

# VITICULTURE AND ENOLOGY OPTION

This option is offered within the following major(s):

- Horticulture - College of Agricultural Sciences (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/horticulture/horticulture-bs-hbs/>)

Our Viticulture and Enology option is designed to support your learning about sustainable wine grape production practices that consider vine and vineyard health while also emphasizing the profitability of the vineyard and winery business. This learning, along with a strong basic horticultural sciences background, will be critical to your growth as a professional in vineyard production science and to your ability to contribute effectively to the wine grape industry upon graduation. As only one of five universities in the nation with programs in both grape and wine production sciences, the Viticulture and Enology option through the Department of Horticulture is an excellent program for you if you are interested in vineyard production, vine growth and physiology, as well as enology.

Vineyard and winery production and the wine sales and agri-tourism associated with the industry is a significant component of the Oregon economy; it is estimated to contribute \$2.7 billion annually. The increase in acreage, number of wineries and total wine sales in the past ten years shows that Oregon's reputation as a well-respected wine production region continues to grow. As a student of this program, you will help bolster this reputation by becoming an expert in sustainable viticulture production methods with a strong background in basic sciences, horticultural production, agriculture, and viticulture sciences.

Recent graduates of the Viticulture and Enology option have become vineyard managers, viticulturists, consultants, and winemakers.

## Active Learning

As a student studying Viticulture and Enology, you'll spend time conducting trials and research projects at Woodhall Vineyard, Oregon State's research vineyard. Students will also visit Willamette Valley vineyards to learn about problems and opportunities facing local producers. VITIS Club, the student organization for those interested in wine production at OSU, coordinates yearly wine tours and assists in yearly maintenance at Woodhall Vineyard. The Department of Horticulture encourages students to get out of the classroom and take a hands-on approach to learning and research in viticulture and enology.

For more information, visit the Horticulture website (<https://horticulture.oregonstate.edu/horticulture/students/undergraduate-students/>).

## Option Code: 613

In addition to the required Horticulture Major Core courses, students in this proposed option will complete the following courses:

Code	Title	Credits
<b>Plant Materials</b>		
HORT 251	TEMPERATE TREE FRUIT, BERRIES, GRAPES, AND NUTS	2
<b>Ecology</b>		
Select one of the following:		3-4
BI 370	ECOLOGY	
BOT 341	PLANT ECOLOGY	

