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)*

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 math 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 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: Horticultural Research
Term Entering: __________________________
From: __________________________

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)
- CROP 205 – Crop Development & Morphology (3)
- CROP 340 – Crop Breeding (3)
- HORT 226 – Landscape Plant Materials I (4)
- HORT 228 – Landscape Plant Materials II (4)
- HORT 251 – Trees & Shrubs, Berries, and Nuts (2) *(alt. year)*
- HORT 255 – Herbaceous Ornamental Plant Materials (3)
- HORT 433 – Systems & 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 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 441 – Plant Tissue Culture (4)

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 251)*
- 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)*

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(No single course can satisfy more than one core area)
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)
_______ *ENS 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 302 – Issues in Nutrition & Health (3)
_______ *PHL 411 – Energy Alternatives (3)
_______ *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.