ECOLOGICAL MANAGEMENT OF TURF, LANDSCAPE AND URBAN 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/)

The turf, landscape, and urban horticulture industries are large and diverse, offering careers in golf course and athletic field management; landscape design, construction, management, and ecological restoration; conservation; park, botanical, and public garden management; urban horticulture and forestry policy and management; research; and consulting.

The Turf Management program works to develop ecological and sustainable ways to manage large grassed areas, such as golf courses, athletic fields, and parks. A natural fit for the grass seed capital of the U.S., the Willamette Valley, the Turf Management program allows you to integrate horticulture, biology, soil science, and pest management in your studies. Today’s turf landscapes are managed with a focus on sustainability and ecosystem enhancement, and Oregon State leads the way. In addition to sustainable methods, you’ll learn about the environmental benefits of turf, like pollutant filtration and flood control, and you’ll become an expert in understanding how to maintain native wildlife and bird populations while using cutting edge turf management techniques.

Recent graduates who have focused on Turf Management have become golf course supervisors, athletic field managers, and caretakers of the parks and grounds of cities, counties, and school districts. The program focuses on science, technology, ‘in-field’ hands-on experience, and decision making in real-world settings. Activities stress networking and exposure to multiple work environments to help students integrate quickly into the industry.

In the Landscape and Urban Horticulture program, students will learn about sustainable landscape management, urban forestry, and the ecosystem services provided by the built environment, such as carbon sequestration and climate regulation, temperature modulation, waste decomposition and detoxification, purification of water and air, storm and rainwater management, crop polination, pest and disease control, nutrient dispersal and cycling, seed dispersal, intellectual and spiritual inspiration, recreational experiences, and scientific discovery.

Landscaping professionals design, build, and manage aesthetically pleasing, functional, and environmentally responsible natural spaces where we all live, work, and play. Some focus is on ecological restoration of disturbed habitats. In recent years, the industry has expanded and rapidly become more sophisticated to meet the challenges of today’s urban environment. Consequently, there is great demand for creative, motivated individuals who love the outdoors and enjoy working with plants, soil, water, nature, and people.

Active Learning

As a student studying Turf Management, you’ll spend time conducting field research trials at our turfgrass research facility at Lewis-Brown Farm. You’ll also have the opportunity to compete in the yearly Collegiate Turf Bowl at the GCSAA Education Conference and the Golf Industry Show. Most students also join the Turf Club, as there you’ll get to meet industry members, visit their golf courses and athletic fields, perform community service, and play golf at a local golf course - for free!

As a student studying Ecological Landscape and Urban Horticulture, you’ll spend time in one of our greenhouses, learning the best methods to grow and propagate plants and at the Oak Creek Center for Urban Horticulture, working on permaculture and landscape design, construction and management projects. You’ll also learn from faculty in the College of Forestry, to explore the latest urban forest management techniques. Student teams will also attend the Collegiate Competition at the Annual Meeting of the National Association of Landscape Professionals. The Department of Horticulture encourages students to get out of the classroom and take a hands-on approach to learning and skill development.

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

Option Code: 792

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HORT 226</td>
<td>LANDSCAPE PLANT MATERIALS I: DECIDUOUS HARDWOODS AND CONIFERS</td>
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<td>or HORT 228</td>
<td>LANDSCAPE PLANT MATERIALS II: SPRING FLOWERING TREES AND SHRUBS</td>
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<td>Select one additional course from the above or below courses:</td>
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<td>BOT 313</td>
<td>PLANT STRUCTURE</td>
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<td>BOT 321</td>
<td>PLANT SYSTEMATICS</td>
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<td>BOT 323</td>
<td>*FLOWERING PLANTS OF THE WORLD</td>
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<td>BOT 425</td>
<td>FLORA OF THE PACIFIC NORTHWEST</td>
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<td>FES 241</td>
<td>DENDROLOGY</td>
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<td>HORT 251</td>
<td>TEMPERATE TREE FRUIT, BERRIES, GRAPES, AND NUTS</td>
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<td>HORT 255</td>
<td>HERBACEOUS ORNAMENTAL PLANT MATERIALS</td>
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<td>HORT 433/CROP 433</td>
<td>SYSTEMATICS AND ADAPTATION OF VEGETABLE CROPS</td>
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<td>RNG 353</td>
<td>WILDLAND PLANT IDENTIFICATION</td>
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<td>Ecology</td>
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<tr>
<td>HORT 318</td>
<td>*APPLIED ECOLOGY OF MANAGED ECOSYSTEMS</td>
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<td>Technology</td>
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<td>Select one course from the following:</td>
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<td>AG 312</td>
<td>ENGINE THEORY AND OPERATION</td>
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<td>FW 303</td>
<td>SURVEY OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCE</td>
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<td>GEOG 350</td>
<td>GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY</td>
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<td>HORT 380</td>
<td>SUSTAINABLE LANDSCAPE DESIGN</td>
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<td>HORT 414/CROP 414</td>
<td>PRECISION AGRICULTURE</td>
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Horticultural Communication

