

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

Name: _____

ID: _____

Entering Status: _____

Option: **General Horticulture**

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 112, MTH 241, MTH 245, MTH 251, or ST 351 (4)

(Prereq of C- or higher in MTH 111, or in MTH 112 if taking MTH 251)

_____ CH 121 – General Chemistry (5) or CH 231 – General Chemistry (4)
and CH 261 – Laboratory for Chemistry 231 (1)

_____ CH 122 – General Chemistry (5) or CH 232 – General Chemistry (4)
and CH 262 – Laboratory for Chemistry 232 (1)

_____ CH 123 – General Chemistry (5) or CH 233 – General Chemistry (4)
and CH 263 – Laboratory 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)

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 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 or 410 – Thesis/Internship (6-12)

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

Option Requirements

Plant Materials

(Select 3 of the following courses)

_____ *BOT 220 – Introduction to Plant Biology (4)

_____ BOT 440 – Field Methods in Plant Ecology (4)

_____ CROP 200 – Crop Ecology and Morphology (3)

_____ HORT 226 – Landscape Plant Materials I (4)

_____ HORT 228 – Landscape Plant Materials II (4)

_____ HORT 255 – Herbaceous Ornamental Plant Materials (3)

_____ RNG 353 – Wildland Plant Identification (4)

Horticultural Production & Management

(Select 6 or more of the following courses, 18 credits min.)

_____ CROP 310 – Forage Production (4)

_____ CROP 420 – Seed Science and Technology (3)

_____ CROP 460 – Seed Production (3)

_____ ENT 322—Honeybee Biology & Beekeeping (3)

_____ ENT 440—Issues in Insect Toxicology (3)

_____ FES 445 – Ecological Restoration (4)

_____ HORT 260 – Organic Farming/Gardening (3)

_____ HORT 285 – Permaculture Design & Theory: Certificate Course (4)

_____ HORT 314 – Principles of Turfgrass Maintenance (4)

_____ HORT 315 – Sustainable Landscapes: Maintenance, Conserve, Restore (4)

_____ HORT 319 – Restoration Horticulture (3)

_____ HORT 349 – Diagnosing Plant Problems (3)

_____ HORT/FES 350 – Urban Forestry (3)

_____ HORT 421 – Herbs, Spices, and Medicinal Plants (3)

_____ HORT/FES 447 – Arboriculture (4)

_____ HORT 456 – Physiology and Production of Berry Crops (4)

_____ HORT 485 – Advanced Permaculture Design Tools for Climate Resilience (3)

_____ PBG 450 – Plant Breeding (4)

_____ SOIL 388 – Soil Systems and Plant Growth (4)

Ecology

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

Technology

(Select 1 course)

_____ AG 312 – Engine Theory & Operation (3)

_____ AG 391 – Farm Implements (3)

_____ AG 412 – Ag Safety and Health (3)

_____ FW 303 – Survey Geographic Info. Sys. In Natural Resource (3)

_____ GEOG 360 – Introduction to Geographic Information Systems (4)

_____ HORT 414 – Precision Agriculture (4)

Horticultural Communication

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

Capstone

(Select 1 course)

_____ HORT 300 – Crop Production in Pacific Northwest Agroecosystems (4)

_____ HORT 481 – Horticulture Production Case Studies (4)

Business Management

(Select 1 of the following courses)

_____ AEC 211 – Agricultural and Food Management (4)

_____ AEC 221 – Agricultural and Food Marketing (3)

_____ BA 215 – Fundamentals of Accounting (BA 315 – Account. Dec. Mking.) (4)

_____ BA 260 – Introduction to Entrepreneurship (4)

_____ BA 365 – Family Business Management (4)

_____ NMC 311 – Introduction to Nonprofit Management (3)

Government and Policy

(Select 1 of the following courses)