HORT 318	*APPLIED ECOLOGY OF MANAGED ECOSYSTEMS	
<b>Technology</b>		
PBG 430	PLANT GENETICS	3
<b>Horticultural Communication</b>		
HORT 407	SEMINAR	1
HORT 411	HORTICULTURE BOOK CLUB	1
Select one of the following Writing Intensive Courses:		3
HORT 318	*APPLIED ECOLOGY OF MANAGED ECOSYSTEMS	
<b>Capstone</b>		
HORT 481	HORTICULTURE PRODUCTION CASE STUDIES	4
<b>Horticultural Science and Technology</b>		
HORT 360	IRRIGATION AND DRAINAGE	4
Select one of the following:		3-4
AG 221	METALS AND WELDING	
AG 312	ENGINE THEORY AND OPERATION	
AG 391	FARM IMPLEMENTS	
AG 425	DEVELOPMENTS IN AGRICULTURAL MECHANICS	
HORT 260	ORGANIC FARMING AND GARDENING	
HORT 285	PERMACULTURE DESIGN AND THEORY: CERTIFICATE COURSE	
HORT 314	PRINCIPLES OF TURFGRASS MAINTENANCE	
HORT 414/CROP 414	PRECISION AGRICULTURE	
HORT 444/ENT 444	INSECT AGROECOLOGY	
PBG 450	PLANT BREEDING	
SOIL 316	NUTRIENT CYCLING IN AGROECOSYSTEMS	
<b>Viticulture</b>		
HORT 451	TREE FRUIT PHYSIOLOGY AND CULTURE	4
or HORT 452	BERRY AND GRAPE PHYSIOLOGY AND CULTURE	
HORT 453	GRAPEVINE GROWTH AND PHYSIOLOGY	3
HORT 454	PRINCIPLES AND PRACTICES OF VINEYARD PRODUCTION	3
<b>Fermentation Foundation Sciences</b>		
BB 314	CELL AND MOLECULAR BIOLOGY	4
or BB 350	ELEMENTARY BIOCHEMISTRY	
CH 331	ORGANIC CHEMISTRY	4
CH 332	ORGANIC CHEMISTRY	4
MB 302	GENERAL MICROBIOLOGY	3
<b>Fermentation Science</b>		
FST 466	WINE PRODUCTION PRINCIPLES	3
FST 467	PRODUCTION AND ANALYSIS OF WINE	5
<b>Business Management</b>		
Select one of the following:		3-4
AEC 211	AGRICULTURAL AND FOOD MANAGEMENT	
AEC 221	AGRICULTURAL AND FOOD MARKETING	
AEC 250	*INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY	
AEC 251	*INTRODUCTION TO AGRICULTURAL AND FOOD ECONOMICS	
BA 215		
BA 260	INTRODUCTION TO ENTREPRENEURSHIP	
BA 463	FAMILY ENTERPRISE GOVERNANCE	
<b>Ecology and Sustainability Ecosystems Courses</b>		
Meets Synthesis requirements. Each course must be from a different department.		
<i>Contemporary Global Issues</i>		
Select one of the following:		3-4
AEC 351	*NATURAL RESOURCE ECONOMICS AND POLICY	
AEC 352/ECON 352	*ENVIRONMENTAL ECONOMICS AND POLICY	
BI 301	*HUMAN IMPACTS ON ECOSYSTEMS	
CROP 330	*WORLD FOOD CROPS	
FES 365	*ISSUES IN NATURAL RESOURCES CONSERVATION	
FW 325	*GLOBAL CRISES IN RESOURCE ECOLOGY	
GEOG 300	*SUSTAINABILITY FOR THE COMMON GOOD	

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GEOG 330	*GEOGRAPHY OF INTERNATIONAL DEVELOPMENT AND GLOBALIZATION	
HORT 331/ENT 331	*POLLINATORS IN PERIL	
SUS 350	*SUSTAINABLE COMMUNITIES	
WSE 470	*FORESTS, WOOD, AND CIVILIZATION	
Z 349	*BIODIVERSITY: CAUSES, CONSEQUENCES, AND CONSERVATION	
<i>Science, Technology and Society</i>		
Select one of the following:		3-4
AGRI 411	*INTRODUCTION TO FOOD SYSTEMS: LOCAL TO GLOBAL	
ANS 315	*CONTENTIOUS SOCIAL ISSUES IN ANIMAL AGRICULTURE	
BI 348	*HUMAN ECOLOGY	
BOT 324	*FUNGI IN SOCIETY	
CH 374	*TECHNOLOGY, ENERGY, AND RISK	
ENGR 350	*SUSTAINABLE ENGINEERING	
ENGR 363	*ENERGY MATTERS	
ENSC 479	**ENVIRONMENTAL CASE STUDIES	
FES 435/TOX 435	*GENES AND CHEMICALS IN AGRICULTURE: VALUE AND RISK	
FES 477/NR 477	*AGROFORESTRY	
FES 485	*CONSENSUS AND NATURAL RESOURCES	
FST 421	*FOOD LAW	
FW 470/HSTS 470	*ECOLOGY AND HISTORY: LANDSCAPES OF THE COLUMBIA BASIN	
GEOG 300	*SUSTAINABILITY FOR THE COMMON GOOD	
GEOG 340	*INTRODUCTION TO WATER SCIENCE AND POLICY	
HEST 310	*INTRO TO COMMUNITY ENGAGEMENT AND COMMUNITY-BASED DESIGN	
HORT 330/ENT 300	*PLAGUES, PESTS, AND POLITICS	
HST 481	*ENVIRONMENTAL HISTORY OF THE UNITED STATES	
HSTS 421	*TECHNOLOGY AND CHANGE	
NUTR 312	*ISSUES IN NUTRITION AND HEALTH	
PH 313	*ENERGY ALTERNATIVES	
PHL 325	*SCIENTIFIC REASONING	
PS 476	*SCIENCE AND POLITICS	
SOIL 395	**WORLD SOIL RESOURCES	
SUS 304	*SUSTAINABILITY ASSESSMENT	
Total Credits		66-71

