
Napa Valley College

2277 Napa-Vallejo Highway, Napa, CA. 94558

VITICULTURE AND WINERY TECHNOLOGY

Dr. Stephen J. Krebs, Program Coordinator, (707) 253-3259, skrebs@napavalley.edu
Dr. Geraldine Ritchie, Winery Technology Instructor, (707) 253-3049, gritchie@napavalley.edu

The programs of the Viticulture and Winery Technology department are designed to prepare students for careers in the North Coast wine industry. The one-year Certificate and two-year Associate of Science options provide students with the knowledge and skills essential for success.

The *Certificate in Viticulture and Winery Technology* consists of production-oriented courses in viticulture and winemaking. The *Certificate in Wine Marketing and Sales* is a mix of viticulture, winemaking and business courses. Certificate programs may be modified to meet the career goals of the individual student. The typical student will be able to earn a Certificate in one to two years.

Students who complete the *Associate of Science in Viticulture and Winery Technology* degree specialize in either *Viticulture, Winemaking or Wine Marketing and Sales*. The Associate of Science degree includes general education courses, basic science courses and core courses in the degree option. The typical student will be able to earn an Associate of Science degree in two to three years.

CERTIFICATE PROGRAMS

VITICULTURE AND WINERY TECHNOLOGY

| | |
|--|---|
| <i>VWT 130 General Viticulture</i> | <i>VWT 172 Laboratory Analysis</i> |
| <i>VWT 132 Vineyard Soils</i> | <i>VWT 180 Fundamentals of Enology</i> |
| <i>VWT 230 Fall Viticulture Operations</i> | <i>VWT 271 Winery Management</i> |
| <i>VWT 231 Spring Viticulture Operations</i> | <i>VWT 280 Fall Winery Operations</i> |
| <i>VWT 232 Vineyard Management</i> | <i>VWT 281 Spring Winery Operations</i> |

WINE MARKETING AND SALES

| | |
|--------------------------------------|---|
| <i>VWT 130 General Viticulture</i> | <i>VWT 180 Fundamentals of Enology</i> |
| <i>VWT 136 Wines of the World</i> | <i>VWT 241 Wine Marketing and Sales</i> |
| <i>VWT 137 Wines of California</i> | <i>VWT XXX Program Elective+</i> |
| <i>VWT 140 Cultural Appreciation</i> | <i>BUSI 100 Intro to Business</i> |
| <i>VWT 173 Sensory Evaluation</i> | <i>BUSI XXX Business Elective++</i> |

ASSOCIATE OF SCIENCE PROGRAMS

In VITICULTURE AND WINERY TECHNOLOGY

VITICULTURE OPTION

FIRST SEMESTER

VWT 130 General Viticulture
VWT 134 Vineyard Pruning
CHEM 110 Intro to Chemistry or*
*EARTH SCI 110 Earth Science**
*ENGLISH COMPOSITION Elective**
*MATHEMATICS Elective**
*PHYSICAL EDUCATION Elective***

THIRD SEMESTER

VWT 180 Fund of Enology
VWT 199 Independent Study# or
VWT 290 Work Experience#
VWT 230 Fall Viticulture Oper
VWT 234 Pest Management
*HUMANITIES Elective**

SECOND SEMESTER

VWT 132 Vineyard Soils
VWT 135 Grapevine Propagation
VWT XXX Program Elective+
*BIOL 110 Intro to Biology**
*SOCIAL SCIENCE Elective**
*PHYSICAL EDUCATION Elective***

FOURTH SEMESTER

VWT 199 Independent Study# or
VWT 291 Work Experience#
VWT 231 Spring Viticulture Oper
VWT 232 Vineyard Management
VWT XXX Program Elective+
VWT XXX Program Elective+

WINEMAKING OPTION

FIRST SEMESTER

VWT 180 Fund of Enology
VWT 172 Laboratory Analysis
*CHEM 110 Intro to Chemistry**
*MATHEMATICS Elective**
*PHYSICAL EDUCATION Elective***

THIRD SEMESTER

VWT 136 Wines of the World
VWT 270 Advanced Winemaking
VWT 280 Fall Winery Oper
*ENGLISH COMPOSTION Elective**
*SOCIAL SCIENCE Elective**

SECOND SEMESTER

VWT 137 Wines of California
VWT 173 Sensory Evaluation
*CHEM 111 Intro Organic/Microbiol**
*BIOL 110 Intro to Biology**
*PHYSICAL EDUCATION Elective***

FOURTH SEMESTER

VWT 130 General Viticulture
VWT 271 Winery Management
VWT 272 Wine Chem/Microbiol
VWT 281 Spring Winery Oper
*HUMANITIES Elective**

WINE MARKETING AND SALES OPTION

FIRST SEMESTER

VWT 130 General Viticulture
VWT 136 Wines of the World
BUSI 100 Introduction to Business
*ENGLISH COMPOSTION Elective**
*MATHEMATICS Elective**
*PHYSICAL EDUCATION Elective***

