing the questions above, please identify an action plan.

Action Plan:

My action plan is to continue daily assessment and action to improve my teaching and improve the Student's ability to reach the CLOs and PLOs

AG and Envronmental Sciences
Certificate: Nursery Production

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation	✓			✓
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.	✓			✓
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓			✓
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				✓
AG 280	1. calculate and compute volume by using mathematical equations. F10		✓		
AG 280	2. compute and complete necessary calculations using mathematical equations. F10		✓		
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10		✓		

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10				
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓			✓
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				✓
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.		✓		
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.		✓		
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.				

AG and Envronmental Sciences
Certificate: Nursery Production

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11		✓		
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		✓		
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.		✓		

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.		✓		
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.		✓		
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.		✓		
ANSC 200	1. identify and state the function of the major body systems on a written test. F10				
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10				
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10		✓		
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.				

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.				
EHS 201	1. correctly identify and tell the cultural characteristics of the Spring plant list.		✓	✓	
EHS 201	2. Identify and tell the function of the various plant descriptors.		✓	✓	
EHS 202	1. identify and tell the cultural characteristics of the Fall plant list.		✓	✓	
EHS 202	2. Identify and tell the function of the various plant descriptors.		✓	✓	
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.	✓	✓	✓	✓
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant.		✓	✓	
EHS 215	1. complete three drafting exercises: (a) Lettering Plate, (b) Scale Problems, (c) Line Drawing and two sketches: (a) Setting up the Drawing Board, (b) Drawing a Plan S11		✓	✓	
EHS 215	2. draw an original, complete landscape design and formally present it to the class and, possibly, the client.		✓	✓	
EHS 215	3. create six original landscape designs, a midterm landscape design project, and a group project and presentation designed to apply the design process to solving real-life landscape design problems. S11		✓		

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
EHS 215	4. apply the elements and principles of landscape design covered in class during the semester in (a) selecting plant materials appropriate to the design concept and the environmental conditions of the site, (b) addressing the problems presented by the site and (c) in meeting the needs of the client. S11		✓		
EHS 212	No CLO's Found				
EHS 220	1. Given lectures on Turfgrass growth and development, primary and secondary cultural practices, soils and fertilizers, and golf course management, students will students will be given written and practical exams designed to test their knowledge of Turfgrass production and management and the relationship between soil, turf and climate.		✓	✓	
EHS 220	2. collect, preserve and label 20 Turfgrass samples and weeds, create a table of contents and bind the pages together to create a permanent reference collection.		✓	✓	
EHS 235	demonstrate various strategies of plant propagation, including various asexual techniques, seeding, cuttings, budding and grafting to the satisfaction of the instructor. S11		✓		
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.		✓		
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.		✓		
EHS 278	No CLO's Found				

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓		
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.		✓		
NR 222	No CLO's Found				
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.		✓		
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.		✓		
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.		✓		
PLSC 250	3. able to complete a fertilizer trail as a term project.		✓		

		PLOs: Upon satisfactory completion of the course requirements for the Nursery Production Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and interpersonal communication skills that employers demand.*
PLSC 255	1. After the student is given instruction on identifying insects and closely related plant pests. In addition to selecting possible methods and timing to control a pest problem in a given situation they will be able to design an IPM to control or eradicate the pests in question on a term project. S11		✓		
PLSC 255	2. After the student is given instruction on alternate methods of pest control they will be able to explain and give examples on a written test.		✓		
PLSC 255	3. After the student is given instruction on operating pesticide application equipment efficiently and safely they will give examples on proper set up, calibration, and use of such equipment on a laboratory practical test.		✓		

Certificate: Nursery Production

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Mrs. Brinkley		
Dale Pollard		
David Baggett		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   I believe they do. Through careful thought the CLOs are appropriate for the classes.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   There is a need for expansion of PLO #1 that will include portfolio & job seeking skills.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   There is a comprehensive approach to the PLO so they appear to be correct other then refinement of PLO #1

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

Some classes are not helping students be successful in Nursery Production

5. In reviewing the questions above, please identify an action plan.

Action Plan:

Rewrite & define #1 PLO to address more job seeking skills.

Re evaluate classes required for Nursery production Certificate

Certificate: Nursery Production

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

Some classes are not helping students be successful in Nursery Production

5. In reviewing the questions above, please identify an action plan.

Action Plan:

Rewrite & define #1 PLO to address more job seeking skills.

