

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)
Option requires HORT 403 – Thesis to fulfill Experiential Learning requirement in the major core.
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 (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) alt. year
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) (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)
*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)

Table with 3 columns: Grade, Class, Credits. Includes horizontal lines for course entry.

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 (4)
- _____ *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 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) _____

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.