### Horticulture Degree Checklist

#### 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 (CROP/SOIL 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)*
- Western Culture
- Cultural Diversity
- Literature/Arts
- Social Processes
- 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)*

**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)
  - 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)
  - 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)*

**Agricultural Science**
- BOT 331 – Plant Physiology (4)
- BOT 350 – Introductory Plant Pathology (4)
- CROP 440 – Weed Management (4)
- MOV 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 – The Biology of Horticulture (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:** **Viticulture & Enology**

- Term Entering: __________________________
- From: ___________________________

**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)
- BOT 341 – Plant Ecology (4)
- HORT 318 – Applied Ecology of Managed Ecosystems (3)

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

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

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

**Capstone**
- HORT 480 – Case Studies in Cropping Systems Management (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 285 – Permaculture Design and Theory (4)
- HORT 314 – Principles of Turfgrass Maintenance (4)
- HORT 405 – Pesticide Application Training (4)
- HORT 414 – Precision Agriculture (4)
- HORT 495 – Horticultural Management Plans (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
- BI 314 – Cell and Molecular Biology (4)
  - CH 331 – Organic Chemistry (4)
  - CH 332 – Organic Chemistry (4)
  - MB 302 – General Microbiology (3)

**Fermentation Science**
- FST 466 – Wine Production Principles (3)
- FST 467 – Wine Production, Analysis & Sensory Evaluation (5)

**Business Management (Select 1 of the following courses)**
- AEC 211 – Management in Agriculture (4)
- AEC 221 – Marketing in Agriculture (3)
- AEC 250 – Intro. Environmental Economics & Policy (3)
- AEC 251 – Intro. Agricultural & Food Economics (3)
- BA 215 – Fundamentals of Accounting (4)
- BA 260 – Introduction to Entrepreneurship (4)
- BA 463 – 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)
_______ BI 306 – Environmental Ecology (3)
_______ CROP 330 – World Food Crops (3)
_______ ENT/HORT 331 – Pollinators in Peril (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)
_______ 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/FW 485 – Consensus and Natural Resources (3)
_______ ATS 320 – The Changing Climate (3)
_______ BI 348 – Human Ecology (3)
_______ BI/FES 435 – Genes and Chemicals in Agriculture: Value and Risk (3)
_______ BOT 324 – Fungi in Society (3)
_______ CH 374 – Technology, Energy, and Risk (3)
_______ ENGR 350 – Sustainable Engineering (3)
_______ ENGR 363 – Energy Matters (3)
_______ ENSG 479 – Environmental Case Studies (3)
_______ ENT/BI 300/HORT 330 – Plagues, Pests and Politics (3)
_______ FES/NR/RNG 477 – Agroforestry (3)
_______ FST 421 – Food Law (3)
_______ FW 485 – Consensus & Natural Resources (3)
_______ GEOG 300 – Sustainability for the Common Good (3)
_______ GEOG 340 – Introduction to Water Science and Policy (3)
_______ HST 481 – Environmental History of the United States (4)
_______ HSTS 421 – Technology & Change (4)
_______ HSTS 470 – Ecology & History: Landscapes Columbia Basin (3)
_______ 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 – Intro 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.