Re evaluate classes required for Nursery production Certificate

AG and Envronmental Sciences
Certificate: Recreational Land Management

COURSE ID	CLO#: Students successfully completing this course will be able to:	PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate the student will be able to:				
		1. Employ the scientific method to solve problems in the laboratory and in the natural environment.	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation					
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.					
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		X	X		
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		X			
AG 280	1. calculate and compute volume by using mathematical equations. F10				X	
AG 280	2. compute and complete necessary calculations using mathematical equations. F10				X	
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10				X	
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F10					X

AG and Envronmental Sciences
Certificate: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	1. *Employ the scientific method to solve problems in the laboratory and in the natural environment.*	2. *Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	3. *Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	4. *Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F10				Y	Y
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.		Y	Y		
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		Y	Y		
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.					
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.					
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			Y		
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.					

AG and Envronmental Sciences
Certificate: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11			X		X
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11					X
AGM 215	1. perform basic oil changes, air filter change, cooling system change and battery maintenance and maintain the appropriate maintenance records for these procedures.		X	X		
AGM 215	2. perform a safety inspection and properly fill out the appropriate forms and paperwork.			X		
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12					X
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.			X		
ANSC 200	1. identify and state the function of the major body systems on a written test. F10					
ANSC 200	2. Identify and quantify the nutritional needs of animals on a written test and term project. F10					

AG and Envronmental Sciences
Certificate: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate the student will be able to:				
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10	X				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.	X				
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.					
ANSC 230	1. Design, carry out and present a report on a student-run research project that utilizes the principles of the scientific method.	X				
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.					
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.			X		
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.				X	
NR 200	2. discuss this on a written exam.					

AG and Envronmental Sciences
Certificate: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate, the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities' maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 200	3. discuss practical soil management on a written exam.				Y	X
NR 215	1. complete a booklet containing information on common wildlife species of the Sierra Nevada's, designed to show the student's knowledge of common wildlife identification and needs. F10					X
NR 215	2. complete an evaluation of several habitat sites specifically chosen to show the students knowledge and use of various wildlife management evaluation techniques involved in habitat modification and wildlife management concepts. F10					X
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.		Y			
NR 220	2. use selected forestry tools, and technology to complete field and lab reports, showing a level of skill needed to evaluate and manage a forest site.		Y	X		
NR 222	No CLO's Found					

AG and Envronmental Sciences
Certificate: Recreational Land Management

		PLOs: Upon satisfactory completion of the course requirements for the Recreational Land Management Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Employ the scientific method to solve problems in the laboratory and in the natural environment.*	*2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment*	*3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.*	*4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.*	5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.
NR 230	1. complete textbook assignments and create a time line of recreation and park development, designed to develop student awareness of the key theories and concepts of recreation and leisure and their application to the conduct of life, along with discussion of current trends in leisure that affect the demand for outdoor recreation experiences.					X
NR 230	2. complete a 3 minute presentation using visuals and information from various resources including a personal interview. This is designed to develop student awareness of various facilities and services provided by federal, state, local and private recreation agencies and practice interpretive skills needed in the field of outdoor recreation.					X
NR 379	1. compare and contrast various silvicultural practices through a visual Forester interactive CD program with presentations on their results.					X
NR 379	2. apply the basic and more advanced methods of timber measurement and stand evaluation complete field lab evaluation reports and evaluate and conduct a forest stocking survey and prepare a modified Timber Harvest Plan.					X
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test				X	

Certificate: Recreational Land Management

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

David Baggett		
Mike Morales		
Gail Brumley		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.* yes -

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* yes, with minor revisions in the PLO's within the CLO's for a more seamless transition

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Major course CLO's match PLO's well. The Agriculture breadth courses do not match the PLO's (major). A better crosswalk of course CLO's for the breadth requirement and the PLO's for this major need to occur.

Certificate: Recreational Land Management
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

On reviewing the CLO's and the PLO's of given major it demonstrates that the CLO's and PLO's must be altered and realigned.

5. In reviewing the questions above, please identify an action plan.

Action Plan:

after reviewing and reflecting the CLO's & PLO's. We need to review CLO's and PLO's to make up in a better manner for individual major.

