

Viticulture

Overview

The viticulture program is designed to train and develop students who can either work in an existing vineyard/winery business or transfer to a four-year degree program in viticulture, enology, or a related field.

Career Options

- Cellar Assistant
- Crew Supervision
- Enology Assistant
- Equipment Supervision
- Field Technician
- Harvest Assistant
- Pest Control
- Sommelier
- Tasting Room Host
- Vine Nursery Management
- Vineyard Design & Development
- Vineyard Management
- Viticulture Researcher
- Wine Sample Collector
- Winery Event Technician

Some career options may require more than two years of college study

Program Maps

[Science, Technology, Engineering, and Mathematics Undecided Major \(/frc/main/doc/instruction/program-maps/STEM-Uncecided-major.pdf\)](/frc/main/doc/instruction/program-maps/STEM-Uncecided-major.pdf)

[Viticulture, Small Vineyard and Winery Management, A.S. Degree \(/frc/main/doc/instruction/program-maps/Small-Vineyard-Management-AS.pdf\)](/frc/main/doc/instruction/program-maps/Small-Vineyard-Management-AS.pdf)

Dean [Greg McCormac \(/about-us/contact-us/faculty-and-staff-directory/greg-mccormac\)](/about-us/contact-us/faculty-and-staff-directory/greg-mccormac)

Department Chair [Max Mahoney \(/about-us/contact-us/faculty-and-staff-directory/dr-max-mahoney\)](/about-us/contact-us/faculty-and-staff-directory/dr-max-mahoney)

Meta-Major [Science, Technology, Engineering, and Mathematics \(/academics/meta-majors/science-technology-engineering-and-mathematics\)](/academics/meta-majors/science-technology-engineering-and-mathematics)

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Associate Degree

A.S. in Small Vineyard and Winery Management

This program will provide foundational knowledge and skills for the next generation of wine-grape growers and wine producers in the Sierra Nevada foothills region of northern California. The program offers introductory training appropriate for local and regional wine-related employment opportunities and for further training at 4-year programs in viticulture and enology. Students will gain fundamental skills that will help prepare them to maintain and manage a wine grape vineyard, the wine production process, and an introduction to business methods used to promote and market grapes and/or wine.

Catalog Date: January 1, 2021

Degree Requirements

| COURSE CODE | COURSE TITLE | UNITS |
|-------------|---|-------|
| VITI 300 | Viticulture and Enology | 3 |
| VITI 301 | Viticulture Practices from Bud Break to Harvest | 3 |
| VITI 302 | Viticulture and Enology Machinery Operations and Safety | 2 |
| VITI 303 | Viticulture Practices from Harvest through Dormancy | 3 |
| VITI 304 | Wine Component Tasting, Hospitality and Service, and Food Pairing | 3 |
| VITI 308 | Fruit to Wine - Enology | 3 |

| COURSE CODE | COURSE TITLE | UNITS |
|---|--|-------------|
| A minimum of 9 units from the following: | | 9 |
| CHEM 305 | Introduction to Chemistry (5) | |
| or CHEM 400 | General Chemistry I (5) | |
| BIOL 400 | Principles of Biology (5) | |
| or BIOL 310 | General Biology (4) | |
| A minimum of 1.5 units from the following: | | 1.5 |
| VITI 305 | Wines of the World (1.5) | |
| VITI 306 | Wines of California (1.5) | |
| VITI 307 | Wines of the Sierra Foothills (1.5) | |
| A minimum of 6 units from the following: | | 6 |
| BUS 300 | Introduction to Business (3) | |
| BUS 350 | Small Business Management/Entrepreneurship (3) | |
| SPAN 401 | Elementary Spanish (4) | |
| Total Units: | | 33.5 |

The Small Vineyard and Winery Management Associate in Science (A.S.) degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See FLC graduation requirements.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- assist in the management of a wine grape vineyard including maintenance of vineyard rows, implementation of integrated pest management plan, and evaluation of grapes for wine production.
- assist in the production and marketing of the vineyard grapes and/or a wineries wines.
- analyze and appraise wine for its faults and desirable qualities.
- assist in maintaining a winery's tasting room with hospitality services and wine and food pairings.

Career Information

Technical jobs as assistant vineyard manager, assistant winemaker, cellar worker, and laboratory technician. Non-technical jobs as event manager, logistics coordinator, sales representative, and tasting room associate.

