# GENERAL HORTICULTURE 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/)

**Available via Ecampus only**.

The online General Horticulture option curriculum is built on a strong foundation in horticultural science. This option is especially recommended for students already working in the horticultural industry or research facilities, whose careers will benefit from post-secondary education in the horticultural sciences. Students learn horticultural principles and practices associated with horticultural production within the context of plant biology, pest management, soils, ecology, and economics with applications in plant nutrition, pest management, business, and marketing. In addition, students are well-informed about the latest technology and trends in the field. The option provides sufficiently broad electives for the student to build their curriculum to meet specific goals.

Our graduates are skilled in finding and using information, as well as synthesizing information from many sources to solve problems. On-campus students benefit from field and lab experiences, research projects, and internships. Ecampus students will benefit from these same hands-on opportunities. With departmental support, the online student will identify opportunities for field, laboratory, internship, and research experiences, which will be vetted by the Department of Horticulture. Some lab experiences will be in the form of kits that the student will purchase and receive by mail; others will be virtual lab experiences created collaboratively between Department of Horticulture faculty and the curriculum design team in Ecampus.

The internship provides professional-level interaction with growers, managers, field reps, and consultants, and provides hands-on experience. Similarly, the research project familiarizes students with research topics and connects them with researchers in academia, public agencies, and private industry. Mentoring and advising will assist online students in taking advantage of departmental strengths.

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

**Option Code: 240**

| Code | Title | Credits |
|---|---|---|
| **Plant Materials** | | |
| Select three of the following: | | 10-12 |
| BOT 220 | *INTRODUCTION TO PLANT BIOLOGY | |
| BOT 440 | FIELD METHODS IN PLANT ECOLOGY | |
| CROP 200 | CROP ECOLOGY AND MORPHOLOGY | |
| HORT 226 | LANDSCAPE PLANT MATERIALS I: DECIDUOUS HARDWOODS AND CONIFERS | |
| HORT 228 | LANDSCAPE PLANT MATERIALS II: SPRING FLOWERING TREES AND SHRUBS | |
| HORT 255 | HERBACEOUS ORNAMENTAL PLANT MATERIALS | |
| RNG 353 | WILDLAND PLANT IDENTIFICATION | |
| **Horticultural Production and Management** | | |
| Select 6 or more of the following courses, 18 credits min.: | | 18 |
| CROP 310 | FORAGE PRODUCTION | |
| CROP 420 | SEED SCIENCE AND TECHNOLOGY | |
| CROP 460 | SEED PRODUCTION | |
| ENT 322 | HONEY BEE BIOLOGY AND BEEKEEPING | |
| ENT 440 | ISSUES IN INSECT TOXICOLOGY | |
| FES 445/FW 445 | ECOLOGICAL RESTORATION | |
| HORT 260 | ORGANIC FARMING AND GARDENING | |
| HORT 285 | PERMACULTURE DESIGN AND THEORY: CERTIFICATE COURSE | |
| HORT 314 | PRINCIPLES OF TURFGRASS MAINTENANCE | |
| HORT 315 | SUSTAINABLE LANDSCAPES: MAINTENANCE, CONSERVATION, RESTORE | |
| HORT 319 | RESTORATION HORTICULTURE | |
| HORT 349 | DIAGNOSING PLANT PROBLEMS | |
| HORT 350/FES 350 | URBAN FORESTRY | |
| HORT 421 | HERBS, SPICES, AND MEDICINAL PLANTS | |
| HORT 447/FES 447 | ARBORICULTURE | |
| HORT 456 | PHYSIOLOGY AND PRODUCTION OF BERRY CROPS | |
| HORT 485 | ADVANCED PERMACULTURE DESIGN TOOLS FOR CLIMATE RESILIENCE | |
| PBG 450 | PLANT BREEDING | |
| SOIL 388 | SOIL SYSTEMS AND PLANT GROWTH | |
| **Ecology** | | |
| HORT 318 | ^APPLIED ECOLOGY OF MANAGED ECOSYSTEMS | 3 |
| **Technology** | | |
| Select one of the following: | | 3-4 |
| AG 312 | ENGINE THEORY AND OPERATION | |
| AG 391 | FARM IMPLEMENTS | |
| AG 412 | AG SAFETY AND HEALTH | |
| FW 303 | SURVEY OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCE | |
| GEOG 360 | GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY | |
| HORT 414/CROP 414 | PRECISION AGRICULTURE | |
| **Horticultural Communication** | | |
| HORT 318 | ^APPLIED ECOLOGY OF MANAGED ECOSYSTEMS | 3 |
| **Capstone** | | |
| HORT 300/CROP 300 | CROP PRODUCTION IN PACIFIC NORTHWEST AGROECOSYSTEMS | |
| HORT 481 | HORTICULTURE PRODUCTION CASE STUDIES | |
| **Business Management** | | |
| Select one of the following: | | 3-4 |
| AEC 211 | AGRICULTURAL AND FOOD MANAGEMENT | |
| AEC 221 | AGRICULTURAL AND FOOD MARKETING | |
| BA 215 | | |
| BA 260 | INTRODUCTION TO ENTREPRENEURSHIP | |
| BA 365 | FAMILY BUSINESS MANAGEMENT | |
| NMC 311 | INTRODUCTION TO NONPROFIT MANAGEMENT | |
| **Government and Policy** | | |
| Select one of the following: | | 3-4 |
| AEC 250 | *INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY | |
| AEC 253 | *ENVIRONMENTAL LAW, POLICY, AND ECONOMICS | |
| HORT 455/FES 455 | URBAN FOREST PLANNING, POLICY AND MANAGEMENT | |
| LEAD 342 | *TEAM AND ORGANIZATIONAL LEADERSHIP | |
| LEAD 442 | LEADERSHIP SKILLS FOR CAREER SUCCESS | |
| PPOL 447 | INTEGRATED POLICY: FOOD, ENERGY, WATER, CLIMATE | |
| PS 201 | *INTRODUCTION TO UNITED STATES GOVERNMENT AND POLITICS | |
| PS 205 | *INTRODUCTION TO INTERNATIONAL RELATIONS | |
| PS 331 | *STATE AND LOCAL POLITICS | |