AG and Envronmental Sciences
Certificate: Food Processing

Program Inactivated

	PLOs: Upon satisfactory completion of the course requirements for the Food Processing Certificate the student will be able to:				
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific methods to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the Injure Illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation				
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.				
AG 349 A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				
AG 349 A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				
AG 249	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.				
AG 249	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.				
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.				
PLSC 200	CLO's are missing				
ANSC 200	1. identify and state the function of the major body systems on a written test. F10				
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10				

AG and Envronmental Sciences
Certificate: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific methods to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the injure illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10				
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge.				
ANSC 200	5. After student is given instruction on animal behavior as it relates to animal domestication, health and performance the student will provide evidence of that knowledge.				
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.				
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.				
AGM 200	1. complete a basic woodworking project with the given materials, tools, and equipment.				
AGM 200	2. complete a basic metalworking project with the given materials, tools, and equipment.				
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific methods to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the injure illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11				
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11				
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.				
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				

AG and Envronmental Sciences
Certificate: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific methods to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the injure illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.				
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09				
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.				
AGEC 200	1. complete a net income statement, a balance sheet, calculate common ratios used in lending and will analyze the results.				
AGEC 200	2. make accurate debit and credit entries in a journal and ledger.				
FDP 200	No CLO's Found				
AG 376	1. Identify and/or define the terminology on a written or practical exam.				
AG 376	2. identify these items and provide an explanation of their use in a practical lab setting.				
AG 280	1. calculate and compute volume by using mathematical equations. F10				
AG 280	2. compute and complete necessary calculations using mathematical equations. F10				
AG 280	3. complete an equation of both simple and compounded interest using mathematical skills. F10				
FDP 300	No CLO's Found				
FDP 301	No CLO's Found				
FDP 342	No CLO's Found				

AG and Environmental Sciences
Certificate: Food Processing

		PLOs: Upon satisfactory completion of the course requirements for the Food Processing Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Demonstrate mastery of the technical and soft skills needed for successful employment in the food processing industry.*	*2. Demonstrate proficiency in agriculture sciences/engineering by employing the scientific methods to solve agricultural problems.*	*3. Employ safe work habits as prescribed in the injure illness Prevention Plan (IIPP) for the food processing industry.*	*4. Apply the principles of basic food processing industry and laboratory procedures to analyze processed food quality and safety.*
FDP 376	No CLO's Found				
FDP 378	No CLO's Found				
FDP 379	No CLO's Found				
FDP 380	No CLO's Found				
FDP 381	No CLO's Found				
FDP 382	No CLO's Found				
FDP 383	No CLO's Found				
FDP 386	No CLO's Found				
FDP 387	No CLO's Found				
AG 285	1. (a) identify an MJC agriculture-related topic, (b) research the story and collect data, (c) interview the 'newsmakers', and (d) write and edit the newspaper article including a picture. F1D				
AG 285	2. (a) select and research a current local, agricultural-related topic, develop a set of interview questions based upon that research, and develop roles typical of the stakeholders effected; (b) practice film production techniques in the MJC television studio, including the role of the technical and floor director, camera operation, tape and character generation; and (c) produce a 10 minute talk show. F1D				
MICRO 101	1. The student will understand the differences between different types of microorganisms.				
MICRO 101	2. The student will understand the principles of microbial metabolism and genetics.				
MICRO 101	3. The student will understand how microorganisms grow and what factors influence their growth.				
MICRO 101	4. The student will understand how the host's immunity works to prevent disease and how the microorganisms interact with host cells.				

Certificate: Food Processing

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

David BAGGETT		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. - Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

This program has been discontinued & inactivated.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

Certificate: Food Processing

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

5. In reviewing the questions above, please identify an action plan.

Action Plan:

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AG 115	1. utilize an electronic portfolio that contains: resume, letter of recommendation, letter of application, agriculture work experience book, work sample and evaluation				
AG 115	2. demonstrate their awareness of opportunities and skills for employment in the agriculture industry.				
AG 349A-D	1. be evaluated on the completion of a: Personal History, Record of Activities, Job Readiness Self Assessment, set of Occupational Goals, Skill Documentation and Evaluation, Work Documentation, and Work Experience Summary.	✓	✓	✓	✓
AG 349A-D	2. be evaluated as to Job Readiness and Job Performance through an employee evaluation process completed by their employer.		✓	✓	✓
AGEC 225	1. Apply spreadsheets to calculate business mathematical problems such as volume, area, ratio, and proper mixture proportions. S11				
AGEC 225	2. Evaluate, predict, report and defend the findings of basic statistical calculations and trends from supplied agricultural data, supported by formulas, graphs, and charts. S11				