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Baccalaureate Core Course (BCC)

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Writing Intensive Course (WIC)

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Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
CH 121	GENERAL CHEMISTRY	5
HORT 112	INTRODUCTION TO HORTICULTURAL SYSTEMS, PRACTICES AND CAREERS	2
WR 121	*ENGLISH COMPOSITION	3
Math Course		4
		Credits 14
<b>Winter</b>		
CH 122	*GENERAL CHEMISTRY	5
COMM 211	*COMMUNICATING ONLINE	3
SOIL 205 & SOIL 206	SOIL SCIENCE and *SOIL SCIENCE LABORATORY FOR SOIL 205	4
Perspectives Course		3-4
		Credits 15-16

<b>Spring</b>		
CH 123	*GENERAL CHEMISTRY	5
HHS 231	*LIFETIME FITNESS FOR HEALTH	2
HHS 241	*LIFETIME FITNESS	1
Perspectives Course		3-4
Writing II Course		3
		Credits 14-15

<b>Second Year</b>		
<b>Fall</b>		
BI 211	*PRINCIPLES OF BIOLOGY	4
CH 331	ORGANIC CHEMISTRY	4
HORT 251	TEMPERATE TREE FRUIT, BERRIES, GRAPES, AND NUTS	2
HORT 452	BERRY AND GRAPE PHYSIOLOGY AND CULTURE	4
Electives		1-2
		Credits 15-16

<b>Winter</b>		
BI 212	*PRINCIPLES OF BIOLOGY	4
CH 332	ORGANIC CHEMISTRY	4
HORT 316	PLANT NUTRITION	4
HORT 318	*APPLIED ECOLOGY OF MANAGED ECOSYSTEMS	3
		Credits 15

<b>Spring</b>		
BB 350	ELEMENTARY BIOCHEMISTRY	4
BI 213	*PRINCIPLES OF BIOLOGY	4
HORT 360	IRRIGATION AND DRAINAGE	4
Perspectives Course		3-4
		Credits 15-16

<b>Third Year</b>		
<b>Fall</b>		
HORT 301	GROWTH AND DEVELOPMENT OF HORTICULTURAL CROPS	3
MB 302	GENERAL MICROBIOLOGY	3
BA/AEC Course		4
Electives		1-2
Perspectives Course		3-4
		Credits 14-16

<b>Winter</b>		
BOT 331	PLANT PHYSIOLOGY	4
HORT 311	PLANT PROPAGATION	4
HORT 412	CAREER EXPLORATION: INTERNSHIPS AND RESEARCH PROJECTS	1
HORT 453	GRAPEVINE GROWTH AND PHYSIOLOGY	3
Electives		3
		Credits 15

<b>Spring</b>		
ENT 311	INTRODUCTION TO INSECT PEST MANAGEMENT	4
HORT 454	PRINCIPLES AND PRACTICES OF VINEYARD PRODUCTION	3
Electives		4-5
HORT Science and Technology elective		3-4
		Credits 14-16

<b>Fourth Year</b>		
<b>Fall</b>		
BOT 350	INTRODUCTORY PLANT PATHOLOGY	4
CROP 440	WEED MANAGEMENT	4
Perspectives Course		3-4
Synthesis Course		3-4
		Credits 14-16

<b>Winter</b>		
FST 466	WINE PRODUCTION PRINCIPLES	3
HORT 411	HORTICULTURE BOOK CLUB	1
PBG 430	PLANT GENETICS	3

Electives		4-5
Synthesis Course		3-4
	Credits	14-16
<b>Spring</b>		
FST 467	PRODUCTION AND ANALYSIS OF WINE	5
HORT 407	SEMINAR	1
HORT 410	INTERNSHIP	6
HORT 481	HORTICULTURE PRODUCTION CASE STUDIES	4
	Credits	16
	Total Credits	175-187