

Discipline: Agriculture	Sub-discipline: Plant Science
General Course Title: Vineyard Production and Management	Min. Units: 3 Semester
Proposed Suffix: L	
<p>Course Description:</p> <p>The production and management decisions for grapes, berries, and kiwi fruit, including: climate zones, soil selection, financing, farm organization, irrigation systems, field layout, varietal selection, nutritional needs, harvesting, labor management, marketing and budgeting. Students will be required to prepare a budget and calendar of operations. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Prepare a detailed calendar of operations. • Prepare a cash flow analysis and budget. • Explain economic concepts of vineyard production and management. • Describe the basis for cultural practices in California. • Explain the botany and physiological development of crops discussed. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Industry Overview <ol style="list-style-type: none"> A. Acreages and tonnage B. Trends C. Outlook D. Observations 2. Pruning Principles <ol style="list-style-type: none"> A. Carbohydrate balance B. Sugar production C. Fruitfulness D. Light distribution E. Fruit set and vine development 3. Pruning and Training Systems <ol style="list-style-type: none"> A. Head training B. Cordon training C. Other training systems D. Spur pruning E. Cane pruning F. Varietal differences G. Cost management 4. Climatic Requirements and Problems <ol style="list-style-type: none"> A. Growing season and adaptation B. Fruit maturation and growing regions C. Frost protection D. Heat damage E. Regional price determinations <p>Vineyard Production and Management (Content Continued)</p>	

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

5. Site Selection
 - A. Evaluating soils for vineyards
 1. Physical
 2. Chemical
 3. Biological problems
 - B. Water quality and cost
 - C. Interpreting soil, water, and nematode reports
 - D. Costs of overcoming site problems
 - E. Real estate considerations
 1. Land cost and future values
 2. Zoning
 3. Neighbors and urban growth
 4. Water and drainage rights

6. Vineyard Development
 - A. Soil profile modification
 - B. Leveling
 - C. Fumigating
 - D. Developing the irrigation system
 - E. Drainage systems
 - F. Ordering and negotiating for plants
 - G. Vineyard layout designs
 - H. Cuttings vs. rootings
 - I. Planting procedures
 - J. Care of new vines
 - K. Development calendars – options

7. Irrigation
 - A. Requirements
 - B. Monitoring moisture
 - C. Water budgets
 - D. Systems
 - E. Costs

8. Pest Management
 - A. Pests - insects, mites, diseases, viruses, and vertebrates
 - B. Typical spray programs
 - C. Economic and treatment thresholds
 - D. Determining cost effectiveness
 - E. Least-cost alternatives
 - F. Purchasing pesticides and services

**Vineyard Production and Management
(Content Continued)**

9. Management
 - A. Calendar of operations
 - B. Cash-flow analysis
 - C. Crop budget
 - D. Cost analysis
 - E. Debt management
 - F. Tax and accounting problems peculiar to vineyards

<ul style="list-style-type: none"> G. Assessing current financial position H. Developing vs. purchasing I. Labor management J. Cost control K. Economics of scale L. When is it time to replace a block of vines? 	
10. Rootstocks - how to select	
11. Selecting Varieties – considerations	
12. Developing the Crop	
<ul style="list-style-type: none"> A. Growth regulators B. Thinning C. Girdling D. Canopy management 	
13. Harvesting and Transport	
<ul style="list-style-type: none"> A. Maturity evaluation B. Harvest timing and scheduling C. Balancing quality, tonnage, and maturity criteria D. Labor management E. Estimating equipment requirements F. Transporting G. Enhancing maturity for early harvest H. Harvest practices 	
14. Marketing	
<ul style="list-style-type: none"> A. Contracts B. Private processors, packers, and shippers C. Cooperatives D. Brokers E. Self marketing F. Exporting opportunities G. Direct marketing and market development H. Legal protections for growers I. Bargaining Associations J. Concept of pooled tonnage K. Marketing orders 	
Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.	
Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
Typical Textbooks, Manuals, or Other Support Materials <u>General Viticulture</u> . Winkler.	
Statewide Articulation: CPSLO-FRSC 210, CPP-in development, others as lower division elective	
FDRG Lead Signature:	Date:
Mark E. Bender, PhD CSU Stanislaus	

[For Office Use Only]	Internal Tracking Number