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 225	3. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		
AGEC 225	4. Create an original application for data collection and analysis, which can solve a business need such as calculating feed mixtures or price selling points. Students will also be able to create end user documentation describing how to employ their application. S11				
AGEC 225	5. Demonstrate how to reach a specific market by preparing focused sales communications, advertising pieces, and multimedia sales presentations. S11		✓		
AGEC 225	6. Evaluate and compare computer hardware systems against minimum requirements, then propose a choice, and support by writing. S11		✓		
AGEC 225	7. demonstrate how to calculate and find averages, highest selling items, selling trends, extended pricing, profit margin, and create graphs and charts.				

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	CLO#: Students successfully completing this course will be able to:	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
AGEC 225	8. be able to evaluate current computer advertisements. From this, write a recommendation of which system to purchase, why, and what the components are of said system.				
AGEC 225	9. demonstrate how to find prospective clients using the internet. With this target market, students will then create a customized mass mailing sales correspondence, construct a brochure or newsletter to this market, build a multimedia presentation that explains their services, then present the sales presentation in front of an audience.		✓		
AGM 230	1. complete a series labs pertaining to the solving a common surveying problem meeting industry standards as judged by the instructor given the materials, tools, and equipment. S12		✓		
AGM 230	2. complete a series skill sets relating to industry standard note taking techniques as judged by the instructor given the materials, tools, and equipment.		✓		
ARCH 106	No CLO's Found				
ARCH 107	No CLO's Found				
ARCH 121	No CLO's Found				
ARCH 131	No CLO's Found				
ARCH 152	No CLO's Found				
BOT 110	No CLO's Found				

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
CMPSC 201	1. Articulate the nomenclature of computers, computer activities, and types of computer users.		✓		
CMPSC 201	2. Analyze the need for the computer's speed, economy, efficiency, and power.		✓		
CMPSC 201	3. Analyze computer problems with respect to the components of problem-solving procedures.		✓		
CMPSC 201	4. Construct one example of each of the three most frequently used applications: word processing, database management, and spreadsheet; and print the output from each.				
EHS 201	1. correctly identify and tell the cultural characteristics of the Spring plant list.		✓	✓	
EHS 201	2. identify and tell the function of the various plant descriptors.		✓	✓	
EHS 201	3. correctly identify and tell the cultural characteristics of the Fall plant list. F09		✓	✓	
EHS 202	1. identify and tell the cultural characteristics of the Fall plant list.		✓	✓	
EHS 202	2. identify and tell the function of the various plant descriptors.		✓	✓	
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.		✓		

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant.		✓	✓	
EHS 215	1. complete three drafting exercises: (a) Lettering Plate, (b) Scale Problems, (c) Line Drawing and two sketches: (a) Setting up the Drawing Board, (b) Drawing a Plan S11		✓		
EHS 215	2. draw an original, complete landscape design and formally present it to the class and, possibly, the client.		✓		
EHS 215	3. create six original landscape designs, a midterm landscape design project, and a group project and presentation designed to apply the design process to solving real-life landscape design problems. S11		✓		
EHS 215	4. apply the elements and principles of landscape design covered in class during the semester in (a) selecting plant materials appropriate to the design concept and the environmental conditions of the site, (b) addressing the problems presented by the site and (c) in meeting the needs of the client. S11		✓		
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.		✓		

AG and Enronmental Sciences
Certificate: Landscape Design

		PLOs: Upon satisfactory completion of the course requirements for the Landscape Design Certificate the student will be able to:			
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.*	*2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.*	*3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.*	*4. Demonstrate good work habits and inter-personal communication skills that employers demand.*
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.		✓		
EHS 278	No CLO's Found				
ENGTC 210	No CLO's Found				
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.		✓		
NR 200	2. discuss this on a written exam.				
NR 200	3. discuss practical soil management on a written exam.		✓		
NR 222	No CLO's Found				

Certificate: Landscape Design

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

David Baggett		
Gail Brumley		
Dale Pollard		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

The courses listed have excellent CLO's that have the skills & knowledge to be successful in the Landscape Design field.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

Not really too broad and not refined enough to reflect the certificate.

