### HORTICULTURE (HORT)

**HORT 120 — SURVEY OF HORTICULTURE**
3 credits.

For the beginning student. Scientific basis for horticultural practices; scope of the field of horticulture; introduction to propagation, culture, management, improvement, storage, and marketing of flowers, fruits, ornamentals and vegetables. Enroll Info: None

**Requisites:** None

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

**Level:** Elementary

**L&S Credit:** Counts as Liberal Arts and Science credit in L&S

**Sustain:** Sustainability

**Repeatable for Credit:** No

**Last Taught:** Fall 2021

**HORT 121 — HORTICULTURE COLLOQUIUM**
1 credit.

Overview of world, national, and regional horticulture plants and industries presented by various faculty. History and profiles of research advancing horticulture presented by department faculty. Enroll Info: None

**Requisites:** None

**Repeatable for Credit:** No

**Last Taught:** Fall 2021

**HORT 227 — PROPAGATION OF HORTICULTURAL PLANTS**
3 credits.

Methods of propagation of herbaceous and woody plants, fundamental anatomical and physiological principles underlying sexual and asexual propagation of plants. Enroll Info: None

**Requisites:** BOTANY/BIOLOGY 130 or ZOOLOGY/BIOLOGY/BOTANY 152

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

**Level:** Elementary

**L&S Credit:** Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2022

**HORT 234 — ORNAMENTAL PLANTS**
3 credits.

On-site identification and description, aesthetic qualities and uses, environmental requirements and adaptability of selected ornamental plants with emphasis on annuals, herbaceous perennials, and those used for interior design. Enroll Info: None

**Requisites:** None

**Repeatable for Credit:** No

**Last Taught:** Fall 2021

**HORT 289 — HONORS INDEPENDENT STUDY**
1-2 credits.

Honors research work under direct guidance of a Horticulture faculty or instructional academic staff member. Enroll Info: Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.

**Requisites:** Consent of instructor

**Course Designation:** Honors - Honors Only Courses (H)

**Repeatable for Credit:** Yes, unlimited number of completions

**HORT 299 — INDEPENDENT STUDY**
1-3 credits.

Research work under direct guidance of a Horticulture faculty or instructional academic staff member. Enroll Info: Students are responsible for arranging the work and credits with the supervising instructor.

**Requisites:** Consent of instructor

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2021

**HORT/PL PATH 261 — SUSTAINABLE TURFGRASS USE AND MANAGEMENT**
2 credits.

Sustainable use and management of turfgrass landscapes in urban and suburban environments, including home lawns, golf courses, and sports fields. Focus is on creating sustainable and attractive turfgrass landscapes through proper species selection, use of slow-release or organic fertilizer practices, and minimizing the use of pesticides and supplemental irrigation. Enroll Info: None

**Requisites:** None

**Course Designation:** Sustain - Sustainability

**Repeatable for Credit:** No

**Last Taught:** Fall 2021

**HORT/PL PATH 262 — TURFGRASS MANAGEMENT LABORATORY**
1 credit.

Hands-on turf establishment, cool- and warm-season grass, seed and weed identification, chemical application, and turf cultivation techniques and equipment use, plus field trips to major league sport facilities and golf courses. Enroll Info: None

**Requisites:** PL PATH/HORT 261 or concurrent enrollment

**Repeatable for Credit:** No

**Last Taught:** Fall 2020

**HORT/LAND ARC 263 — LANDSCAPE PLANTS I**
3 credits.

Field identification, landscape characteristics, uses, environmental requirements, adaptability of woody ornamental plants; their autumn and winter character. Enroll Info: None

**Requisites:** Sophomore standing and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BOTANY 100)

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

**Level:** Intermediate

**L&S Credit:** Counts as Liberal Arts and Science credit in L&S

**Sustain:** Sustainability

**Repeatable for Credit:** No

**Last Taught:** Fall 2021

**HORT 289 — HONORS INDEPENDENT STUDY**
1-2 credits.

Honors research work under direct guidance of a Horticulture faculty or instructional academic staff member. Enroll Info: Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.

**Requisites:** Consent of instructor

**Course Designation:** Honors - Honors Only Courses (H)

**Repeatable for Credit:** Yes, unlimited number of completions

**HORT 299 — INDEPENDENT STUDY**
1-3 credits.

Research work under direct guidance of a Horticulture faculty or instructional academic staff member. Enroll Info: Students are responsible for arranging the work and credits with the supervising instructor.

