

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)
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
Physical Science
Phys. or Biol. Science

Math

MTH 105, 111, 112, 211, 241, 245, or 251 (4)
(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 student 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.