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

some well but the PLO's need work to better reflect this area of study

Certificate: Landscape Design

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

The PLO's need to be changed or/and modified

5. In reviewing the questions above, please identify an action plan.

Action Plan:

PLO's must be rewritten!
Reflecting the needs of the landscape design field.

Behavioral and Social Sciences
Skills Recognition: Supervisory Management in Public Saftey

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Geography Associate of Science Degree the student will be able to:		
COURSE ID	CLO#: Students successfully completing this course will be able to:	*No PLO's Found* #1 See Below	#2 See Below	#3 See Below
ADJU 351	1. Assess potential areas of liability and litigation.	✓	✓	✓
SUPR 106	1. demonstrate an understanding of organizational and group communication theories and concepts.	✓	✓	✓
SUPR 106	2. identify, research, and analyze ineffective organizational and group communication and make recommendations for improvement.	✓	✓	✓
SUPR 106	3. deliver an individual and/or group presentation effectively using various public speaking techniques.	✓	✓	✓
SUPR 364	1. Explain the need for change in American management practices.	✓	✓	✓
SUPR 364	2. Describe Deming's principles of management and how to implement them.	✓	✓	✓
SUPR 364	3. Develop a practical case study model in the student's environment using TQM application principles.	✓	✓	✓
BUSAD 274	1. Analyze the fundamental principles of a quality or successful organization.	✓	✓	✓
BUSAD 274	2. Describe the goals of human resources management.	✓	✓	✓
BUSAD 274	3. Analyze procedures and develop improved methods of personnel structures.	✓	✓	✓

#1 DEMONSTRATE APPROPRIATE AND EFFECTIVE COMMUNICATIONS SKILLS.

#2 BE PREPARED TO OBTAIN EMPLOYMENT IN AN ENTRY LEVEL SUPERVISORY POSITION WITHIN THE ADMINISTRATION OF JUSTICE FIELD.

#3 DEMONSTRATE THE ABILITY TO RECOGNIZE AND ANALYZE ETHICAL ISSUES AS THEY APPLY TO THE ADMINISTRATION OF JUSTICE FIELD.

Skills Recognition: Supervisory Management in Public Safety

Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

GREG HAUSMANN		
NANCY SILL		
LINDA KAPP		

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   YES THE CLO'S REPRESENT THE OVERALL PURPOSE OF THE COURSE.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.*

   YES THE PLO'S REPRESENT THE OVERALL PURPOSE OF THE CERTIFICATE

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   THEY ALIGN WELL

Skills Recognition: Supervisory Management in Public Safety
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

THE CLO DATA WELL REPRESENTS THE PLO'S

5. In reviewing the questions above, please identify an action plan.

Action Plan:

THE COURSE WORK ALIGNS WITH THE DESIRED PROGRAM LEARNING OUTCOMES. WILL REFINE AS NEEDED.

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
PLSC 260	2. After participating in weekly laboratory/field trips to local vegetable and fruit farms, private research farms, UC Davis Foundation Plant Materials Service, CDFA Plant Disease Diagnostic Labs, UC Farm Advisor presentations, Stanislaus County Agriculture Commissioner, and other experiences designed to provide students with experience in gathering, organizing and evaluating plant diseases, students will score an average of 70% on written laboratory reports that include: (a) description of the lab/field trip including the specific plant diseases and controls observed; (b) identification/discussion of those plant diseases, including signs, symptoms, and life cycles; (c) description of disease management practices observed; and evaluation of the activity. F10		✓	
PLSC 260	3. Given lectures, videos, laboratories, and demonstrations covering plant disease control methods, students will score at least a 70% on the development of a complete disease management plan for a central valley crop that includes: a management calendar defining the timing of management practices and cultural, biological and chemical control applications for anticipated diseases; a complete list and description of the plant diseases for the commodity, including written and graphics descriptions of their signs and symptoms, causal agent, lifecycle and control options; and chemical control application methods and the laws and regulations governing their application. F10		✓	✓
PLSC 260	1. correctly identify and classify plant pathogen examples infecting common central valley crops by common and Latin (genera and species) names.		✓	
PLSC 260	2. develop a complete disease management plan for a central valley crop.	✓		✓