Certificate

Small Winery Marketing Certificate Certificate

The program offers comprehensive marketing and management training and workforce development to wine growers, vintners and tasting room operators in the El Dorado and Amador wine areas.

Catalog Date: January 1, 2021

Certificate Requirements

| COURSE CODE | COURSE TITLE | UNITS |
|---|---|-----------|
| BUSTEC 332 | Integrated Business Projects | 3 |
| BUSTEC 363 | Introduction to Electronic Spreadsheets | 1 |
| MKT 300 | Principles of Marketing | 3 |
| VITI 304 | Wine Component Tasting, Hospitality and Service, and Food Pairing | 3 |
| VITI 306 | Wines of California (1.5) | 1.5 |
| VITI 307 | Wines of the Sierra Foothills | 1.5 |
| A minimum of 2 units from the following: | | 2 |
| WEXP 498 | Work Experience in (Subject) (1 - 4) | |
| Total Units: | | 15 |

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- record, classify, summarize and report the business transactions of an organization.
- develop a comprehensive winery marketing plan.
- evaluate the benefits of using a variety of marketing tools including advertising, publicity, social media marketing and customer relationship marketing.
- identify marketing techniques used to create high velocity sales including online tools, social marketing and customer relationship marketing tools.

Career Information

Winery tasting room coordinator Winery social marketing associate Winery event coordinator Winery customer relationship specialist

Viticulture (VITI) Courses

VITI 300 Viticulture and Enology

| | |
|----------------------|----------------------------|
| Units: | 3 |
| Hours: | 36 hours LEC; 54 hours LAB |
| Prerequisite: | None. |
| Transferable: | CSU; UC |
| Catalog Date: | January 1, 2021 |

The course is an introduction to viticulture and enology practices and will explore the history, principles, and practices of wine grape production and an introduction to enology. Additional topics will cover the history of wine grapes, the current status of wine grape industry, and the classification of wine grapes. The basic principles of vineyard establishment and management will be covered as well as the basic principles of enology. Field trips may be required. A lab/field notebook may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- evaluate a site for grape production and select a grape varietal suitable for the site.
- plan and plant a vineyard, using the principles and practices of wine grape production, and produce grapes that will lead to successful wines.
- analyze vineyard management problems and develop solutions for those problems.
- evaluate and prepare harvest to produce wine.
- identify basic processes for wine production.

VITI 301 Viticulture Practices from Bud Break to Harvest

| | |
|----------------------|----------------------------|
| Units: | 3 |
| Hours: | 36 hours LEC; 54 hours LAB |
| Prerequisite: | None. |
| Advisory: | VITI 300 |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course will cover viticulture practices for the spring and summer growing seasons, from bud-break to harvest. The course will focus on canopy management and wine grape harvest. Canopy management topics will include trellising, suckering, crop estimation, leaf and cluster thinning, petiole analysis, fertilizer application, pest control, and irrigation practices. Wine grape harvest will include quality control measures including measuring Brix, pH and total acidity of grapes samples. This course is a continuation of VITI 300, Viticulture and Enology. Field trips may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- describe and demonstrate the theory and practices of vineyard management to produce wine grapes of optimum quality.
- properly apply canopy management techniques for crop optimization by suckering, leaf and cluster thinning, petiole analysis and application of fertilizers.
- explain and identify grapevine anatomy and understand how physiology is affected by fertilizer and irrigation techniques for vineyards.
- describe and explain the relationship between environment, common vineyard pests and diseases and know how to effectively control identified pests and diseases.
- describe and demonstrate the measurement of Brix, pH, and total acidity of wine grapes.

VITI 302 Viticulture and Enology Machinery Operations and Safety

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|-------------------------------|---|
| Units: | 2 |
| Hours: | 18 hours LEC; 54 hours LAB |
| Prerequisite: | None. |
| Enrollment Limitation: | Students must possess a valid California driver license to operate pickup trucks, tractors and forklifts. |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course is designed to introduce viticulture and enology students to the use and safe operation of machinery used in the viticulture and enology industry. In addition to basic safe operating parameters, students will learn about the economics of equipment commonly used in vineyards and wineries, routine maintenance practices and appropriate applications for machinery use. Hands-on experience and vineyard/winery visits will be major components of this course. Students must possess a valid driver's license to be eligible for this class. Field trip(s) will be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- demonstrate the safe operating principles of vineyard and winery equipment.
- perform routine safety, maintenance and operational checks of vineyard and winery equipment.
- describe appropriate applications of mechanized equipment in the vineyard and winery.
- evaluate the economics of using mechanized equipment in the vineyard and winery.

