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 (BOT 323, CROP/SOIL 325, or 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, or MTH 251 (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 311 – 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
- CROP/HORT 101 – Intro. to Horticulture, Crop, Soil, & Insect Science (1)

OR
- HORT 112 – Introduction to Horticultural Systems, Practices, & Careers (2)

Horticultural Science
- HORT 301 – The Biology of Horticulture (3)
- HORT 311 – Plant Propagation (4)
- HORT 316 – Plant Nutrition (4)

Option: Plant Breeding & Genetics
Term Entering: ________________________________
From: ________________

Experiential Learning
- PBG 403 or 410 – Thesis/Internship (3-12)
- HORT 412 – Career Exploration: Internships & Research Projects (1)

Option Requirements

Plant Materials
(Select 2 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 Fruits, Berries, Grapes, and Nuts (2) alt. year
- HORT 255 – Herbaceous Ornamental Plant Materials (3)
- HORT 433 – Systems & Adaptations of Veg. Crops (4)

Ecology
(Select 1 of the following courses)
- BI 370 – Ecology (3) (Prereq of C– or higher in BI 211, 212, 213)
- BOT 341 – Plant Ecology (4)
- HORT 318 – Applied Ecology of Managed Ecosystems (WIC) (3)

Technology
- PBG 441 – Plant Tissue Culture (4)

Agricultural Communication
- CROP/HORT 407 – Seminar (1)
- HORT 411 – Horticulture Book Club (1)

(Agricultural Communication)
- CROP/SOIL 325 – Ag & Environmental Predicaments (WIC) (3)
- HORT 318 – Applied Ecology of Managed Ecosystems (WIC) (3)

Capstone
- PBG 450 – Plant Breeding (4)

Science and Technology
- HORT 463 – Seed Biology (3) alt. year
- PBG 430 – Plant Genetics (3)
- ST 351 – Introduction to Statistical Methods (4)

Production and Technology
(Select 4 of the following courses, for 12 credits minimum)
- BOT 332 – Lab Techniques in Plant Bio (3)
- CROP 199 – Special Studies: Issues in Sustainable Ag (1)
- CROP 280 – Introduction to Complexity of Oregon Cropping Systems (4)
- CROP/HORT 300 – Crop Production in PNW Agroecosystems (4)
- CROP 310 – Forage Production (4)
- CROP 330 – World Food Crops (3)
- CROP 460 – Seed Production (3)
- CROP 590 – Experimental Design in Agriculture (4)
- CSS 320 – Principles of Oil & Fiber Crop Production (1)
- CSS 321 – Principles of Cereal Crop Production (1)
- CSS 322 – Principles of Potato Production (1)
- HORT 260 – Organic Farming & Gardening (3)
- HORT 351 – Floriculture & Greenhouse Systems (4) alt. year
- HORT 360 – Irrigation/Drainage (4)
- HORT 361 – Plant Nursery Systems (4) alt. year
- HORT/ENT 444 – Insect Agroecology (3)
- HORT 452 – Berry & Grape Physiology & Culture (4) alt. year
- HORT 453 – Grapevine Growth & Physiology (3)
- HORT 454 – Principles & Practices of Vineyard Production (3)
- HORT 499 – Advanced Organic Farming (2)
- MB 302 – General Microbiology (3)
- MB 303 – General Microbiology Lab (2)
- PBG 513 – Plant Genetic Engineering (3)
- SOIL 316 – Nutrient Cycling in Agroecosystems (4)
Plant Synthesis
________ CROP/HORT 480 – Case Studies in Cropping Systems Management (4)

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) _______

Research Track (Optional)
_______ HORT 406 – Projects: Data Presentations (1)
_______ MTH 251 – Differential Calculus (4)
_______ MTH 252 – Integral Calculus (4)
_______ ST 351 – Introduction to Statistical Methods (4)

(Select 3 of the following)
_______ BB 350 – Elementary Biochemistry (4)
_______ BI 370 – Ecology (3)
_______ BOT 341 – Plant Ecology (4)
_______ CH 331 – Organic Chemistry (4)
_______ CH 332 – Organic Chemistry (4)
_______ CH 337 – Organic Chemistry Lab (4)
_______ MB 230 – Introductory Microbiology (4)
_______ PH 201 – General Physics (5)
_______ PH 202 – General Physics (5)

Grade Requirements
Students pursuing an option in Plant Breeding and Genetics, under the Horticulture Major, and under the Crop & Soil Science Major, are required to receive a grade of C– or better in all BOT, CROP, CSS, FOR, HORT, MB, P&B, SOIL and ST courses required within their major and option.