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
PLSC 215	3. select or design a plant nutrition program for several different vegetable crops.		✓	
PLSC 215	4. design a field preparation plan for several different types of vegetable crops.		✓	
PLSC 215	5. design a field preparation plan to accomplish this task for several different types of vegetable crops. FD9		✓	
PLSC 230	1. After the student is given instruction on how plants are affected by their surrounding environment and the changes to that environment in relationship to photosynthetic process within the plant on a written test.			
PLSC 230	2. design a nut or fruit tree plot plan for several different fruit and nut crop varieties.		✓	
PLSC 230	3. go out into the laboratory setting and properly demonstrate the steps of proper pruning and training a young vine and tree.		✓	
PLSC 250	1. After the student is given instruction on nutrient deficiency symptoms in growing plants they will be able to identify the symptoms and explain how to correct the deficiency on a written test or term project.			
PLSC 250	2. After the student is given instruction on the methods of applying fertilizers, advantages and disadvantages, and when to apply different fertilizers for best results they will be able to explain and give examples on a written test or term project.			
PLSC 250	3. able to complete a fertilizer trail as a term project.		✓	
PLSC 260	1. Given lectures, labs or activities on the history and significance of plant pathology and diseases, types of plant diseases, basic plant pathology terminology, classification of plant diseases, parasitism and disease development, pathogens and their effect on plants, and diagnostic procedures, students will be given written and practical exams designed to test their knowledge of common plant diseases and their classification.			

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
EHS 276	1. create a monthly schedule of landscape maintenance activities for the year.		✓	
EHS 276	2. Perform skills related to the landscape maintenance industry i.e. pruning, staking, mowing, edging, planting trees shrubs and bedding plants.			
MATH 111	No CLO's Found			
MATH 134	No CLO's Found			
MATH 138	No CLO's Found			
NR 220	1. complete textbook assignments, a Forest laws and regulations presentation, employment opportunities presentation, and fieldtrip and lab reports, designed to develop student's skills and knowledge in the importance of forestry and the lumber industry to the community and individual, evaluate career opportunities in forestry and regulatory principles governing forest practices.	✓		
NR 220	2. use selected forestry tools, and technology to complete Field and lab reports, showing a level of skill needed to evaluate and manage a forest site			
PLSC 205	1. After the student is given instruction on the importance of field crop regions of California and the United States they will be able to explain and give examples on a written test.			✓
PLSC 205	2. After the student is given instruction on the importance of the leading field crop grown in the United States and California they will be able to explain their importance to the nations and California's economy on a written test.			✓
PLSC 205	3. select or design a plant nutrition program for several different field crops.			
PLSC 205	4. design a field preparation plan for several different types of field crops.			
PLSC 215	1. After the student is given instruction on the importance of vegetable crop regions of California and the United States they will be able to explain and give examples on a written test.			✓
PLSC 215	2. After the student is given instruction on the importance of the leading vegetable crop grown in the United States and California they will be able to explain their importance to the nations and California's economy on a written test.			✓

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
ANSC 220	2. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.			
ANSC 220	3. Given lectures, readings, power points, videos, internet research, field trips, discussions, demonstrations and laboratory activities related to the history, development projections of the dairy industry, information on economics of dairying, facts, trends, selection determinants, genetics, handling, fitting, showing, judging, feeding and health, facilities, management systems, and career opportunities related to the environments of California and the United States, students will complete a semester long lab notebook scoring greater than 70 percent on the criteria listed below: F09	✓		
ECON 101	1. Describe, analyze and evaluate economic concepts, mathematical models, and theories of the macroeconomy.			✓
ECON 101	2. Identify major current economic problems and use economic theory to analyze and evaluate the problems.			✓
ECON 101	3. Identify current governmental policies to remedy the macroeconomic problems and assess the effectiveness of these policies.			✓
ECON 101	4. Evaluate the impact of macroeconomic policies on such issues as: the distribution of wealth and income, economic growth, economic development, comparative economics, and the global economy.			✓
EHS 210	1. perform transplanting, propagation, staking, pruning, and other related horticultural industry skills.			
EHS 210	2. identify and tell the function of the various physiological and structural components of a plant.			

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
ANSC 214	2. After the student is given instruction on the digestive systems found in livestock nutrition. S11			
ANSC 214	3. After the student is given instruction on balancing feed rations and selecting least cost rations. S11			
ANSC 215	1. After student is given instruction on the role animal behavior plays in individual and herd health the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.			
ANSC 215	2. After student is given instruction on identifying physiological changes which alter susceptibility to various health issues the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports. !!			
ANSC 215	3. After student is given instruction on identifying common diseases in U.S. animal agriculture production and establish control programs the student will provide evidence of that knowledge through written examination, practical exercises and written lab reports.			
ANSC 220	1. Given lectures, readings, power points, videos, internet research, periodicals and discussions, the student will be able to recognize, outline and discuss the various attributes of recognized Dairy Breeds' benefits in the multiple environments of the United States. The student will be able to demonstrate their mastery of the material by scoring at least 70% on a written examination and an oral presentation which will include a poster board project or power point categorizing the breed attributes and values to a specific environment.			

