HORTICULTURE, B.S.

Horticulturists work to enrich our lives by integrating and applying plant science, environmental science, molecular biology, biotechnology, genetics, physiology, and management. Specifically, horticultural science deals with the development, production, growth, distribution, and use of fruits, vegetables, greenhouse crops, ornamentals, turf, and specialty plant crops (used for flavoring and medicine). Horticultural science is one of the most diverse biological sciences one can study at a university. Not only are the biology and genetics of crop plants interesting, but the application of this knowledge is equally important in a myriad of situations. Undergraduate horticulture majors will obtain specialized training in greenhouse/field management and the production and use of fruits, vegetables, nuts, and herbaceous/woody ornamentals through the bachelor of science degree program.

In addition to obtaining a job with an undergraduate degree in horticulture, the major provides an excellent background for graduate study in the field of plant sciences. Areas of graduate study include plant breeding and plant genetics, horticulture, agronomy, plant pathology, or other related fields such as biology, environmental science, natural resource management, agroecology, and genetics.

Students with either undergraduate or graduate degrees in horticulture have a variety of career opportunities. Recent studies show that there are more jobs in agriculture in the US than there are students graduating with agricultural bachelor of science degrees to fill them. Estimates in 2015 showed that there were 57,900 job openings in agriculture and related fields and only 35,400 students graduating annually in those areas. As our world grapples with the need to contribute science-based solutions to feeding 9 billion people by 2050, students trained in the agricultural and horticultural sciences will be called on to contribute.

Horticulture graduates may find opportunities in working on developing higher yielding crops or crops that can withstand more stressful growing conditions. Others may find opportunities working on improving qualities such as flavor, appearance, texture, and postharvest shelf life for a wide range of horticultural commodities from fruits to vegetables to flowers. Sustainable production is a particular area of growth where horticultural expertise can make a contribution. Students may wish to read a recent report from the United States Department of Agriculture and Purdue University (https://www.purdue.edu/usda/employment/wp-content/uploads/2015/04/2-Page-USDA-Employ.pdf) on the subject of employment opportunities in this area.

The horticulture degree serves as excellent preparation for careers in food production, plant nurseries, community supported agriculture (CSA), public gardens, landscaping, greenhouse production, teaching, public parks, vegetable fields, golf courses, urban agriculture, extension- and community-based educational work, work in research labs, and the health sciences. In addition, many horticultural science majors go on to work in public sector jobs including city and state positions with the Department of Natural Resources, the Wisconsin Department of Agriculture, and University of Wisconsin Division of Extension. Students with degrees in horticulture also work in hospitals (horticultural therapy), aerospace (food and recycling in space labs), and zoos (managing environments for animals and visitors). Although the career opportunities are numerous, horticulture students have a common desire to work intensively with plants to improve our environment and our health.

HOW TO GET IN

To declare this major, students must be admitted to UW–Madison and the College of Agricultural and Life Sciences (CALS). For information about becoming a CALS first-year or transfer student, see Entering the College (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#enteringthecollegetext).

Students who attend Student Orientation, Advising, and Registration (SOAR) with the College of Agricultural and Life Sciences have the option to declare this major at SOAR. Students may otherwise declare after they have begun their undergraduate studies. For more information, contact the advisor listed under the Advising and Careers tab.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatetestudytext) section of the Guide.

General Education

- Breadth—Humanities/Literature/Arts: 6 credits
- Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
- Breadth—Social Studies: 3 credits
- Communication Part A & Part B *
- Ethnic Studies *
- Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.
## COLLEGE REQUIREMENTS FOR ALL CALS B.S. DEGREE PROGRAMS

### Quality of Work: Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation.

### Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.

### First Year Seminar (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)
- 1

### International Studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)
- 3

### Physical Science Fundamentals
- CHEM 103 General Chemistry I
- CHEM 108 Chemistry in Our World
- CHEM 109 Advanced General Chemistry
- 4-5

### Biological Science
- 5

### Additional Science (Biological, Physical, or Natural)
- 3

### Science Breadth (Biological, Physical, Natural, or Social)
- 3

### CALS Capstone Learning Experience: included in the requirements for each CALS major (see 'Major Requirements') (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#requirementstext)

### MAJOR REQUIREMENTS

Courses may not double count within the major (unless specifically noted otherwise), but courses counted toward the major requirements may also be used to satisfy a university requirement and/or a college requirement. A minimum of 15 credits must be completed in the major that are not used elsewhere.

