

## B.S. in Horticulture at Oregon State University – Curriculum

Name: \_\_\_\_\_

ID: \_\_\_\_\_

Entering Status: \_\_\_\_\_

Option: **Ecological Management of Turf, Landscape, and Urban Horticulture**

Term Entering: \_\_\_\_\_

From: \_\_\_\_\_

### University Core Requirements:

(No single course can satisfy more than one core area)

#### Writing/Health

\_\_\_\_\_ WR 121 – English Composition (3) (Minimum grade of C– required)

\_\_\_\_\_ WR II (3)

\_\_\_\_\_ COMM (3)

\_\_\_\_\_ Writing Intensive (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 minimum grade of C- to continue 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, 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 minimum grade of C- to continue to next chem. course)

\_\_\_\_\_ 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 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 Sci. (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 316 – Plant Nutrition (4)

#### Experiential Learning

\_\_\_\_\_ HORT 403 or 410 – Thesis/Internship (6-12)

\_\_\_\_\_ HORT 412 – Career Exploration: Internships & Research Projects (1)

### Option Requirements

#### Plant Materials

(Select 1 of the following courses)

\_\_\_\_\_ HORT 226 – Landscape Plant Materials I (4)

\_\_\_\_\_ HORT 228 – Landscape Plant Materials II (4)

(Select 1 additional course from the above or below courses)

\_\_\_\_\_ BOT 313 – Plant Structure (4)

\_\_\_\_\_ BOT 321 – Plant Systematics (4)

\_\_\_\_\_ BOT 323 – Flowering Plants of the World (3)

\_\_\_\_\_ BOT 425 – Flora of the Pacific Northwest (3)

\_\_\_\_\_ FES 241 – Dendrology (3)

\_\_\_\_\_ HORT 251 – Temperate Tree Fruits, Berries, Grapes, and Nuts (2) *alt. year*

\_\_\_\_\_ HORT 255 – Herbaceous Plant Materials (3)

\_\_\_\_\_ HORT 433 – Systematics & Adaptations of Vegetable Crops (4)

\_\_\_\_\_ RNG 353 – Wildland Plant Identification (4)

#### Ecology

\_\_\_\_\_ HORT 318 – Applied Ecology of Managed Ecosystems (3)

#### Technology

(Select 1 of the following courses)

\_\_\_\_\_ AG 312 – Engine Theory and Operation (3)

\_\_\_\_\_ FW 303 – Survey Geographic Information Systems in Natural Resource (3)

\_\_\_\_\_ GEOG 360 – GISCIENCE I: Geographic Information Systems and Theory (4)

\_\_\_\_\_ HORT 380 – Sustainable Landscape Design (3)

\_\_\_\_\_ HORT 414 – Precision Agriculture (4)

#### Horticultural Communication

\_\_\_\_\_ HORT 318 – Applied Ecology of Managed Ecosystems (3) (WIC)

\_\_\_\_\_ HORT 407 – Seminar (1)

\_\_\_\_\_ HORT 411 – Horticulture Book Club (1)

#### Capstone

(Select 1 of the following courses)

\_\_\_\_\_ FES 445/FW 445 – Ecological Restoration (4)

\_\_\_\_\_ HORT 418 – Golf Course Maintenance (4)

\_\_\_\_\_ HORT 455 – Urban Forest Planning & Management (4)

\_\_\_\_\_ HORT 481 – Horticulture Production Case Studies (4)

#### Science and Technology of Managed Ecosystems

\_\_\_\_\_ \*GEOG 340 – Introduction to Water Science & Policy (3)

\_\_\_\_\_ HORT 314 – Principles of Turfgrass Maintenance (4)

\_\_\_\_\_ HORT 315 – Sustainable Landscapes: Maint., Conserv., Restor. (4)

\_\_\_\_\_ HORT 358 – Landscape Construction Techniques (4)

\_\_\_\_\_ HORT 360 – Irrigation/Drainage (4)

(Select 2 of the following courses, minimum 6 credits)

\_\_\_\_\_ \*BI 301 – Human Impacts on Ecosystems (3)

\_\_\_\_\_ BOT 488 – Environmental Physiology of Plants (3)

\_\_\_\_\_ SUS 325 – Ag and Environmental Predicaments (WIC) (3)

\_\_\_\_\_ CROP 480 – Case Studies in Cropping Systems Management (4)

\_\_\_\_\_ FES 445/FW 445 – Ecological Restoration (4)

\_\_\_\_\_ FW 462 – Ecosystem Services (3)

\_\_\_\_\_ GEOG 450 – Land Use in the American West (3)

\_\_\_\_\_ HORT 285 – Permaculture Design and Theory: Certificate Course (4)

\_\_\_\_\_ HORT 319 – Restoration Horticulture (3)

\_\_\_\_\_ \*HORT 330/ENT 300 – Plagues, Pests, and Politics (3)

\_\_\_\_\_ HORT 350 – Urban Forestry (3)

\_\_\_\_\_ HORT 351 – Floriculture & Greenhouse Systems (4) *alt. year*

\_\_\_\_\_ HORT 361 – Plant Nursery Systems (4) *alt. year*

\_\_\_\_\_ HORT 405 – Pesticide Applicator Training (4)

\_\_\_\_\_ HORT 414 – Precision Agriculture (4)

\_\_\_\_\_ HORT 418 – Golf Course Maintenance (4)

\_\_\_\_\_ HORT/ENT 444 – Insect Agroecology (3)

\_\_\_\_\_ HORT/FES 447 – Arboriculture (4)

\_\_\_\_\_ HORT 455 – Urban Forest Planning & Management (4)

\_\_\_\_\_ HORT 481 – Horticulture Production Case Studies (4)

\_\_\_\_\_ HORT 485 – Advanced Permaculture Design (3)

\_\_\_\_\_ HORT 499 – Building Sustainable Landscapes for the 21st Century (1)

- \_\_\_\_\_ RNG 355 – Desert Watershed Management (3)
- \_\_\_\_\_ RNG 421 – Wildland Restoration and Ecology (4)
- \_\_\_\_\_ SOIL 316 – Nutrient Cycling in Agroecosystems (4)
- \_\_\_\_\_ SOIL 455 – Biology of Soil Ecosystems (4)
- \_\_\_\_\_ \*SUS 304 – Sustainability Assessment (4)
- \_\_\_\_\_ WSE 111 – Renewable Materials for a Green Planet (2)
- \_\_\_\_\_ WSE 475 – Environmental Assessment of Building Materials (4)

**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)
- \_\_\_\_\_ NMC 311 – Introduction to Nonprofit Management (3)

**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 (4)
- \_\_\_\_\_ \*WSE 470 – Forests, Wood, and Civilization (3)
- \_\_\_\_\_ \*Z 349 – Biodiversity: Causes, Consequences & Conservation (3)

**Science, Technology and Society**

*(Select 1 of the following courses)*

- \_\_\_\_\_ \*AGRI 411 – Introduction to Food Systems: Local to Global (3)
- \_\_\_\_\_ \*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)
- \_\_\_\_\_ \*HEST 310 – Intro to Community Engagement/Comm.-Based Design (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 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.

\* = Meets bacc core requirement