

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

Name: _____

ID: _____

Entering Status: _____

Option: **Horticultural Research**

Term Entering: _____

From: _____

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)*

(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) _____

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 – Principles of Biology (4)

_____ BI 212 – Principles of Biology (4)

_____ BI 213 – Principles of Biology (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 CSS 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 316 – Plant Nutrition (4)

Experiential Learning

_____ HORT 403 – Thesis (6-12)

_____ HORT 412 – Career Exploration: Internships & Research Projects (1)

Option Requirements

Plant Materials

(Select 1 of the following courses)

_____ BOT 313 – Plant Structure (4)

_____ BOT 321 – Plant Systematics (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)

Technology

(Select 1 of the following courses)

_____ HORT 414 – Precision Agriculture (4)

_____ PBG 441 – Plant Tissue Culture (4)

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 (WIC) (3)

_____ CROP/SOIL 325 – Ag & Environmental Predicaments (3) (WIC)

_____ HORT 318 – Applied Ecology of Managed Ecosystems (3) (WIC)

Capstone

(Select 1 of the following courses)

_____ HORT 452 – Berry & Grape Physiology & Culture (4) *alt. year*

_____ HORT 453 – Grapevine Growth & Physiology (3)

_____ HORT 454 – Principles & Practices of Vineyard Production (3)

_____ HORT 463 – Seed Biology (3) *alt. year*

_____ HORT 480 – Case Studies in Cropping Systems Management (4)

_____ HORT 495 – Horticultural Management Plans (3)

_____ PBG 450 – Plant Breeding (4)

Advanced Horticultural Science

_____ PBG 430 – Plant Genetics (3)

Math and Science Foundation Courses

_____ BB 350 – Elementary Biochemistry (4)

_____ CH 331 – Organic Chemistry (4) **(Prereq of C- or higher in CH 123 or CH 233+263)**

_____ CH 332 – Organic Chemistry (4) **(Prereq of C- or higher in CH 331)**

_____ 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)**

_____ PH 201 – General Physics (5)

_____ PH 202 – General Physics (5)

_____ ST 351 – Introduction to Statistical Methods (4)

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

Grade	Class	Credits

Students in this option must take HORT 403 – Thesis for the Experiential Learning requirement in the major core.

Ecology & Sustainability Ecosystems Courses (Meets Synthesis Requirements)
(Each course must be from a different department)

Contemporary Global Issues

(Select 1 of the following courses)

- _____ AEC 351 – Natural Resource Economics & Policy (3)
- _____ AEC 352 – Environmental Economics and Policy (3)
- _____ BI 301 – Human Impacts on Ecosystems (3)
- _____ CROP 330 – World Food Crops (3)
- _____ FES 365 – Issues in Natural Resources Conservation (3)
- _____ FW 325 – Global Crises in Resource Ecology (3)
- _____ GEOG 300 – Sustainability for the Common Good (3)
- _____ GEOG 330 – Geography International Development & Globalization (3)
- _____ HORT/ENT 331 – Pollinators in Peril (3)
- _____ SUS 350 – Sustainable Communities (3)
- _____ Z 349 – Biodiversity: Causes, Consequences & Conservation (3)

Science, Technology and Society

(Select 1 of the following courses)

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

Total Units (need 180) _____

Upper Div. Units (need 60) _____

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.