AG and Envronmental Sciences
A.A. Degree: University Preparation, Emphasis in Agricultural Sciences

		PLOs: Upon satisfactory completion of the course requirements for the University Preparation, Emphasis in Agricultural Sciences Associate of Arts Degree the student will be able to:		
COURSE ID	**CLO#: Students successfully completing this course will be able to:**	*1. Give specific exomples of careers in the general agriculture area and briefly describe the prerequisites for these careers.*	*2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.*	*3. Describe the importance of the agriculture industry to the local, state and national economy.*
AGEC 210	1. construct a graph of the production function, its derivatives and identify the 3 stages of production. F09			✓
AGEC 210	2. explain the characteristics of various types of market structures, how each type of market allocates price and the efficiency of each market structure.			✓
ANSC 200	1. identify and state the function of the major body systems on a written test F10			
ANSC 200	2. identify and quantify the nutritional needs of animals on a written test and term project. F10			
ANSC 200	3. After a student is given instruction on the scientific method to collect data, calculate production parameters and make scientifically-based management decisions the student will complete a term project that will incorporate the above knowledge and skill. F10			
ANSC 200	4. After student is given instruction on analysis of genetic change through artificial and natural selection the student will provide evidence of that knowledge			
NR 200	1. determine and analyze how one would use the findings of the following to manage the soils they live on or work on: textures (two methods), use of texture triangle, bulk density, particle density, pore space, organic content, color, pH, structure, conductivity, and reactivity.			
NR 200	2. discuss this on a written exam.			
NR 200	3. discuss practical soil management on a written exam.			
PLSC 200	1. After the student is given instruction on the roles of higher plants in the living world they will be able to explain and give examples on a written test.			
PLSC 200	CLO's are missing			
ANSC 203	1. Identify sheep breeds, their adaptability to climatic conditions, differentiate types of operations, and discuss the relationship between consumer-packer-retailer.			
ANSC 214	1. After student is given instruction on the identification and composition of feedstuffs. S11			

Associate of Arts Degree: University Preparation, Emphasis in Agricultural Sciences
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

Faculty Members Present:

Dale Pollard	John Mendes	Don Borges
Steve Amador	David Baggett	
Todd Conrado	Marlis Boyd	
Bill Hobby	Gail Brumley	
Mike Morales	Amanda Schnoor	

Please provide a brief and cogent narrative in response to each of the following questions. Responses will be used to reflect on learning outcomes and be used for data analysis and planning.

1. Do the course learning outcomes (CLOs) represent the overall purpose(s) of the course(s)? *Please explain why or why not.*

   Yes! The CLO's meet and represent the coursework.

2. Do the program learning outcomes (PLOs) represent the overall purpose(s) of the program? *Please explain why or why not.* Attend the PLO to reflect needs of students to enhance student success. #3. Describe the importance of the agriculture industry and economics to the local, state, and national level. Add

3. How well did the course learning outcomes (CLOs) fulfill, support and align with the program learning outcomes (PLOs)? *Please explain.*

   In renewing the CLOs, it is noted that an additional PLO is needed. The reason is; the classes are not "necessary" and the new PLO is necessary.

Associate of Arts Degree: University Preparation, Emphasis in Agricultural Sciences
Qualitative Analysis and Reflection on Program PLOs WORKSHEET

4. You've mapped your CLOs to PLOs. You've also been provided CLO assessment data in your packet; now, take some time to reflect on, consider and analyze the data you have. What does your CLO data tell you about your PLOs?

When the CLO's are reviewed they are analyzed to see if changes/improvements are necessary. The PLOs need to be altered to connect better with the CLOs!

5. In reviewing the questions above, please identify an action plan.

Action Plan:

Definitely an action plan is necessary to add an additional PLO to read is:

Demonstrate understanding of aspects of agricultural production systems including: Livestock, Horticulture, Crop Science & Natural Resources, & Ag Mechanics,

Thus, the CLOs will align with the new PLO.