### Mathematics and Statistics

Select one of the following (or may be satisfied by placement exam):

- MATH 112 & MATH 113 Algebra and Trigonometry
- MATH 114 Algebra and Trigonometry
- MATH 171 Calculus with Algebra and Trigonometry I

Select one of the following:

- MATH 211 Algebra
- MATH 217 Calculus with Algebra and Trigonometry II
- MATH 221 Calculus and Analytic Geometry 1
- MATH 222 Calculus and Analytic Geometry 2
- STAT 301 Introduction to Statistical Methods
- STAT 371 Introductory Applied Statistics for the Life Sciences
- COMP SCI 300 Programming II

Select one of the following:

- CHEM 103 & CHEM 104 General Chemistry I and General Chemistry II
- CHEM 109 Advanced General Chemistry

### Biology

Select one of the following options: 10-12

**Option 1:**

- BOTANY/BOTANY 130 General Botany
- ZOOLOGY/BIOLOGY 101 Animal Biology
- ZOOLOGY/BIOLOGY 102 Animal Biology Laboratory

**Option 2:**

- BOTANY/BOTANY 151 Introductory Botany
- ZOOLOGY/BIOLOGY 152 Introductory Botany

**Option 3:**

- BIOCORE 381 Evolution, Ecology, and Genetics
- BIOCORE 383 Cellular Biology

And select two of the following:

- BIOCORE 382 Evolution, Ecology, and Genetics Laboratory
- BIOCORE 384 Cellular Biology Laboratory
- BIOCORE 486 Principles of Physiology Laboratory

### Agricultural Breadth

- ENTOM/ZOOLOGY 302 Introduction to Entomology 3-4
- or ENTOM 351 Principles of Economic Entomology

- GENETICS 466 Principles of Genetics 3

Select one of the following: 3-4

- BOTANY 300 Plant Anatomy
- BOTANY 305 Plant Morphology and Evolution
- BOTANY 500 Plant Physiology
- PL PATH 300 Introduction to Plant Pathology
- PL PATH 300 or PL PATH/F&W ECOL/HORT/LAND ARC 309 Diseases of Trees and Shrubs

- SOIL SCI 301 General Soil Science 4

### Horticultural Core

- HORT 120 Survey of Horticulture 3
- HORT 121 Horticulture Colloquium 1
- HORT 227 Propagation of Horticultural Plants 3
- HORT 320 Environment of Horticultural Plants 3
- HORT/AGRONOMY/SOIL SCI 326 Plant Nutrition Management 3

Select one of the following: 3

- HORT 334 Greenhouse Cultivation
- HORT 335 Greenhouse Cultivation Lab
- HORT 375 Special Topics (Organic Vegetable Production) 2

Select three of the following: 9
### HORT 234
Ornamental Plants

### HORT/PL PATH 261 & HORT/PL PATH 262
Sustainable Turfgrass Use and Management and Turfgrass Management Laboratory

### HORT 375
Special Topics (Arboriculture and Landscape Maintenance)

### HORT 345
Fruit Crop Production (alternate years) ²

### HORT 370
World Vegetable Crops

### Electives
Select 5 elective credits (see list below) ³

### Capstone
Select one of the following: ¹-³

- A course as approved by advisor and chair of the curriculum committee, usually taken as the following: ³

- HORT/AGRonomy 376
- Tropical Horticultural Systems

- AGRonomy 378
- and Tropical Horticultural Systems

- HORT 399
- Coordinative Internship/Cooperative Education

- HORT 699
- Special Problems

### Total Credits
70-84

¹ If MATH 171 is taken, MATH 217 must also be taken.

² Alternate years.

³ Example activities include broad-based internships or broad-based international study.