**Requisites:** Consent of instructor

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2021
HORT/F&W ECOL/LAND ARC/PL PATH 309 — DISEASES OF TREES AND SHRUBS
3 credits.

Fundamental disease concepts, pathogens and causal agents, diagnosis, and biologically rational principles and practices for management of diseases of trees and shrubs. Enroll Info: Includes field trips

Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, or BIOCORE 381) or graduate/professional standing

Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50%- Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

HORT 320 — ENVIRONMENT OF HORTICULTURAL PLANTS
3 credits.

Fluctuations and regulations of temperature, light, water, carbon dioxide and pollutants in natural and controlled environments. Effects upon plant growth and development. Adaptive mechanisms. Significance of air ions, electromagnetic fields and other geophysical factors. Enroll Info: None

Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, AGRONOMY 100, or HOR T 120
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

HORT/AGRONOMY/SOIL SCI 326 — PLANT NUTRITION MANAGEMENT
3 credits.

Functions, requirements and uptake of essential plant nutrients; chemical and microbial processes affecting nutrient availability; diagnosis of plant and soil nutrient status; fertilizers and efficient fertilizer use in different tillage systems. Enroll Info: None

Requisites: (CHEM 103, 109, or 115 and SOIL SCI/ENVIR ST/GEOG 230) or SOIL SCI 301, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50%- Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2018

HORT 330 — WINES AND VINES OF THE WORLD
2 credits.

An introduction to grape production and wine culture targeting students interested in learning the science of growing grapes, winemaking, and wine appreciation. Topics include cultural history and geography of the world's grape-producing regions, principles of plant anatomy and physiology, biochemistry of wine production, wine producing regions of the world and wine styles, and sensory evaluation of wines. Includes a wine tasting discussion to explore the sensory attributes of the wines and production practices specific to the wine production regions to be covered. Students must be 21 years old by the beginning of class. Enroll Info: None

Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

HORT/AGRONOMY/SOIL SCI 332 — TURFGRASS NUTRIENT AND WATER MANAGEMENT
3 credits.

Nutrient requirements of turfgrasses; nature of turfgrass response to fertilization; soil and tissue testing methodology and interpretation; irrigation scheduling; irrigation water quality; use of irrigation and fertilizer to minimize environmental impact; writing effective nutrient management plans. Enroll Info: None

Requisites: SOIL SCI/AGRONOMY/HORT 326 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2018

HORT 334 — GREENHOUSE CULTIVATION
2 credits.

Principles of selection, production, handling, use of fruits, vegetables, flowers, and foliage plants grown indoors. Enroll Info: One-day field trip required.

Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, AGRONOMY 100, or HORT 120
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50%- Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 335 — GREENHOUSE CULTIVATION LAB
1 credit.

Provide students with hands-on experience in and understanding of greenhouse cultivation. Enroll Info: The optional lab component of HORT 334 Greenhouse Cultivation.

Requisites: HORT 334 or concurrent registration
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
HORT/AGRONOMY 338 — PLANT BREEDING AND BIOTECHNOLOGY
3 credits.

Principles of transferring plant genes by sexual, somatic, and molecular methods and the application of gene transfer in plant breeding and genetic engineering to improve crop plants. Enroll Info: None
Requisites: (BOTANY/BIOLOGY 130, GENETICS 466, 467, or BIOCORE 381) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT/AGRONOMY/BOTANY 339 — PLANT BIOTECHNOLOGY: PRINCIPLES AND TECHNIQUES I
4 credits.

Theoretical and practical training in plant biotechnology including molecular biology, protein biochemistry and basic bioinformatic techniques used in fundamental and applied research on plants. Valuable hands-on training to those interested in careers in biotechnology. Enroll Info: None
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY/BIOLOGY 102) and (CHEM 104, 109, or 116) or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

HORT/AGRONOMY/BOTANY 340 — PLANT CELL CULTURE AND GENETIC ENGINEERING
3 credits.

Presents an overview of the techniques, biology and underlying theory of plant tissue culture, genetic engineering and genome editing. Overviews of research and commercial applications, and issues/challenges in the area of plant biotechnology are also covered. Enroll Info: None
Requisites: (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 102, or BIOCORE 381) and (CHEM 104, 109, or 116), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

HORT 345 — FRUIT CROP PRODUCTION
3 credits.

Survey of fruit production, emphasizing commercial production of temperate fruits. Fruit origin, history, classification, physiology, genetics, harvest and post-harvest handling. Enroll Info: None
Requisites: BOTANY/BIOLOGY 130 or ZOOLOGY/BIOLOGY/BOTANY 152
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 350 — PLANTS AND HUMAN WELLBEING
2 credits.

