**Horticulture: Horticultural Science, BSAG**

**Requirements for Students Matriculating in or before Academic Year 2017-2018.** Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

*Minimum Overall Grade Point Average: 2.00*  
*Total Hours: 120*

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>General Education Requirements</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>English Composition</strong></td>
<td></td>
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</tr>
<tr>
<td>ENGL 1113 or ENGL 1313</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
<td>3</td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td><strong>American History &amp; Government</strong></td>
<td></td>
<td></td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>HIST 1103</td>
<td>Survey of American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1483</td>
<td>American History to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1493</td>
<td>American History Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>POLS 1113</td>
<td>American Government</td>
<td>3</td>
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<tr>
<td><strong>Analytical &amp; Quantitative Thought (A)</strong></td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>MATH 1583</td>
<td>Applied Geometry and Trigonometry (A)</td>
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<tr>
<td>MATH 1613</td>
<td>Trigonometry (A)</td>
<td>3</td>
</tr>
<tr>
<td>3 hours STAT designated (A)</td>
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<tr>
<td><strong>Humanities (H)</strong></td>
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<td></td>
</tr>
<tr>
<td>Courses designated (H)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Natural Sciences (N)</strong></td>
<td></td>
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<tr>
<td>Must include one Laboratory Science (L) course</td>
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<td></td>
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<tr>
<td>BIOL 1114</td>
<td>Introductory Biology (LN)</td>
<td>4</td>
</tr>
<tr>
<td>BOT 1404</td>
<td>Plant Biology (LN)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1314 or CHEM 1215</td>
<td>General Chemistry (LN)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Social &amp; Behavioral Sciences (S)</strong></td>
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<td></td>
</tr>
<tr>
<td>Course designated (S)</td>
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<tr>
<td><strong>Additional General Education</strong></td>
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<tr>
<td>Courses designated (A), (H), (N), or (S)</td>
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<td><strong>Hours Subtotal</strong></td>
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**Diversity (D) & International Dimension (I)**

May be completed in any part of the degree plan

Select at least one Diversity (D) course

Select at least one International Dimension (I) course

**College/Departmental Requirements**

**Agricultural Sciences and Natural Resources**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AG 1011</td>
<td>First Year Seminar</td>
<td>1</td>
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<tr>
<td>AGEC 1113</td>
<td>Introduction to Agricultural Economics (S)</td>
<td>2</td>
</tr>
<tr>
<td>or ECON 2103</td>
<td>Introduction to Microeconomics (S)</td>
<td>3</td>
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<tr>
<td>HORT 1013</td>
<td>Principles of Horticultural Science (LN)</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 2124</td>
<td>Fundamentals of Soil Science (N)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Written and Oral Communications</strong></td>
<td></td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
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<tr>
<td>AGCM 3203</td>
<td>Oral Communications in Agricultural Sciences &amp; Natural Resources (S)</td>
<td>2</td>
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<tr>
<td>SPCH 2713</td>
<td>Introduction to Speech Communication (S)</td>
<td>2</td>
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<tr>
<td>SPCH 3733</td>
<td>Elements of Persuasion (S)</td>
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<td><strong>Hours Subtotal</strong></td>
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**Major Requirements**

**Core Courses**

Select one of the following: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BOT 3463</td>
<td>Plant Physiology</td>
<td>3</td>
</tr>
<tr>
<td>HORT 4953</td>
<td>Plant Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>HORT 4963</td>
<td>Horticulture Physiology</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 1225 or CHEM 1515</td>
<td>General Chemistry (LN)</td>
<td>5</td>
</tr>
<tr>
<td>ENTO 2993</td>
<td>Introduction to Entomology (LN)</td>
<td>3</td>
</tr>
<tr>
<td>HORT 2010</td>
<td>Internship in Horticulture or Landscape Management (3 hours)</td>
<td>3</td>
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<tr>
<td>HORT 3084</td>
<td>Plant Propagation</td>
<td>4</td>
</tr>
<tr>
<td>HORT 3113</td>
<td>Greenhouse Management</td>
<td>3</td>
</tr>
<tr>
<td>PLP 3343</td>
<td>Principles of Plant Pathology</td>
<td>3</td>
</tr>
<tr>
<td>Select 3 hours of Genetics</td>
<td></td>
<td>3</td>
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<tr>
<td>Select 3 hours of Organic Chemistry</td>
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<td>3</td>
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</table>

**Related Courses**

Select 12 hours of 3000- or 4000-level courses in Botany or the College of Agricultural Sciences and Natural Resources