VITI 303 Viticulture Practices from Harvest through Dormancy

| | |
|----------------------|----------------------------|
| Units: | 3 |
| Hours: | 36 hours LEC; 54 hours LAB |
| Prerequisite: | None. |
| Advisory: | VITI 300 |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course will cover viticulture and enology practices from post-harvest in the fall to bud break in the spring. The course will cover winter pre-pruning, pruning relative to bud break, vineyard management during dormancy, grapevine diseases and post-harvest practices for irrigation, fertilization, erosion control, cover crops and vineyard winterization. Planting of vines as well as grafting of new varieties to an existing rootstock will be covered. Field trips may be required. A field notebook may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- describe and demonstrate the theory and practices of vineyard management post harvest through dormancy.
- describe and demonstrate post-harvest practices for irrigation, fertilization, cover crop planning and pre-pruning.
- describe and explain how to evaluate and effectively control common vineyard pests and diseases for the fall and winter seasons.
- describe and demonstrate proper planting techniques for new vines and grafting techniques for established rootstock.

VITI 304 Wine Component Tasting, Hospitality and Service, and Food Pairing

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|-------------------------------|--|
| Units: | 3 |
| Hours: | 54 hours LEC |
| Prerequisite: | None. |
| Enrollment Limitation: | Students must be 21 years of age or older. |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course covers organoleptic wine evaluation, how to pair foods to wine, and wine service hospitality. The course covers organoleptic tasting techniques of wine including varietal characteristics, wine styles, and identification of wine flaws. The course is designed for wine industry personnel and wine enthusiasts. A materials fee of \$50.00 is required and payable upon registration.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify common grape and wine varieties by sight and components.
- discuss the history and development of the wine industry in the Sierra Foothills and California.
- identify and describe wine defects.
- discuss wine tasting set up.
- discuss the pairing of food with wine varieties.
- explain the principles involved in the fermentation process.

VITI 305 Wines of the World

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|-------------------------------|--|
| Units: | 1.5 |
| Hours: | 27 hours LEC |
| Prerequisite: | None. |
| Enrollment Limitation: | Students must be 21 years of age or older. |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

The course examines some of the most popular wine varieties of the world compared and contrasted to their California counterparts. Each week we will examine a different grape or related group of grapes and their expression in wine, e.g., California Cabernet Sauvignon, to a similar Chilean varietal, or French Bordeaux. A materials fee of \$75 is required and payable upon registration. A field trip may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify world wine grape growing regions and the varieties best suited to that region.
- differentiate the climate, soil and geographic features that contribute to the uniqueness of a wine appellation.
- explain the relationship of viticulture and winemaking practices on the qualities of a particular wine type.
- compare and contrast the sensory characteristics of wines produced from the same varietal when grown in different locations.
- evaluate the quality of wines from particular world wine producing areas.
- define and comprehend world wine label terminology.

VITI 306 Wines of California

| | |
|-------------------------------|--|
| Units: | 1.5 |
| Hours: | 27 hours LEC |
| Prerequisite: | None. |
| Enrollment Limitation: | Students must be 21 years of age or older. |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course examines some of the wine varietals grown and produced in California. Each week the course will examine a different grape or related group of grapes and their expression in different regions or appellations of California. A materials fee of \$50.00 is required and payable upon registration. Field trips may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify California wine grape growing regions and the varietals best suited to that region.
- differentiate the climate, soil and geographic features that contribute to the uniqueness of a wine appellation.
- explain the relationship of viticulture and winemaking practices on the qualities of a particular wine type.
- compare and contrast the sensory characteristics of wines produced from the same varietal when grown in different locations.
- evaluate the quality of wines from particular California wine producing areas.
- define and comprehend California wine label terminology.

