**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 (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 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 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 – Intro. 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)

**Option:**

**Viticulture & Enology**
- Term Entering: ____________________________
- From: ____________________________________

**Experiential Learning**
- HORT 403 or 410 – Thesis/Internship (6-12)
- HORT 412 – Career Exploration: Internships & Research Projects (1)

**Option Requirements**

**Plant Materials**
- HORT 251 – Tree Fruits, Berries, Grapes & Nuts (2) alt. year

**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 (3)

**Technology**
- PBG 430 – Plant Genetics (3)

**Horticultural Communication**
- HORT 407 – Seminar (1)
- HORT 411 – Horticulture Book Club (1)

*(Select 1 of the following Writing Intensive Courses)*
- SUS 325 – Ag & Environmental Predicaments (3)
- HORT 318 – Applied Ecology of Managed Ecosystems (3)

**Capstone**
- HORT 481 – Horticulture Production Case Studies (4)

**Horticultural Science and Technology**
- HORT 360 – Irrigation/Drainage (4)
 *(Select 1 of the following courses)*
- AG 221 – Metals & Welding (3)
- AG 312 – Engine Theory & Operation (3)
- AG 391 – Farm Implements (3)
- AG 425 – Developments in Agricultural Mechanics (3)
- HORT 260 – Organic Farming & Gardening (3)
- HORT 285 – Permaculture Design and Theory (4)
- HORT 314 – Principles of Turfgrass Maintenance (4)
- HORT 414 – Precision Agriculture (4)
- HORT/ENT 444 – Insect Agroecology (3)
- PBG 450 – Plant Breeding (4)
- SOIL 316 – Nutrient Cycling in Agroecosystems (4)

**Viticulture**
- HORT 451 – Tree Fruit Physiology & Culture (4) alt. year
- OR
- HORT 452 – Berry & Grape Physiology & Culture (4) alt. year
- HORT 453 – Grapevine Growth & Physiology (3)
- HORT 454 – Principles & Practices of Vineyard Production (3)

**Fermentation Foundation Sciences**
- BB 350 – Elementary Biochemistry (4)
- OR
- BB 314 – Cell and Molecular Biology (4) *(Prereq of C– or higher in BI 211, 212, 213)*
- 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)*
- MB 302 – General Microbiology (3)

**Fermentation Science**
- FST 466 – Wine Production Principles (3) *(Prereq of C– or higher in BI 212, CH 331, and CH 332)*
- FST 467 – Wine Production, Analysis & Sensory Evaluation (5)
Business Management  
*(Select 1 of the following courses)*  
- AEC 211 – Agricultural and Food Management (4)  
- AEC 221 – Agricultural and Food Marketing (3)  
- *AEC 250 – Introduction to Environmental Economics & Policy (3)*  
- *AEC 251 – Introduction to Agricultural & Food Economics (3)*  
- BA 260 – Introduction to Entrepreneurship (4)  
- BA 365 – Family Business 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 Int’l 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 477 – Agroforestry (3)*  
- *FST 421 – Food Law (3)*  
- *FW/HSTS 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)*

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 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.

Total Units (need 180) __________

Upper Div. Units (need 60) _______

* = Meets bacc core requirement