- _____ *AEC 250 – Introduction to Environmental Economics and Policy (3)
- _____ *AEC 253—Environmental Law, Policy & Economics (4)
- _____ FES 455/HORT 455 – Urban Forest Planning, Policy, and Management (4)
- _____ LEAD 342 – Team and Organizational Leadership (3)
- _____ LEAD 442 – Leadership Skills for Career Success (3)
- _____ PPOL 447 – Integrated Policy: Food, Energy, Water, Climate (4)
- _____ *PS 201—Introduction to US Government & Politics (4)
- _____ *PS 205—Introduction to International Relations (4)
- _____ *PS 331 – State and Local Politics (4)
- _____ PS 470 – Global Food Politics and Policy (4)
- _____ PS 475 – Environmental Politics and Policy (4)
- _____ *PS 476 – Science & Politics (4)

Ecology & Sustainability Ecosystems Courses (Meets Synthesis Requirements)

(Each course must be from a different department)

Science, Technology & Society

(Select 1 of the following courses)

- _____ *ANS/FES/FW/SOC 485 – Consensus & Natural Resources (3)
- _____ *ANTH 481 — Natural Resources and Community Values (3)
- _____ *BI 348 - Human Ecology (3)
- _____ *BOT 324 – Fungi in Society (3)
- _____ *ENSC 479 – Environmental Case Studies (3)
- _____ *FES/TOX 435 – Genes and Chemicals in Agriculture: Value and Risk (3)
- _____ *FES 485 – Consensus and Natural Resources (3)
- _____ *FW 350 – Endangered Species, Society & Sustainability (3)
- _____ *GEO 306 – Minerals, Energy, Water & the Environment (3)
- _____ *GEOG 300 – Sustainability for the Common Good (3)
- _____ *GEOG 340 – Introduction to Water Science & Policy (3)
- _____ *HORT 330/ENT 300 – Plagues, Pests, and Politics (3)
- _____ *HST 413 – Food in World History (4)
- _____ *HST 481 – Environmental History of the U.S. (4)
- _____ *PS 476 - Science and Politics (4)
- _____ *SOC 481 – Society and Natural Resources (4)
- _____ *SOIL 395 – World Soil Resources (3)
- _____ *SUS 395 – Sustainability Assessment (4)
- _____ *WGSS 440 – Women and Natural Resources (3)

Contemporary Global Issues

(Select 1 of the following courses)

- _____ *AEC 351 – Natural Resource Economics & Policy (3)
- _____ *AEC 352 – Environmental Economics and Policy (3)
- _____ *CROP 330 – World Food Crops (3)
- _____ *ECON 352 – Environmental Economics and Policy (3)
- _____ *FES 365 – Issues in Natural Resource Conservation (3)
- _____ *FCSJ 454 – International Perspectives on Food Systems (4)
- _____ *FW 325 – Global Crises in Resource Ecology (3)
- _____ *GEOG 300 – Sustainability for the Common Good (3)
- _____ *HORT/ENT 331 – Pollinators in Peril (3)
- _____ *PHL 440 – Environmental Ethics (3)
- _____ *PHL 443 – World Views & Environmental Values (3)
- _____ *PS 455 – The Politics of Climate Change (4)
- _____ *SOC 480 – Environmental Sociology (4)
- _____ *SUS 350 – Sustainable Communities (4)
- _____ *Z 349 – Biodiversity: Causes, Consequences and Conservation (3)

Total Units (need 180) _____

Upper Div. Units (need 60) _____

Research Track (optional)

- _____ MTH 251 – Differential Calculus (4)
- _____ MTH 252 – Integral Calculus (4)
- _____ ST 351 – Introduction to Statistical Methods (4)

(Select 3 or more from the following courses)

- _____ BB 350 – Elementary Biochemistry (4)
- _____ BI 370 – Ecology (3)
- _____ CH 331 – Organic Chemistry (4)
- _____ CH 332 – Organic Chemistry (4)
- _____ MB 230 – Introductory Microbiology (4)

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 re-take 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 re-take the same course or complete the other three courses with a grade of C– or better.