Horticulture / Horticultural Research Option

Horticulture involves the production, genetic improvement, and research of fruits, nuts, vegetables, and ornamental plants, along with the design, construction, and management of landscape plantings such as parks, gardens, golf courses, sports fields, and ecological restoration projects. Our program provides students with the skills, knowledge, and applied experience needed to provide novel and innovative solutions to contemporary environmental issues.

Students must select from one of these options:
- Horticultural Research
- Ecological Management of Turf, Landscape, & Urban Horticulture*
- General Horticulture (Ecampus only)*
- Plant Breeding & Genetic*
- Sustainable Horticulture Production*
- Therapeutic Horticulture*
- Viticulture and Enology*

*Please refer to the other Horticulture Transfer Guide for course information

Your Bachelor’s Degree (BS) in Horticulture

- A minimum of 180 credits are required for graduation; 60 must be upper division (300 and 400-level courses)
- A maximum of 135 transfer credits may be applied toward a bachelor’s degree at OSU
- Only courses with letter prefixes and numbers above 100 are accepted
- Option required for Horticulture major
- More info at: agsci.oregonstate.edu/horticulture-main/degree/horticulture

Courses Required for Horticulture Major, Horticultural Research Option

This list is not comprehensive. Speak with OSU advisor for more information.

<table>
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<tr>
<th>Horticulture Core Requirement</th>
<th>MHCC Equivalent Course</th>
<th>OSU Course</th>
<th>Notes</th>
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<tr>
<td>Principles of Biology</td>
<td>BI 211, BI 212, BI 213</td>
<td>BI LD2, BI LD2, BI LD2</td>
<td>BI 204-206 available online to Ecampus students only; may not meet requirements for required courses in this or other programs. Only select one full series (either all of 204-206, all of 211-213, or all of 221-223). OSU now only offers BI 221-223. If taking BI 211-213, you must take entire series at Mount Hood. Refer to admissions.oregonstate.edu/d1-and-dld2-explained to learn more about BI LD2 equivalency.</td>
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<tr>
<td>General Chemistry</td>
<td>CH 221, CH 222, CH 223</td>
<td>CH 231/261, CH 232/262, CH 233/263</td>
<td>Lecture &amp; lab for 200-level Chemistry have separate course numbers at OSU</td>
</tr>
<tr>
<td>Differential Calculus</td>
<td>MTH 251</td>
<td>MTH 251</td>
<td>Available online at OSU</td>
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### Courses Required for Horticulture Major: Hort. Research coursework
This list is not comprehensive. Speak with OSU advisor for more information.

<table>
<thead>
<tr>
<th>Hort. Option Requirements</th>
<th>MHCC Equivalent Course</th>
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<tr>
<td>Additional Mathematics Integral Calculus</td>
<td></td>
<td>MTH 252</td>
<td>MTH 252</td>
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<tr>
<td>Science Foundation Courses</td>
<td></td>
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<tr>
<td>Organic Chemistry</td>
<td>CH 241</td>
<td>CH 331</td>
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<tr>
<td>Organic Chemistry</td>
<td>CH 243</td>
<td>CH 332</td>
<td></td>
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<tr>
<td>Organic Chemistry</td>
<td>CH 242</td>
<td>CH 337</td>
<td></td>
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<tr>
<td>General Physics</td>
<td>PH 201</td>
<td>PH 201</td>
<td></td>
</tr>
<tr>
<td>General Physics</td>
<td>PH 202</td>
<td>PH 202</td>
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- Complete one course in each Perspective category with no more than two in the same department.
- Full listing of Mount Hood courses that fulfill Bacc Core requirements: [admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-mount-hood-community-college](admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-mount-hood-community-college)

### General Education Courses (called the Baccalaureate Core)

**SKILLS COURSES**

- Math
- Writing I
- Writing II
- Speech (Writing III)
- Fitness (HHS 231 and 241)

Completed as part of major
WR 121. Required to transfer.
Can be completed as part of major: see advisor
Choose one course from BaccCore link above
HPE 295

**PERSPECTIVE COURSES**

- Biological Science
- Physical Science
- Additional Biological or Physical Science
- Cultural Diversity
- Literature and the Arts
- Social Processes and Institutions
- Western Culture

Completed as part of major
Completed as part of major
Completed as part of major
Choose one course from BaccCore link above
Choose one course from BaccCore link above
Completed as part of major
Choose one course from BaccCore link above

**DPD COURSE**

- Difference, Power, & Discrimination

Can be completed as part of major: see advisor

**SYNTHESIS COURSES**

- Contemporary Global Issues
- Science, Technology, & Society

Upper division course, take through OSU
Upper division course, take through OSU

### Horticulture option descriptions:

**Horticultural Research** – this option is designed for students interested in graduate school and/or a career in academic or industrial research. It provides you with an excellent foundation in the natural sciences and horticulture, and accommodates your specific research interests. Your studies will involve you in critical thinking, and allow you to seek out, synthesize, and apply information from many sources to analyze novel situations and solve problems. You will create a research project under the guidance of a faculty mentor, and write an undergraduate thesis. Recent graduates have gone on to Masters and Ph.D. programs in the US and abroad, and have studied diverse topics such as plant breeding, green roof technology, entomology, and weed science.

