B.S. in Horticulture at Oregon State University – Curriculum

Name: ____________________________  
ID: ______________________________  
Entering Status: ____________________  

University Core Requirements:  
(No single course can satisfy more than one core area)

Writing/Health  
- WR 121 – English Composition (3) (Minimum passing grade of C–)  
- WR II (3)  
- COMM (3)  
- Writing Intensive (HORT 318) (3)  
- HHS 231 – Lifetime Fitness for Health (2)  
- HHS 24_ – Lifetime Fitness or PAC (1)  
- Foreign Language (if deficient; waived for pre-1997 HS graduates)

Perspectives  
(No more than 2 courses in one department)  
- Cultural Diversity  
- Literature/Arts  
- Social Processes  
- Western Culture  
- Difference, Power, Dis.  
- Biological Science (Met by major requirements)  
- Physical Science (Met by major requirements)  
- Phys. or Biol. Science (Met by major requirements)

Math  
- MTH 105, 111, 112, 211, 241, 245, or 251 (4) (Met by major requirements)  
- MTH 251 – Differential Calculus (4) (Prereq of C- or higher in MTH 112)

(Students must receive a grade of C-, or higher, to continue on to the next math course)

Synthesis/Upper Division – choose from provided list  
(Each course from a different department)  
- Contemp. Global Issues (3)  
- Science, Technology, Society (3)  
- WR II (3)

Major Core:  
General Science  
- MTH 251 – Differential Calculus (4) (Prereq of C- or higher in MTH 111, or in MTH 112 if taking MTH 251)

- CH 231 – General Chemistry (4) & CH 261 – Lab for Chemistry 231 (1)  
- CH 232 – General Chemistry (4) & CH 262 – Lab for Chemistry 232 (1)  
- CH 233 – General Chemistry (4) & CH 263 – Lab for Chemistry 233 (1)  
(Students must receive a grade of C-, or higher, to continue on to the next chemistry course in the series)

- Bi 211 or 221 – Principles of Biology (4)  
- Bi 212 or 222 – Principles of Biology (4)  
- Bi 213 or 223 – Principles of Biology (4)

or the alternative BI 204–206 series:  
- BI 204 – Introductory Biology I (4)  
- BI 205 – Introductory Biology II (4)  
- BI 206 – Introductory Biology III (4)

Agricultural Science  
- BOT 331 – Plant Physiology (4)  
- BOT 350 – Introductory Plant Pathology (4)  
- CROP 440 – Weed Management (4)  
- ENT 311 – Introduction to Insect Pest Management (4)  
- SOIL 205 – Soil Science (3) & SOIL 206 – Lab (1) or CS 205 Soil Science (4)

Orientation  
- HORT 112 – Introduction to Horticultural Systems, Practices & Careers (2)

Horticultural Science  
- HORT 301 – Growth and Development of Horticultural Crops (3)  
- HORT 311 – Plant Propagation (4) (HORT 310. Princ. Plant Propag. (3) for E-campus students only)  
- HORT 316 – Plant Nutrition (4)

Experiential Learning  
- HORT 403 – Thesis (3-12)  
- HORT 412 – Career Exploration: Internships & Research Projects (1)

Option: Horticultural Research  
Term Entering: ____________________________

From: ____________________________

Option Requirements

Plant Materials  
(Select 1 of the following courses)  
- BOT 313 – Plant Structure (4)  
- BOT 321 – Plant Systems (4)  
- BOT 425 – Flora of the Pacific Northwest (3)  
- CROP 200 – Crop Ecology & Morphology (3)  
- FES 241 – Dendrology (3)  
- HORT 226 – Landscape Plant Materials I (4)  
- HORT 228 – Landscape Plant Materials II (4)  
- HORT 251 – Temperate Tree Fruit, Berries, Grapes, and Nuts (2) alt. year  
- HORT 255 – Herbaceous Ornamental Plant Materials (3)  
- HORT 433 – Systematics & Adaptations of Vegetable Crops (4)

Ecology  
(Select 1 of the following courses)  
- BI 370 – Ecology (3)  
- BOT 341 – Plant Ecology (4)  
- HORT 318 – Applied Ecology of Managed Ecosystems (3)

Horticultural Communication  
- HORT 406 – Projects: Data Presentations (1)  
- HORT 407 – Seminar (1)  
- HORT 411 – Horticulture Book Club (1)

(Select 1 of the following Writing Intensive Courses)  
- BOT 323 – Flowering Plants of the World (3)  
- SUS 325 – Ag & Environmental Predicaments (3)  
- HORT 318 – Applied Ecology of Managed Ecosystems (3)

Capstone  
(Select 1 of the following courses)  
- HORT 452 – Berry & Grape Physiology & Culture (4) (Select 1 of the following courses)  
- HORT 453 – Grapevine Growth & Physiology (3)  
- HORT 454 – Principles & Practices of Vineyard Production (3)  
- HORT 463 – Seed Biology (3) alt. year  
- HORT 481 – Horticulture Production Case Studies (4)  
- PBG 450 – Plant Breeding (4)

Advanced Horticultural Science  
- PBG 430 – Plant Genetics (3)

Math and Science Foundation  
- MTH 251 – Differential Calculus (4) (Prereq of C- or higher in MTH 112)  
- MTH 252 – Integral Calculus (4) (Prereq of C- or higher in MTH 252)  
- ST 351 – Introduction to Statistical Methods (4)