VITI 307 Wines of the Sierra Foothills

| | |
|-------------------------------|--|
| Units: | 1.5 |
| Hours: | 27 hours LEC |
| Prerequisite: | None. |
| Enrollment Limitation: | Students must be 21 years of age or older. |
| Transferable: | CSU |
| Catalog Date: | January 1, 2021 |

This course introduces some of the wine varietals grown and produced in California's Sierra Foothills appellation. Each week the course will examine the expression in wine of different varietals of grape, related group of grapes, or a particular vintners varietals of wines produced in the Sierra Foothills. A materials fee of \$50.00 is required and payable upon registration. Field trips may be required.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- identify California Sierra Foothills growing regions and the varietals best suited to those regions.
- differentiate the climate, soil and geographic features that contribute to the uniqueness of a Sierra Foothills wine appellation.
- explain the relationship of viticulture and winemaking practices on the qualities of a particular wine type.
- compare and contrast the sensory characteristics of wines produced from the same varietal when grown in different locations within the Sierra Foothills.
- define and comprehend Sierra Foothills wine label terminology.

VITI 308 Fruit to Wine - Enology

| | |
|-------------------------------|----------------------------|
| Units: | 3 |
| Hours: | 36 hours LEC; 54 hours LAB |
| Prerequisite: | None. |
| Enrollment Limitation: | Must be 21 years of age. |
| Transferable: | CSU; UC |
| Catalog Date: | January 1, 2021 |

This course is an introduction to the science of wine production from grapes and other fruits to the bottle. Topics covered include the history of wine production; grape varieties and wine types; influence of climate and soil; wine fermentation including assessment of wine qualities, handling, racking, aging, bottling, wine disorders and remedies; and legal compliance. The production of fruit wines may also be covered. Some labs involve local field trips. A lab fee will be assessed to cover the costs of grapes and bottling. Students will have the opportunity to take wine home with them made during the semester.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- discuss the history of winemaking and the wine producing regions of the world and California.
- assess grapes and fruit to produce wine by applying fermentation principles.
- analyze results of winemaking including composition of wine for percentage alcohol, acidity, flavors, aging and bottling.
- report on wine qualities for bottling, labeling and storage for future consumption.
- define legal compliance requirements for the making, labeling, selling, and distribution of wine.

VITI 498 Work Experience in Viticulture

| | |
|-------------------------------|--|
| Units: | 1 - 4 |
| Hours: | 60 - 300 hours LAB |
| Prerequisite: | None. |
| Enrollment Limitation: | Student must be in a paid or non-paid internship, volunteer opportunity, or job related to career interests. |
| Advisory: | ENGWR 101 or ESLW 320 |
| Transferable: | CSU |
| General Education: | AA/AS Area III(b) |
| Catalog Date: | January 1, 2021 |

This course provides students with opportunities to develop marketable skills in preparation for employment or advancement within the field of Viticulture. Course content will include understanding the application of education to the workforce; completing required forms which document the student's progress and hours spent at the work site; and developing workplace skills and competencies. During the semester, the student is required to attend orientation. Students must complete 75 hours of related paid work experience, or 60 hours of related unpaid work experience, for one unit. An additional 75 hours of related paid work experience or 60 hours of related unpaid work experience is required for each additional unit. The course may be taken for a maximum of 16 units. Students should have access to a computer, the Internet, and some computer media such as a USB drive to store data files. Online students must have an email account. Only one Work Experience course may be taken per semester.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- apply industry knowledge and theoretical concepts in a field of study or career as written in the minimum 3 learning objectives created by the student and his/her employer or work site supervisor at the start of the course.
- manage personal career plans and decision making using industry & workforce information and online resources.
- behave professionally and ethically, exhibit adaptability, initiative, self-awareness and self-management as needed.
- exhibit effective communication, collaboration, and leadership skills at work with consideration to workplace dynamics and social and diversity awareness.
- demonstrate critical and creative thinking skills as they apply to the workplace.

VITI 499 Experimental Offering in Viticulture

| | |
|----------------------|-----------------|
| Units: | 0.5 - 4 |
| Prerequisite: | None. |
| Catalog Date: | January 1, 2021 |

Faculty

Kevin Jones

Adjunct Professor

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Cecilia Osorio

Adjunct Professor

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Science, Technology, Engineering, and Mathematics

[\(/academics/meta-majors\)](#)

This program is part of the Science, Technology, Engineering, and Mathematics meta-major.

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