**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, SUS 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 grade of C—, or higher, to continue on to 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)
- CH 261 – Laboratory for Chemistry 231 (1)
- CH 122 – General Chemistry (5) or CH 232 – General Chemistry (4)
- CH 262 – Laboratory for Chemistry 232 (1)
- CH 123 – General Chemistry (5) or CH 233 – General Chemistry (4)
- CH 263 – Laboratory for Chemistry 233 (1)

**(Students must receive a grade of C—, or higher, to continue on to next chemistry 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 330 – Plant Pathology (4)
- CROP/HORT 480 – Case Studies in Cropping Systems Management (4)
- CROP 480 – 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 310. Princ. Plant Propag. (3) for E-campus students only)*
- HORT 316 – Plant Nutrition (4)

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

**Option: Plant Breeding & Genetics**

**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)
- 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 – Systematics & 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)

**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 3 of the following courses, for 9 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 250 – 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 421 – Herbs, Spices & Medicinal Plants (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 456 – Physiology & Production of Berry Crops (4)
- MB 302 – General Microbiology (3)
- MB 303 – General Microbiology Lab (2)
- SOIL 316 – Nutrient Cycling in Agroecosystems (4)

**Plant Synthesis**
- CROP/HORT 480 – Case Studies in Cropping Systems Management (4)

**OR**
- HORT 481 – Horticulture Production Case Studies (4)
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)
- *HRT 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)
- *PH 325 – Scientific Reasoning (4)
- *PS 476 – Science & Politics (4)
- *SUS 350 – Sustainable Communities (4)
- *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)

* = Meets bacc core requirement

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, P8G, SOIL and ST courses required within their major and option.