# 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)
- HS 245 – Macroeconomics or PAC (1)
- Foreign Language (if deficient; waived for pre-1997 HS graduates)

### General Science
- MTH 105, 111, 112, 211, 241, 245 or 251 (4)
- MTH 112, MTH 241, MTH 245, or ST 351 (4)
- SOIL 205 – Soil Science (3) & SOIL 206 – Lab (1)
- CH 122 – General Chemistry (5) or CH 232 – General Chemistry (4)
  and CH 261 – Laboratory for Chemistry 231 (1)
- CH 123 – General Chemistry (5) or CH 233 – General Chemistry (4)
  and CH 263 – Laboratory for Chemistry 233 (1)
- CH 121 – General Chemistry (5) or CH 231 – General Chemistry (4)
- SOIL 316 – Nutrient Cycling in Agroecosystems (4)
- BI 211 or 212 – Principles of Biology (4)
- BI 212 or 222 – Principles of Biology (4)
- BI 213 or 223 – Principles of Biology (4)
- BI 204 – Introductory Biology I (4)
- BI 205 – Introductory Biology II (4)
- BI 206 – Introductory Biology III (4)

### Math
- MTH 105, 111, 112, 211, 241, 245 or 251 (4) *(Met by major requirements)*
- 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)*

### 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)*

### Synthesis/Upper Division—choose from provided list
(Each course from a different department)
- Contemp. Global Issues (3)
- Science, Technology, Society (3)
- HORT 360 – Irrigation/Drainage (4)
- HORT 451 – Tree Fruit Physiology & Culture (4) *
- FST 466 – Wine Production Principles (3) *
- HORT 453 – Grapevine Growth & Physiology (4)
- FST 467 – Wine Production, Analysis & Sensory Evaluation (5)
- HORT 318 – Applied Ecology of Managed Ecosystems (3)
- FST 467 – Wine Production Principles (3)
- HORT 454 – Principles & Practices of Vineyard Production (3)
- FST 467 – Wine Production, Analysis & Sensory Evaluation (5)

## Major Core:

### General Science
- **MTH 112, MTH 241, MTH 245, MTH 251, or ST 351 (4) ** *(Prereq of C- or higher in 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)*

### Agriculture
- **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)**

### Horticultural Science and Technology
- **HORT 112 – Intro. to Horticultural Systems, Practices, & Careers (2)**
- **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
- **HORT 403 or 410 – Thesis/Internship (3-12)**
- **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 & Enology
- **HORT 451 – Tree Fruit Physiology & Culture (4) alt. year**
- **FST 466 – Wine Production Principles (3) *(Prereq of C- or higher in BI 211, 212, 213)*
- **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)**
- **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)**

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**From: _______________________________
To: _______________________________
Option: Viticulture & Enology
Term Entering: _______________________________**
### 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 215** – Fundamentals of Accounting (BA 315 – Account. Mkng.) (4)
- **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)
- **ENSC 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 a 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.

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**Total Units (need 180)** __________

**Upper Div. Units (need 60)** _______