Plants provide not only the foundation of food, clothing, and shelter essential for human existence, but also some of the key raw materials for transcendence and abstraction through music, art, and spirituality. Since antiquity, we have co-evolved with plants and their derivative products, with each exerting a domesticating force on the other. It is, for example, impossible to think of our modern life without its plant-based accompaniments in the form of cotton, sugar, bread, coffee, and wood. Yet they are so ubiquitous we may forget they all derive from plants discovered, domesticated, bred, and farmed for millennia in a never-ending pursuit to improve our wellbeing. Major points of intersection between plants and human wellbeing will be explored from a horticultural point of view by highlighting a plant or group of plants that represent a primary commodity or resource through which humans have pursued their own aims and explore effects and impacts on human society. Enroll Info: None
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2021

HORT 351 — A DEEPER LOOK AT PLANTS AND HUMAN WELLBEING
1 credit.

Plants are essential for human wellbeing, yet they are often manipulated in ways that contribute significantly to human and environmental detriment. Provides an opportunity for students to consider the scientific, social, economic, and public policy implications of plants or groups of plants and dive deeply into those subjects for a variety of crops that are essential for human societies. Enroll Info: None
Requisites: Concurrent enrollment in HORT 350
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2021
HORT/AGRONOMY/ENTOM/PL PATH/SOIL SCI 354 — DIAGNOSING AND MONITORING PEST AND NUTRIENT STATUS OF FIELD CROPS
3 credits.
Provides students with information necessary to diagnosis and monitor corn, soybean, alfalfa and wheat for pests (insects, weeds, diseases) and nutrient deficiency symptoms including perspectives from Agronomy, Entomology, Horticulture, Plant Pathology and Soil Science. Proper soil and pest sampling information will be provided as will proper crop staging techniques which are essential for pest and nutrient management. Enroll Info: None
Requisites: None
Course Designation: Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2019

HORT/AGRONOMY 360 — GENETICALLY MODIFIED CROPS: SCIENCE, REGULATION & CONTROVERSY
2 credits.
Explores how and why genetically modified (GM) crops are created and their regulation at the federal and state level. Through case studies, students will learn about the impacts of GM crops and critically evaluate arguments both for and against their use. Readings and discussion introduce students to the complex economic, cultural, and political issues surrounding GM crops. Enroll Info: None
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, GENETICS 466, or GENETICS 467
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT/A A E/AGRONOMY/PL PATH 367 — INTRODUCTION TO ORGANIC AGRICULTURE: PRODUCTION, MARKETS, AND POLICY
3 credits.
Provides an in-depth understanding of the history of organic agriculture, its production, processing, marketing, and social dimensions, and its impact on environmental, community, and human health. Enroll Info: None
Requisites: ENVIR ST/AGROECOL/AGRONOMY/C&E SOC/ENTOM 103 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 370 — WORLD VEGETABLE CROPS
3 credits.
An overview of the importance of fresh and processed vegetables worldwide. Vegetable origin, history, classification, culture, marketing, physiology, genetics, handling, quality, significance in world cultures and diets. Enroll Info: None
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2021

HORT 372 — COLLOQUIUM IN ORGANIC AGRICULTURE
1 credit.
Colloquium in which faculty, regional professionals, local organic farmers and students will present and discuss topics relevant to history, marketing, economics, production and social context of organic and sustainable agriculture. Enroll Info: None
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 375 — SPECIAL TOPICS
1-4 credits.
Special topics on issues relevant to horticulture. Enroll Info: None
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HORT/AGRONOMY 376 — TROPICAL HORTICULTURAL SYSTEMS
1 credit.
Highlight the connections between tropical plants and society through a combination of readings, writing assignments, lectures, and collaborative work. Discussions include multidisciplinary reflections on the biology of tropical plants, as well as an overview of different production systems and some of the social and environmental problems associated with the utilization of plants in the context of local and global markets. Provides the opportunity to demonstrate comparative skills with respect to local and international challenges posed by the topics we address in class. By the end of this course, the student will be able to make connections between horticulture and conservation, food security, nutrition, and global health. Enroll Info: None
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2021
HORT 378 — TROPICAL HORTICULTURAL SYSTEMS INTERNATIONAL FIELD STUDY 2 credits.