### ELECTIVE COURSES
Students may not double count courses within the major requirements (Agricultural Breadth, Horticultural Core, Electives, Capstone)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A A 215</td>
<td>Introduction to Agricultural and Applied Economics</td>
<td>4</td>
</tr>
<tr>
<td>A A/ENVIR ST 244</td>
<td>The Environment and the Global Economy</td>
<td>4</td>
</tr>
<tr>
<td>A A 246</td>
<td>Climate Change Economics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>A A 319</td>
<td>The International Agricultural Economy</td>
<td>3</td>
</tr>
<tr>
<td>A A 320</td>
<td>Farming Systems Management</td>
<td>3</td>
</tr>
<tr>
<td>A A 323</td>
<td>Cooperatives and Alternative Forms of Enterprise Ownership</td>
<td>3</td>
</tr>
<tr>
<td>A A/ECON/ENVIR ST 343</td>
<td>Environmental Economics</td>
<td>3-4</td>
</tr>
<tr>
<td>GEN BUS 310</td>
<td>Fundamentals of Accounting and Finance for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>GEN BUS 311</td>
<td>Fundamentals of Management and Marketing for Non-Business Majors</td>
<td>3</td>
</tr>
</tbody>
</table>

### BUSINESS AND ECONOMICS

- **Code**
- **Title**
- **Credits**

### Ecology, Conservation, and the Environment

- **Code**
- **Title**
- **Credits**

### Total Credits
70-84

### Food, Health and Human Well-being:

- A A/E/C&SOC/SOC 340
- Issues in Food Systems ³-4

### BUSINESS AND ECONOMICS

- **Code**
- **Title**
- **Credits**

### Agriculture Breadth

- **Code**
- **Title**
- **Credits**

### Horticultural Core

- **Code**
- **Title**
- **Credits**

### Electives

- **Code**
- **Title**
- **Credits**

### Capstone

- **Code**
- **Title**
- **Credits**

### Total Credits
70-84

¹ If MATH 171 is taken, MATH 217 must also be taken.

² Alternate years.

³ Example activities include broad-based internships or broad-based international study.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL PATH 311</td>
<td>Global Food Security (Food Systems, Sustainability, and Climate Change)</td>
<td>3</td>
</tr>
<tr>
<td>PL PATH 375</td>
<td>Special Topics</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Landscape Horticulture**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BSE 201</td>
<td>Land Surveying Fundamentals</td>
<td>1</td>
</tr>
<tr>
<td>BSE 243</td>
<td>Operating and Management Principles of Off-Road Vehicles</td>
<td>3</td>
</tr>
<tr>
<td>F&amp;W ECOL 375</td>
<td>Special Topics (Tree Risk Assessment and Decay Detection)</td>
<td>1-4</td>
</tr>
<tr>
<td>HORT 234</td>
<td>Ornamental Plants</td>
<td>3</td>
</tr>
<tr>
<td>HORT/PL PATH 261</td>
<td>Sustainable Turfgrass Use and Management</td>
<td>2</td>
</tr>
<tr>
<td>HORT/PATH-BIO 500</td>
<td>Special Topics (Epigenetics)</td>
<td>1-4</td>
</tr>
<tr>
<td>HORT/AGRONOMY 338</td>
<td>Plant Breeding and Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>HORT/AGRONOMY/BOTANY 339</td>
<td>Plant Biotechnology: Principles and Techniques I</td>
<td>4</td>
</tr>
<tr>
<td>HORT/AGRONOMY/BOTANY 340</td>
<td>Plant Cell Culture and Genetic Engineering</td>
<td>4</td>
</tr>
<tr>
<td>HORT/AGRONOMY 360</td>
<td>Genetically Modified Crops: Science, Regulation &amp; Controversy</td>
<td>2</td>
</tr>
<tr>
<td>HORT 375</td>
<td>Special Topics (Arboriculture and Landscape Maintenance)</td>
<td>3</td>
</tr>
<tr>
<td>HORT/AGRONOMY 501</td>
<td>Techniques of Plant Breeding</td>
<td>3</td>
</tr>
<tr>
<td>HORT/AGRONOMY 502</td>
<td>Molecular Approaches for Potential Crop Improvement</td>
<td>3</td>
</tr>
<tr>
<td>HIST SCI 202</td>
<td>The Making of Modern Science</td>
<td>3</td>
</tr>
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</table>