- HORT 318 | *APPLIED ECOLOGY OF MANAGED ECOSYSTEMS | 3       |
- HORT 407 | SEMINAR                                     | 1       |
- HORT 411 | HORTICULTURE BOOK CLUB                       | 1       |

Capstone

Select one course from the following: 4

- FES 445/FW 445 | ECOLOGICAL RESTORATION                      |         |
- HORT 418 | GOLF COURSE MAINTENANCE                      |         |
Select two courses from the following, for a minimum of 6 credits:

- BI 301 *HUMAN IMPACTS ON ECOSYSTEMS
- BOT 488 ENVIRONMENTAL PHYSIOLOGY OF PLANTS
- CROP 480/HORT 480 CASE STUDIES IN CROPPING SYSTEMS MANAGEMENT
- FES 445/FW 445 ECOLOGICAL RESTORATION
- FW 462 ECOSYSTEM SERVICES
- GEOG 450 LAND USE IN THE AMERICAN WEST
- HORT 285 PERMACULTURE DESIGN AND THEORY: CERTIFICATE COURSE
- HORT 319 RESTORATION HORTICULTURE
- HORT 330/ENT 330 *PLAGUES, PESTS, AND POLITICS
- HORT 350/FES 300 URBAN FORESTRY
- HORT 351 FLORICULTURE AND GREENHOUSE SYSTEMS
- HORT 361 PLANT NURSERY SYSTEMS
- HORT 405 READING AND CONFERENCE
- HORT 414/CROP 414 PRECISION AGRICULTURE
- HORT 418 GOLF COURSE MAINTENANCE
- HORT 444/ENT 444 INSECT AGROECOLOGY
- HORT 447/FES 447 ARBORICULTURE
- HORT 481 URBAN FOREST PLANNING, POLICY AND MANAGEMENT
- HORT 485 HORTICULTURE PRODUCTION CASE STUDIES
- HORT 499 SPECIAL TOPICS
- RNG 355 DESERT WATERSHED MANAGEMENT
- RNG 421 WILDLAND RESTORATION AND ECOLOGY
- SOIL 316 NUTRIENT CYCLING IN AGROECOSYSTEMS
- SOIL 455 BIOLOGY OF SOIL ECOSYSTEMS
- SUS 304 *SUSTAINABILITY ASSESSMENT
- WSE 111 RENEWABLE MATERIALS FOR A GREEN PLANET

Select one course from the following:

- 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 FUNDAMENTALS OF ACCOUNTING
- BA 260 INTRODUCTION TO ENTREPRENEURSHIP
- BA 365 FAMILY BUSINESS MANAGEMENT
- NMC 311 INTRODUCTION TO NONPROFIT MANAGEMENT

Select one course from the following:

- 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 CRISIS IN RESOURCE ECOLOGY
- GEOG 300 *SUSTAINABILITY FOR THE COMMON GOOD

Select one course from the following:

- 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 330 *PLAGUES, PESTS, AND POLITICS
- 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: 55-60

Baccalaureate Core Course (BCC)
Writing Intensive Course (WIC)
Meets Synthesis requirements. Each course must be from a different department

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