Recommended:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BOT 3005</td>
<td>Field Botany</td>
<td>3</td>
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<tr>
<td>BOT 3024</td>
<td>Plant Diversity</td>
<td>3</td>
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<tr>
<td>BOT 3114</td>
<td>Plant Taxonomy</td>
<td>3</td>
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<tr>
<td>BOT 3233</td>
<td>Plant Anatomy</td>
<td>3</td>
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<tr>
<td>ENTO 3663</td>
<td>Turfgrass Integrated Pest Management</td>
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<tr>
<td>ENTO 4223</td>
<td>Ecological Methodology</td>
<td>3</td>
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<tr>
<td>ENTO 4923</td>
<td>Applications of Biotechnology in Pest Management</td>
<td>3</td>
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<tr>
<td>HORT upper-division</td>
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<td></td>
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<tr>
<td>PLNT 4013</td>
<td>Principles of Weed Science</td>
<td>3</td>
</tr>
<tr>
<td>PLNT 4123</td>
<td>Plant-Environment Interactions</td>
<td>3</td>
</tr>
<tr>
<td>PLNT 4353</td>
<td>Plant Breeding</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 3433</td>
<td>Soil Genesis, Morphology, and Classification</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 3883</td>
<td>Sustainable Agriculture Concepts and Practice</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 4213</td>
<td>Precision Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 4234</td>
<td>Soil Nutrient Management</td>
<td>3</td>
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</table>
Horticulture: Horticultural Science, BSAG

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SOIL 4363</td>
<td>Environmental Soil Science</td>
</tr>
<tr>
<td>SOIL 4463</td>
<td>Soil and Water Conservation</td>
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<tr>
<td>SOIL 4483</td>
<td>Soil Microbiology</td>
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<tr>
<td>SOIL 4893</td>
<td>Soil Chemistry and Environmental Quality</td>
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</table>

Select 18 hours of the following: 5

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HORT 2513</td>
<td>Herbaceous Plant Materials</td>
</tr>
<tr>
<td>HORT 2613</td>
<td>Woody Plant Materials</td>
</tr>
<tr>
<td>HORT 3013</td>
<td>Arboriculture</td>
</tr>
<tr>
<td>HORT 3153</td>
<td>Turf Management</td>
</tr>
<tr>
<td>HORT 3213</td>
<td>Fruit and Nut Production</td>
</tr>
<tr>
<td>HORT 3433</td>
<td>Commercial Vegetable Production</td>
</tr>
<tr>
<td>HORT 3513</td>
<td>Landscape Irrigation</td>
</tr>
<tr>
<td>HORT 3612</td>
<td>Bidding and Estimating</td>
</tr>
<tr>
<td>HORT 3713</td>
<td>Urban Horticulture Production</td>
</tr>
<tr>
<td>HORT 4053</td>
<td>International Experience in Horticulture (I)</td>
</tr>
<tr>
<td>HORT 4133</td>
<td>Temperature Stress Physiology</td>
</tr>
<tr>
<td>HORT 4453</td>
<td>Turfgrass Physiology and Ecology</td>
</tr>
<tr>
<td>HORT 4543</td>
<td>Sustainable Nursery Production</td>
</tr>
<tr>
<td>HORT 4713</td>
<td>Public Garden Management</td>
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<tr>
<td>HORT 4773</td>
<td>Applied Landscape Planning</td>
</tr>
<tr>
<td>HORT 4901</td>
<td>Horticulture in Controlled Environments Laboratory</td>
</tr>
<tr>
<td>HORT 4903</td>
<td>Horticulture in Controlled Environments</td>
</tr>
<tr>
<td>HORT 4933</td>
<td>Principles of Sustainable and Organic Horticulture</td>
</tr>
<tr>
<td>HORT 4943</td>
<td>International Horticulture</td>
</tr>
<tr>
<td>HORT 4973</td>
<td>Sustainable Landscape Management</td>
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</tbody>
</table>

Hours Subtotal: 60

Electives

Select 1 hour or hours to complete required total for degree: 1

Hours Subtotal: 1

Total Hours: 120

1. College & Departmental requirements that may be used to meet GE requirements.
2. If used as (S) course above, hours in this block are reduced by three.
3. If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition II above, then hours in this block are reduced by three.
4. CHEM 3013 The Chemistry of Organic Compounds or BIOC 2344 Chemistry and Applications of Biomolecules recommended.
5. 12 hours must be upper-division.

Other Requirements

- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.
- A 2.25 GPA or higher is required in courses listed in the Major Requirements column above.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.