THIRD SEMESTER

VWT 140 Cultural Appreciation
VWT 199 Independent Study# or
VWT 290 Work Experience#
VWT 180 Fund of Enology
VWT XXX Program Elective+
VWT XXX Program Elective+

SECOND SEMESTER

VWT 137 Wines of California
*COMMUNICATIONS Elective**
*HUMANITIES Elective**
*NATURAL SCIENCE Elective**
*SOCIAL SCIENCE Elective**
*PHYSICAL EDUCATION Elective***

FOURTH SEMESTER

BUSI XXX Elective++
VWT 173 Sensory Evaluation
VWT 199 Independent Study# or
VWT 291 Work Experience#
VWT 241 Marketing/Sales
VWT XXX Program Elective+

PROGRAM NOTES

KEY TO CERTIFICATE AND DEGREE SYMBOLS (preceding pages)

- ** Three units of PHYSICAL EDUCATION are required for degrees.**
- * Satisfies NVC General Education requirement.**
- # A total of 5 units of VWT 190/191/199/290/291 is required.**
- + Viticulture and Winery Technology program elective.**
- ++ Business Elective: any ACCT, BUSI, CISA, CISN, COMS**

PROGRAM ELECTIVES

VITICULTURE AND WINERY TECHNOLOGY

Any VWT courses not already required for the degree option may be used.

BUSINESS, NATURAL SCIENCE, FOREIGN LANGUAGE, INDUSTRIAL ARTS

All courses in these areas are acceptable Program Electives.

Other courses may also be accepted as electives at the discretion of the Program Coordinator, including course work from other colleges.

Please refer to the Napa Valley College *General Catalog* for course descriptions from other academic departments.

PROGRAM COUNSELING AND SCHEDULE PLANNING

Students are encouraged to meet with the Program Coordinator as soon as possible for counseling and schedule planning. Call for an appointment.

TRANSFER TO A FOUR-YEAR COLLEGE OR UNIVERSITY

Information about Napa Valley College courses for transfer to four-year institutions may be obtained from the Admissions and Records department, at (707) 253-3000.

Please note that Viticulture and Winery Technology certificate and degree programs provide the technical training needed for direct entry into wine industry employment and are not designed as transfer programs. Contact the Program Coordinator for more information.

KEY TO COURSE DESCRIPTION SYMBOLS (following pages)

| | |
|--------------------|---|
| VWT 101 | Department name and course number |
| (3) | Unit value of the course |
| Fall/Spring | Semester during which the course is offered |
| (A) | Afternoon meeting time (1-4 PM or 1-5 PM) |
| (E) | Evening meeting time (7-10 PM) |
| (W) | One or more weekend laboratory meeting times |

COURSE DESCRIPTIONS

- VWT 130** *General Viticulture (4) Fall, Spring (E,W)*
Introduction to grape growing, including botany and anatomy, history and distribution, propagation, grape varieties and wine types, climate, production practices, common diseases and pests.
- VWT 131** *Cover Crops for Vineyards (1) Summer (E,W)*
The use of cover crops in North Coast vineyards, including erosion control, beneficial insect habitat enhancement, soil fertility, selection of cover crop cultivars. Six week course.
- VWTI 132** *Vineyard Soils, Fertilizers, Irrigation (3) Spring (E,W)*
Introduction to basic principles of soil science, mineral nutrition and plant/water relationships for North Coast vineyards.
- VWT 133** *Phylloxera and Rootstocks (1) Summer (E)*
Rootstocks used for grapevines, including rootstock selection for the prevention of phylloxera and nematode damage, for soil adaptation, and for the enhancement of wine quality. Six week course.
- VWT 134** *Vineyard Pruning (1) Fall (E,W)*
Introduction to the theory and practice of grapevine pruning. Lecture topics illustrate grapevine responses to pruning. Laboratory consists of pruning in the field. Three Friday evenings, three Saturday mornings.
- VWT 135** *Grapevine Propagation (1) Spring (E,W)*
Theory and practice of grapevine propagation. Topics include field budding, bench grafting, grafting to change varieties.. Six week course.
- VWT 136** *Wines of the World (3) Fall, Spring (E)*
Introduction to the wines of the world, including history, viticulture practices and winemaking styles. Sensory evaluation of representative wines. Lab fee. Must be at least 21 years of age.
- VWT 137** *Wines of California (3) Spring (E)*
Introduction to the wines of California, including history, viticulture practices and winemaking styles. Sensory evaluation of representative wines. Lab fee. Must be at least 21 years of age.