**Public Policy and Environmental Ethics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>C&amp;E SOC/SOC 541</td>
<td>Environmental Stewardship and Social Justice</td>
<td>3</td>
</tr>
<tr>
<td>ENVR ST/GEOG 439</td>
<td>US Environmental Policy and Regulation</td>
<td>3-4</td>
</tr>
<tr>
<td>ENVIR ST/SOIL SCI 575</td>
<td>Assesment of Environmental Impact</td>
<td>3</td>
</tr>
<tr>
<td>POLI SCI 272</td>
<td>Introduction to Public Policy</td>
<td>3-4</td>
</tr>
<tr>
<td>POLI SCI/ECON/ENVR ST/URB R PL 449</td>
<td>Government and Natural Resources</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**Soil Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOIL SCI 305</td>
<td>Field Study of Soil</td>
<td>1</td>
</tr>
<tr>
<td>SOIL SCI 321</td>
<td>Soils and Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>SOIL SCI 322</td>
<td>Physical Principles of Soil and Water Management</td>
<td>3</td>
</tr>
<tr>
<td>SOIL SCI/PL PATH 323</td>
<td>Soil Biology</td>
<td>3</td>
</tr>
<tr>
<td>SOIL SCI/ENVR ST 324</td>
<td>Soils and Environmental Quality</td>
<td>3</td>
</tr>
<tr>
<td>SOIL SCI/ENVR ST 575</td>
<td>Assessment of Environmental Impact</td>
<td>3</td>
</tr>
</tbody>
</table>

**Weather and Climate Change**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM OCN 101</td>
<td>Weather and Climate</td>
<td>4</td>
</tr>
<tr>
<td>ATM OCN/ENVR ST/GEOSCI 102</td>
<td>Climate and Climate Change</td>
<td>3</td>
</tr>
<tr>
<td>ATM OCN/ENVR ST 171</td>
<td>Global Change: Atmospheric Issues and Problems</td>
<td>2-3</td>
</tr>
<tr>
<td>ATM OCN/ENVR ST/GEOG 332</td>
<td>Global Warming: Science and Impacts</td>
<td>3</td>
</tr>
<tr>
<td>ATM OCN/ENVR ST 520</td>
<td>Bioclimatology</td>
<td>3</td>
</tr>
</tbody>
</table>

**HONORS IN THE MAJOR**

Admission to the Honors Program is not competitive provided students meet the required admission criteria.

**Admission Criteria for New Freshmen:**
Horticulture, B.S.

- In the upper 10% of their high school graduating class
- ACT score of 28 or higher
- SAT score of at least 1240

**Admission Criteria for Transfer and Continuing UW-Madison Students:**

- UW-Madison cumulative GPA of at least 3.25

Highly motivated students can apply for admission to the program in the absence of these requirements by including a letter with their application addressed to the Honors Dean in 116 Agricultural Hall explaining why they should be in the program.

**HOW TO APPLY**

Apply to the program online (https://cals.wisc.edu/wp-content/uploads/2017/05/honorsapplication_form.pdf) or request an application in the Office of Academic Affairs, 116 Agricultural Hall. Applications are accepted at any time.

New freshmen with accepted applications will automatically be enrolled in Honors in Research. It is possible to switch to Honors in the Major in the student's first semester on campus after meeting with the advisor for that major by completing the application form and selecting Honors in the Major. Transfer and continuing students may apply directly to Honors in Research or Honors in the Major (after meeting with the major advisor).

**HOW TO CANCEL PARTICIPATION**

Students who are no longer interested in pursuing Honors should contact the CALS Honors Program Manager (see the contact box for CALS Honors Program (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/college-wide/college-agricultural-life-sciences-honors/)). Students may cancel their participation at any time, and this will not be noted on the student's transcript.

**REQUIREMENTS**

To earn Honors in the Major, students are required to take at least 20 honors credits. In addition, students must take HORT 289 Honors Independent Study, HORT 681 Senior Honors Thesis and HORT 682 Senior Honors Thesis when completing their thesis project; please see the Honors in Major Checklist for Horticulture (http://www.cals.wisc.edu/academics/undergraduate-programs/get-involved/honors-program/honors-in-the-major/) for more information. The Department of Horticulture also works collaboratively to strongly support students through the Honors in Research program.

**UNIVERSITY DEGREE REQUIREMENTS**

**Total Degree**

To receive a bachelor's degree from UW—Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.

**Residency**

Degree candidates are required to earn a minimum of 30 credits in residence at UW—Madison. "In residence" means on the UW—Madison campus with an undergraduate degree classification. "In residence" credit also includes UW—Madison courses offered in distance or online formats and credits earned in UW—Madison Study Abroad/Study Away programs.