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| PS 470 | GLOBAL FOOD POLITICS AND POLICY | |
| PS 475 | ENVIRONMENTAL POLITICS AND POLICY | |
| PS 476 | *SCIENCE AND POLITICS | |
| **Ecology and Sustainability Ecosystems Courses** | | |
| Select courses that meet Synthesis requirements. Each course must be from a different department. | | |
| *Contemporary Global Issues* | | |
| 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 | |
| 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 | |
| *Science, Technology and Society* | | |
| 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 | *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 | | 49-56 |

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Baccalaureate Core Course (BCC)

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Writing Intensive Course (WIC)

**Option Code: 240**

| Course | Title | Credits |
|---|---|---|
| **First Year** | | |
| **Fall** | | |
| CH 121 | GENERAL CHEMISTRY | 5 |
| HHS 231 | *LIFETIME FITNESS FOR HEALTH | 2 |
| HORT 112 | INTRODUCTION TO HORTICULTURAL SYSTEMS, PRACTICES AND CAREERS | 2 |
| WR 121 | *ENGLISH COMPOSITION | 3 |
| Electives | | 3 |
| | Credits | 15 |
| **Winter** | | |
| CH 122 | *GENERAL CHEMISTRY | 5 |
| COMM 211 | *COMMUNICATING ONLINE | 3 |
| Bacc Core Perspectives Course | | 3-4 |
| Plant Materials Course | | 3-4 |
| | Credits | 14-16 |
| **Spring** | | |
| CH 123 | *GENERAL CHEMISTRY | 5 |
| HHS 241 | *LIFETIME FITNESS | 1 |
| Electives | | 2-4 |
| HORT Production Elective | | 3-4 |
| Bacc Core Writing II Course | | 3 |
| | Credits | 14-17 |
| **Second Year** | | |
| **Fall** | | |
| BI 204 | *INTRODUCTORY BIOLOGY I | 4 |
| CSS 205 | *SOIL SCIENCE | 4 |
| Math Course | | 4 |
| Bacc Core Perspectives Course | | 3-4 |
| | Credits | 15-16 |
| **Winter** | | |
| BI 205 | *INTRODUCTORY BIOLOGY II | 4 |
| Business Course | | 4 |
| Electives | | 3-4 |
| HORT Production Elective | | 3-4 |
| | Credits | 14-16 |
| **Spring** | | |
| BI 206 | *INTRODUCTORY BIOLOGY III | 4 |
| HORT 318 | ^APPLIED ECOLOGY OF MANAGED ECOSYSTEMS | 3 |
| HORT Production Elective | | 4 |
| Plant Materials Course | | 4 |
| | Credits | 15 |
| **Third Year** | | |
| **Fall** | | |
| ENT 311 | INTRODUCTION TO INSECT PEST MANAGEMENT | 4 |
| HORT 301 | GROWTH AND DEVELOPMENT OF HORTICULTURAL CROPS | 3 |
| HORT 316 | PLANT NUTRITION | 4 |
| Bacc Core Perspectives Course | | 4 |
| | Credits | 15 |
| **Winter** | | |
| HORT 311 | PLANT PROPAGATION | 4 |
| HORT 412 | CAREER EXPLORATION: INTERNSHIPS AND RESEARCH PROJECTS | 1 |
| Electives | | 2 |
| HORT Production Elective | | 4 |
| Bacc Core Perspectives Course | | 4 |
| | Credits | 15 |
| **Spring** | | |
| BOT 331 | PLANT PHYSIOLOGY | 4 |
| Electives | | 3-4 |
| Government and Policy Course | | 4 |

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|---|---|---|
| Technology Course | | 3-4 |
| | Credits | 14-16 |
| **Fourth Year** | | |
| **Fall** | | |
| BOT 350 | INTRODUCTORY PLANT PATHOLOGY | 4 |
| HORT Production Elective | | 3-4 |
| Plant Materials Course | | 3-4 |
| Bacc Core Synthesis Course | | 3-4 |
| | Credits | 13-16 |
| **Winter** | | |
| CROP 440 | WEED MANAGEMENT | 4 |
| HORT 300/CROP 300 | CROP PRODUCTION IN PACIFIC NORTHWEST AGROECOSYSTEMS | 4 |
| Electives | | 3-4 |
| Bacc Core Synthesis Course | | 3-4 |
| | Credits | 14-16 |
| **Spring** | | |
| HORT 410 | INTERNSHIP | 6 |
| HORT Production Elective | | 3-4 |
| Electives | | 6 |
| | Credits | 15-16 |
| | Total Credits | 173-189 |