(Select 3 of the following courses)  
- BB 350 – Elementary Biochemistry (4)  
- CH 331 – Organic Chemistry (4) (Select 3 of the following courses)  
- CH 332 – Organic Chemistry (4) (Prereq of C- or higher in CH 323+326)  
- PH 201 – General Physics (5)  
- PH 202 – General Physics (5)

Select 12 credits of upper-division Horticulture and Life Science courses (with approval of research mentor and advisor)  

Grade ______ Class ______ Credits ______

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Select 12 credits of upper-division Horticulture and Life Science courses (with approval of research mentor and advisor)
**Ecology & Sustainability Ecosystems Courses (Meets Synthesis Requirements)**
*(Each course must be from a different department)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>*AEC 351</td>
<td>Natural Resource Economics &amp; Policy</td>
<td>3</td>
</tr>
<tr>
<td>*AEC 352</td>
<td>Environmental Economics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>*BI 301</td>
<td>Human Impacts on Ecosystems</td>
<td>3</td>
</tr>
<tr>
<td>*CROP 330</td>
<td>World Food Crops</td>
<td>3</td>
</tr>
<tr>
<td>*FES 365</td>
<td>Issues in Natural Resources Conservation</td>
<td>3</td>
</tr>
<tr>
<td>*FW 325</td>
<td>Global Crises in Resource Ecology</td>
<td>3</td>
</tr>
<tr>
<td>*GEOG 300</td>
<td>Sustainability for the Common Good</td>
<td>3</td>
</tr>
<tr>
<td>*GEOG 330</td>
<td>Geography International Development &amp; Globalization</td>
<td>3</td>
</tr>
<tr>
<td>*HORT/ENT 331</td>
<td>Pollinators in Peril (3)</td>
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<tr>
<td>*SUS 350</td>
<td>Sustainable Communities</td>
<td>4</td>
</tr>
<tr>
<td>*Z 349</td>
<td>Biodiversity: Causes, Consequences &amp; Conservation</td>
<td>3</td>
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</tbody>
</table>

**Science, Technology and Society**
*(Select 1 of the following courses)*

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ANS 315</td>
<td>Contentious Social Issues in Animal Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>*ANS/FES/SOC 485</td>
<td>Consensus and Natural Resources (3)</td>
<td></td>
</tr>
<tr>
<td>*BI 348</td>
<td>Human Ecology</td>
<td>3</td>
</tr>
<tr>
<td>*BOT 324</td>
<td>Fungi in Society</td>
<td>3</td>
</tr>
<tr>
<td>*CH 374</td>
<td>Technology, Energy, and Risk</td>
<td>3</td>
</tr>
<tr>
<td>*ENGR 350</td>
<td>Sustainable Engineering</td>
<td>3</td>
</tr>
<tr>
<td>*ENGR 363</td>
<td>Energy Matters</td>
<td>3</td>
</tr>
<tr>
<td>*ENS 479</td>
<td>Environmental Case Studies</td>
<td>3</td>
</tr>
<tr>
<td>*FES/TOX 435</td>
<td>Genes and Chemicals in Agriculture: Value and Risk (3)</td>
<td></td>
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<tr>
<td>*FES/NR 477</td>
<td>Agroforestry</td>
<td>3</td>
</tr>
<tr>
<td>*FST 421</td>
<td>Food Law</td>
<td>3</td>
</tr>
<tr>
<td>*FW 470</td>
<td>Ecology &amp; History: Landscapes Columbia Basin</td>
<td>3</td>
</tr>
<tr>
<td>*GEOG 300</td>
<td>Sustainability for the Common Good</td>
<td>3</td>
</tr>
<tr>
<td>*GEOG 340</td>
<td>Introduction to Water Science and Policy</td>
<td>3</td>
</tr>
<tr>
<td>*HORT 330/ENT 300</td>
<td>Plagues, Pests, and Politics (3)</td>
<td></td>
</tr>
<tr>
<td>*HST 481</td>
<td>Environmental History of the United States</td>
<td>4</td>
</tr>
<tr>
<td>*HST 421</td>
<td>Technology &amp; Change</td>
<td>4</td>
</tr>
<tr>
<td>*NUTR 312</td>
<td>Issues in Nutrition &amp; Health</td>
<td>3</td>
</tr>
<tr>
<td>*PH 313</td>
<td>Energy Alternatives</td>
<td>3</td>
</tr>
<tr>
<td>*PHL 325</td>
<td>Scientific Reasoning</td>
<td>4</td>
</tr>
<tr>
<td>*PS 476</td>
<td>Science &amp; Politics</td>
<td>4</td>
</tr>
<tr>
<td>*SOIL 395</td>
<td>World Soil Resources</td>
<td>3</td>
</tr>
<tr>
<td>*SUS 304</td>
<td>Sustainability Assessment</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Units (need 180)**

**Upper Div. Units (need 60)**

**Grade Requirements**

Students pursuing a major or minor in horticulture are required to receive a grade of C– or better in all HORT (horticulture) and PBG (plant breeding and genetics) courses that are required for completion of their major and option, or minor. If a grade below C– is received in a HORT or PBG course required for their major and option, or minor, a student will need to retake the course and receive a grade of C– or better. If the grade below a C– was received for a course that is part of a group of courses where the student can select which courses to take (i.e., they do not need to take all of the courses, just a specified number of courses or credits) then it would be acceptable for the student to substitute a course for the one that they had received a grade below a C–. For example, in most of our options, a student needs to complete three of four plant identification courses. If a student received a grade lower than a C– in one of the classes, they could either retake the same course or complete the other three courses with a grade of C– or better.