<table>
<thead>
<tr>
<th>Quality of Work</th>
<th>Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.</th>
</tr>
</thead>
</table>

**LEARNING OUTCOMES**

1. Acquire, integrate, and apply knowledge of plant science to horticultural systems.
2. Demonstrate interdisciplinary knowledge and competency in managing horticultural systems.
3. Synthesize knowledge and use insight and creativity to better understand and improve horticultural systems.
4. Appreciate and communicate the diverse impacts of horticulture on people.
5. Demonstrate professionalism and proficiency in skills that relate to horticulture.

**FOUR-YEAR PLAN**

**SAMPLE HORTICULTURE FOUR-YEAR PLAN (WITH BOTANY/BIOLOGY 130 IN THE FIRST SEMESTER)**

**Freshman**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT 120</td>
<td>3</td>
<td>MATH 113</td>
<td>3</td>
</tr>
<tr>
<td>HORT 121</td>
<td>1</td>
<td>Ethnic Studies Course</td>
<td>3</td>
</tr>
<tr>
<td>BOTANY/BIOLOGY 130</td>
<td>1</td>
<td>ZOOLOGY/BIOLOGY 101</td>
<td>5</td>
</tr>
<tr>
<td>&amp; ZOOLOGY/BIOLOGY 102</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 112</td>
<td>3 Electives Courses</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>COMM A Course</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year Seminar</td>
<td>1</td>
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</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
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</tbody>
</table>

Total Credits 32

**Sophomore**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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<tr>
<td>HORT 320</td>
<td>3</td>
<td>CHEM 104</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>4</td>
<td>HORT 227</td>
<td>3</td>
</tr>
<tr>
<td>COMM B Course</td>
<td>3</td>
<td>HORT 334 &amp; HORT 335 (OR HORT 375 (Organic Vegetable Production))</td>
<td>3</td>
</tr>
<tr>
<td>Horticulture Breadth Courses or Electives</td>
<td>4-5 Electives</td>
<td>4-5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14-15</td>
<td>15-16</td>
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</tbody>
</table>

Total Credits 29-31

**Junior**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Breadth Courses</td>
<td>6-8</td>
<td>Agricultural Breadth Courses</td>
<td>6-9</td>
</tr>
<tr>
<td>Horticulture Breadth Course</td>
<td>3 Math / Statistics / Computer Science Course 3</td>
<td></td>
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<tr>
<td>---------------------------</td>
<td>------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>4-5 Electives 3</td>
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<td></td>
<td><strong>Total Credits 25-31</strong></td>
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</table>

**Senior**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Breadth Course(^2)</td>
<td>3 Agricultural Breadth Course(^2)</td>
<td>3-4</td>
</tr>
<tr>
<td>Horticulture Breadth or Elective Courses</td>
<td>6-7 Horticulture Breadth or Elective Courses(^3)</td>
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<tr>
<td>Horticulture Capstone Course</td>
<td>3 Horticulture Capstone Course (if not taken in fall)</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>Total Credits 27-29</strong></td>
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</tbody>
</table>

\(^1\) BOTANY/BIOLOGY 130 and ZOOLOGY/BIOLOGY 101/ZOOLOGY/BIOLOGY 102 are the preferred biology track

\(^2\) ENTOM/ZOOLOGY 302, ENTOM 351, GENETICS 466, BOTANY 300, BOTANY 305, BOTANY 500, PL PATH 300, PL PATH/F&W ECOL/HORT/LAND ARC 309, and SOIL SCI 301. Please consult with a Horticulture advisor to discuss when these courses are typically offered.

\(^3\) Note that at least 120 credits must be completed to be eligible for graduation. Aim to complete an average of 15 credits per semester.

**Note:** HORT 121 Horticulture Colloquium can be taken in any year.

### SAMPLE HORTICULTURE FOUR-YEAR PLAN (WITH CHEM 103 IN THE FIRST SEMESTER)

#### Freshman

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT 120</td>
<td>3 Ethnic Studies Course</td>
<td>3</td>
</tr>
<tr>
<td>HORT 121</td>
<td>1 CHEM 104</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>4 BOTANY/BIOLOGY 130(^1)</td>
<td>5</td>
</tr>
<tr>
<td>MATH 112</td>
<td>3 MATH 113</td>
<td>3</td>
</tr>
<tr>
<td>First Year Seminar</td>
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<td></td>
</tr>
<tr>
<td>COMM A</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td><strong>Total Credits 31</strong></td>
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#### Sophomore