- VWT 139** *Introduction to North Coast Wines (1) Summer, Fall (E)*
Short introductory course, including history, viticulture practices and winemaking styles of the North Coast Districts of California. Sensory evaluation of representative wines. Lab fee. Must be at least 21 years of age. Six week course. Offered at Upper Valley Campus, St. Helena.
- VWT 140** *A Cultural Appreciation of Wine (3) Fall, (E)*
A survey of wine and its role in religion, art, culture and society from pre-history to the modern day. Sensory evaluation of representative wines. Lab fee. Must be at least 21 years of age.
- VWT 172** *Laboratory Analysis of Wines and Musts (3) Fall (E)*
Introduction to vineyard and winery laboratory practices, including basic chemistry principles, laboratory techniques and common analysis methods for wines and musts. Lab fee.
- VWT 173** *Sensory Evaluation of Wine (3) Spring (E)*
Introduction to wine sensory evaluation methods, including statistical analysis of trials, study of wine styles, sensory testing techniques, identification of wine traits. Sensory evaluation of representative wines. Lab fee. Must be at least 21 years of age.
- VWT 180** *Fundamentals of Enology (3) Fall, Spring (E)*
An introduction to the science of winemaking, including history and geographical distribution, grape varieties and wine types, influence of climate and soil, wine fermentation, general wine handling operations, wine disorders, winery sanitation, legal compliance.
- VWT 190** *Work Experience (2) Fall*
Supervised practical work experience. Intended to help the student integrate classroom study with on-the-job training in the wine industry. Student must meet with the Program Coordinator before enrolling. For three unit fall semester Work Experience, see VWT 290.
- VWT 191** *Work Experience (2) Spring*
Supervised practical work experience. Intended to help the student integrate classroom study with on-the-job training in the wine industry. Student must meet with the Program Coordinator before enrolling. For three unit spring semester Work Experience, see VWT 291.
- VWT 199** *Independent Study (1) Fall, Spring, Summer*
Special project for advanced Viticulture and Winery Technology students. Student must meet with the Program Coordinator before enrolling.

- VWT 229** **Summer Viticulture Operations (1) Summer (A)**
Vineyard practices for the summer season. Class operates the NVC Student Vineyards, with an emphasis on the practical applications of viticulture theory.
- VWT 230** **Fall Viticulture Operations (3) Fall (A)**
Vineyard practices for the fall and winter seasons. Class operates the NVC Student Vineyards, with an emphasis on the practical applications of viticulture theory.
- VWT 231** **Spring Viticulture Operations (3) Spring (A)**
Vineyard practices for the winter and spring seasons. Class operates the NVC Student Vineyards, with an emphasis on the practical applications of viticulture theory.
- VWT 232** **Vineyard Management (3) Spring (A)**
Vineyard management practices, including annual plans and budgets, labor management and supervision, crop sale contracts, legal compliance.
- VWT 233** **Hillside Viticulture (2) Fall (E,W)**
Special requirements for the operation of hillside vineyards, including layout and planting, erosion control, water sources, equipment, pest and disease control, economics, environmental issues. Eight week course.
- VWT 234** **Integrated Pest Control for Grapes (3) Fall (A)**
Introduction to the theory and practice of integrated pest control in grape growing, including biology and control of common insect and disease problems in North Coast vineyards.
- VWT 241** **Wine Marketing and Sales Practices (3) Spring (E)**
Introduction to wine marketing and sales methods, including basic approaches to packaging, advertising, promotion, retail and wholesale selling of wines.
- VWT 270** **Advanced Winemaking (3) Fall (A)**
Advanced course in winemaking, including development of winemaking style, experimentation in production practices and enhancement of wine quality. Course provides essential skills for a career in commercial winemaking. Lab fee. Must be at least 21 years of age. Prerequisite: VWT 180.

- VWT 271 Winery Management (3) Spring (A)**
Fundamentals of winery management, including annual plans, budgets, labor management, scheduling of work, legal compliance, record keeping.
- VWT 272 Wine Chemistry and Microbiology (3) Spring (E)**
Basic chemistry and microbiology for winemaking, including acidity, sulfur dioxide, protein and phenol equilibrium. Students learn how to make informed decisions on style, crush options, cellar practices, quality assurance.
- VWT 280 Fall Winery Operations (3) Fall (A)**
Winery operations for the fall and winter seasons, including grape maturity monitoring, grape harvesting, fermentation, handling and storage of new wines, maintenance of wines from previous vintages, general cellar practices. Class operates the Teaching Winery.
- VWT 281 Spring Winery Operations (3) Spring (A)**
Winery operations for the winter and spring seasons, including handling and storage of new wines, maintenance of wines from previous vintages, general cellar practices. Class operates the Teaching Winery.
- VWT 282 Summer Winery Operations (1) Summer (A)**
Winery operations for the summer season, including handling and storage of new wines, maintenance of wines from previous vintages, general cellar practices. Class operates the Teaching Winery.
- VWT 288 Selected Topics in Viticulture and Winery Technology (1-3)**
Special topics not covered by regular catalog listings. Course content and unit value varies. May be offered as a seminar, lecture or laboratory course during fall or spring semester, summer session.
- VWT 290 Work Experience (3) Fall**
Supervised practical work experience. Intended to help the student integrate classroom study with on-the-job training in the wine industry. Student must meet with the Program Coordinator before enrolling. For two unit fall semester Work Experience, see VWT 190.
- VWT 291 Work Experience (3) Spring**
Supervised practical work experience. Intended to help the student integrate classroom study with on-the-job training in the wine industry. Student must meet with the Program Coordinator before enrolling. For two unit spring semester Work Experience, see VWT 191.