

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 310.Princ. Plant Propag. (3) for E-campus students only)
- _____ HORT 316 – Plant Nutrition (4)

Option: **Viticulture & Enology**

Term Entering: _____

From: _____

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

_____ 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 215 – Fundamentals of Accounting (BA 315 – Account. Dec. Mknng.) (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)

Total Units (need 180) _____**Upper Div. Units (need 60) _____**

* = Meets bacc core requirement

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.