<table>
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<tr>
<th>Fall</th>
<th>Credits Spring</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HORT 320</td>
<td>3 Horticulture Breadth or Electives</td>
<td>9</td>
</tr>
<tr>
<td>Horticulture Breadth</td>
<td>3 HORT 227</td>
<td>3</td>
</tr>
<tr>
<td>COMM B</td>
<td>3 HORT 334 &amp; HORT 335 (OR HORT 375 (Organic Vegetable Production))</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits 30-32</strong></td>
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</tbody>
</table>

\(^1\) BOTANY/BIOLOGY 130 and ZOOLOGY/BIOLOGY 101/ZOOLOGY/BIOLOGY 102 are the preferred biology track

\(^2\) ENTOM/ZOOLOGY 302, ENTOM 351, GENETICS 466, BOTANY 300, BOTANY 305, BOTANY 500, PL PATH 300, PL PATH/F&W ECOL/HORT/LAND ARC 309, and SOIL SCI 301. Please consult with a Horticulture advisor to discuss when these courses are typically offered.

\(^3\) Note that at least 120 credits must be completed to be eligible for graduation. Aim to complete an average of 15 credits per semester.

**Note:** HORT 121 Horticulture Colloquium can be taken in any year.

### ADVISING AND CAREERS

#### ADVISING

Students interested in learning more about the Horticulture major should meet with Kathryn Jones, kjones26@wisc.edu or schedule an advising appointment via Starfish (https://advising.wisc.edu/facstaff/starfish/student-resources/).

#### FACULTY MENTORS

The Horticulture Department maintains a list of faculty mentors (https://horticulture.wisc.edu/academics/undergraduate-program/advising-2/) that are available to help current students with internships and careers, graduate school preparation, research opportunities, etc.
CAREERS
A degree in horticulture prepares students for numerous career paths, including plant breeding and genetics, applied plant science, food crop production, greenhouse production, urban agriculture, community-supported agriculture (CSA), gardening and landscaping, horticulture education, extension- and community-based education, horticultural therapy, and the health sciences. For sample career profiles in horticulture, see Career Opportunities (https://horticulture.wisc.edu/academics/undergraduate-program/research-career-opportunities-3/) on the department website.

INTERNSHIPS
Internships are a great way for Horticulture students to get hands-on horticultural experience. Many of our students intern at locations that vary from seed companies to wineries to public gardens. Horticulture students also have many opportunities to intern during the year on or near campus at facilities such as the Allen Centennial Garden (https://allencentennialgarden.org/), the UW Arboretum (https://arboretum.wisc.edu/), and the Agricultural Research Stations (https://ars.wisc.edu/).

RESEARCH
Horticulture students have many opportunities to get involved with research in the department. Students primarily find research opportunities by directly contacting faculty. Faculty can be found on the department’s website by the directory list (https://horticulture.wisc.edu/faculty-and-staff-2/faculty-and-staff/), by crops studied (https://horticulture.wisc.edu/research-and-outreach-2/crops-studied/), or by program area (https://horticulture.wisc.edu/research-and-outreach-2/faculty-by-program-area/). Occasionally, research positions are posted on the Student Job Center.

STUDY ABROAD
Horticulture students have unique opportunities to contextualize the learning acquired in traditional face-to-face courses on campus by participating in short-term field experiences abroad led by program leaders from the Department of Horticulture.

Some of these programs are:

UW Tropical Horticulture in Costa Rica – students enroll in AGRONOMY/HORT 376 Tropical Horticultural Systems in the fall then participate in a two-week intensive field experience in Costa Rica during winter break. Students have the opportunity to visit tropical crop plantations (for example—banana, pineapple, cacao, coffee, palm oil) and contrast different agricultural practices (small and large scale, organic, conventional).

UW Food Systems and the Environment in Northern Japan – this two-week field study takes place in mid-August. In this program, students from UW-Madison are partnered with students from Obihiro University of Agriculture and Veterinary Medicine, and through a combination of lectures and site visits, they will compare and contrast the landscape and ecology of Japan and Wisconsin.

HORTICULTURE SOCIETY
Connect with other Hort majors and those interested in horticulture by joining the Horticulture Society (https://win.wisc.edu/organization/hortsociety/). The Horticulture Society is a professional, social, and educational group which provides a common ground for all students interested in horticulture to meet other students with the same interests.