**Please refer to Horticulture Transfer Guide if interested in any options below:**

**Ecological Management of Turf, Landscape, & Urban Horticulture** – The Turf Management program works to develop ecological and sustainable ways to manage large grassed areas, such as golf courses, athletic fields, and parks. 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 pollination, pest and disease control, nutrient dispersal and cycling, seed dispersal, intellectual and spiritual inspiration, recreational experiences, and scientific discovery. Landscape 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.
General Horticulture (on-line option) – provides students with a strong foundation in horticultural science. Recommended for students already working in the horticultural industry, whose careers will benefit from post-secondary education in the horticultural sciences.

Plant Breeding & Genetics - Students in the Plant Breeding and Genetics Option will learn an interdisciplinary approach to applied plant breeding by taking courses across a broad spectrum of disciplines. The option may be tailored to meet students’ career goals including graduate school, as well as directly entering public or private sector breeding programs. After completing the degree, students will have gained fundamental knowledge in plant breeding that may be applied in a range of crops including annual and perennial horticultural crops, agronomic food and feed crops, and forestry products. See note on last page.

Sustainable Horticultural Production – students will gain the skills and knowledge necessary to manage integrated and organic fruit, berry, vegetable, nursery and/or greenhouse production systems. You will gain knowledge and experience in integrated pest management, plant propagation, plant nutrition, soil science, ecology, economics and business.

Therapeutic Horticulture – prepares students with the skills and knowledge needed to design healing and adapted gardens and to provide therapy programs used to improve the quality of people’s lives. The curriculum stresses effectively treating senior citizens with physical or cognitive issues, individuals with developmental disabilities, and at-risk youth with the restorative powers of gardens, landscapes, and greenscapes. Graduates of this option may become Registered Horticultural Therapists, Community Garden Coordinators, and Rehabilitation Program Coordinators.

Viticulture and Enology – this option is designed to support student learning about sustainable grape production practices that consider vine and vineyard health while also emphasizing the profitability of the vineyard and winery business. Recent graduates of the Viticulture and Enology option have become vineyard managers, viticulturists, consultants, and winemakers.

### Important Notes & Resources

- **Program Information:** see the [Department of Horticulture](https://horticulture.oregonstate.edu/horticulture/students) for more information.
- **See a sample degree plan by searching “Horticulture” located in the OSU catalog [catalog.oregonstate.edu](https://catalog.oregonstate.edu).** Or find a sample degree plan on the Horticulture Degree Fact Sheet [agsci.oregonstate.edu/degree-fact-sheet/horticulture](http://catalog.oregonstate.edu).
- **Horticulture offers 7 options which allow students to specialize.** The options are Ecological Management of Turf, Landscape and Urban Horticulture, General Horticulture, Horticulture Research, Plant Breeding and Genetics, Sustainable Horticultural Production, Therapeutic Horticulture, Viticulture and Enology. More details can be found by searching "Horticulture" in the OSU Catalog at [http://catalog.oregonstate.edu](http://catalog.oregonstate.edu).
- **Other similar majors to explore:** Botany, Crop and Soil Science, and Agricultural Sciences. Check out the [OSU catalog](http://catalog.oregonstate.edu) to explore these majors at [http://catalog.oregonstate.edu](http://catalog.oregonstate.edu).
- **Level 100/200 and lower division Baccalaureate Core are priority courses to complete before transferring to OSU.**
- **For Horticulture students, the best time to transfer is fall term.** Talk with an OSU advisor about your specific timeline.
- **It is important to speak with a Horticulture advisor early on, and often, to ensure correct course selection and sequencing.** Advisors contact info can be found [here](http://catalog.oregonstate.edu/education/contact-us/advisors).

### Resources and OSU Information:

- **Students do not have to complete a transfer degree in order to transfer to OSU.**
  - If you’ve completed the Oregon AAOT, all requirements of the Baccalaureate Core are complete except for Synthesis Courses and Writing Intensive Courses.
- **Preparing to apply to OSU?** See transfer student admissions info: [transfer.oregonstate.edu](http://transfer.oregonstate.edu).
- **Want to take classes at both OSU and an Oregon community college?** Check out the Degree Partnership Program: [partnerships.oregonstate.edu/students](http://partnerships.oregonstate.edu/students).

### Advising Contacts

Academic advisors at your community college and OSU are available to answer your questions and assist you in creating a transfer plan. **See your community college advisor first and use this Transfer Guide to help you plan.** It is important to speak with your OSU academic advisor early on, and often, to ensure correct course selection and sequencing. See [visit.osu.oregonstate.edu/visit-campus](http://visit.osu.oregonstate.edu) to schedule your personalized visit.

<table>
<thead>
<tr>
<th><strong>Mount Hood Community College</strong></th>
<th><a href="http://mhcc.edu/Degrees_TransferGuides/">mhcc.edu/Degrees_TransferGuides/</a></th>
</tr>
</thead>
</table>
| **OSU College of Agricultural Sciences Student Advisors** | Campus: Anne Gearhart, 541-737-5448, Anne.gearhart@oregonstate.edu  
  Ecampus: Sarah Finger-McDonald, Sarah.mcdonald@oregonstate.edu |

OSU College of Agricultural Sciences prohibits discrimination in all its programs, services, activities, and materials.

*Updated September 2022*