This international field study will meet during the winter intercession in a tropical country in Central America. Reflect on the role of plants in our daily lives and the effects that our daily choices have on the environment, human health, conflicts, poverty, and development. Provides an opportunity to develop a holistic appreciation of horticulture by highlighting the interactions between plants and society. Discuss some of the social, scientific and environmental challenges that conventional, sustainable and organic horticulture practices face in the production, marketing, and use of tropical crops. The field study will provide an opportunity to contextualize what was learned during “Tropical Horticultural Systems” (HORT/AGRONOMY 376). Visit diverse agricultural systems, such as small farms, large-scale operations, market growers, and industrial export businesses. In addition, we will visit agronomic centers, botanical gardens, herbaria, germplasm banks, and nature preserves. Enroll Info: None
Requisites: HORT/AGRONOMY 376
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Sustain - Sustainability
Repeatable for Credit: No

HORT 380 — INDIGENOUS FOODWAYS: FOOD AND SEED SOVEREIGNTY 2 credits.

Indigenous foods of North America are a vital component of modern agricultural and food systems. Indigenous foods and foodways will be examined from interdisciplinary historical, legal, biological, and social perspectives. Historic indigenous foodways of the present-day upper Midwestern United States and the impact on food and seed sovereignty of settler colonialism and subsequent agricultural practices and policies will be explored. Current efforts to re-claim agricultural traditions and foodways to improve public health, economic opportunity, and food and seed sovereignty will be covered, including the right to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, to define one’s own food and agriculture systems, and to control the mechanisms and policies that govern food distribution. Hands-on activities are featured; previous examples include cooking with indigenous foods, ice fishing, and tapping maple trees for syrup. Enroll Info: None
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION 1-8 credits.

Internship under guidance of a Horticulture faculty or instructional academic staff member and internship site supervisor. Enroll Info: Students are responsible for arranging the work and credits with the Horticulture faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2020

HORT 400 — STUDY ABROAD IN HORTICULTURE 1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enroll Info: Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

HORT/PATH-BIO 500 — MOLECULAR BIOLOGY TECHNIQUES 3 credits.

Become familiar with common techniques used in both genetic and genomic research. Includes hands-on exposure to methodologies used in molecular biology laboratories. Enroll Info: None
Requisites: (BIOCHEM 501, GENETICS 466, or MICROBIO 303) or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018

HORT/AGRONOMY 501 — PRINCIPLES OF PLANT BREEDING 3 credits.

Principles involved in breeding and maintaining economic crops; factors affecting the choice of breeding methods; alternative approaches through hybridization and selection. Enroll Info: None
Requisites: (GENETICS 466 or 467) and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381) or graduate/ professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
HORT/AGRONOMY 502 — TECHNIQUES OF PLANT BREEDING
1 credit.

Lab and field techniques used in breeding and maintaining economic crops. Enroll Info: None
Requisites: (GENETICS 466 or 467) and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

HORT/F&W ECOL/SOIL SCI 524 — URBAN SOIL AND ENVIRONMENT
3 credits.

Many environmental issues related to urbanization are derived from the manipulation of soil. By coupling contemporary literature in urban soils with soil science, students will be able to evaluate environmental issues within the urban environment and provide new ways of remediating their impact. Enroll Info: None
Requisites: (PHYSICS 103, 201, 207, or 247) and (SOIL SCI/ENVIR ST/GEOG 230 or SOIL SCI 301 or concurrent), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2017

HORT/GENETICS 550 — MOLECULAR APPROACHES FOR POTENTIAL CROP IMPROVEMENT
3 credits.

Introduction of basic concepts of plant molecular biology and molecular techniques in current use. Topics include: organization and regulation of plant genes, gene cloning and analysis, transformation systems for plants, and molecular techniques for crop improvement. Enroll Info: None
Requisites: BIOCHEM 501 and (GENETICS 466 or 467); or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

HORT/F&W ECOL/STAT 571 — STATISTICAL METHODS FOR BIOSCIENCE I
4 credits.

Descriptive statistics, distributions, one- and two-sample normal inference, power, one-way ANOVA, simple linear regression, categorical data, non-parametric methods; underlying assumptions and diagnostic work. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

HORT/F&W ECOL/STAT 572 — STATISTICAL METHODS FOR BIOSCIENCE II
4 credits.

Polynomial regression, multiple regression, two-way ANOVA with and without interaction, split-plot design, subsampling, analysis of covariance, elementary sampling, introduction to bioassay. Enroll Info: None
Requisites: STAT/F&W ECOL/HORT 571
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

HORT/AGRONOMY/AN SCI/GENETICS 615 — GENETIC MAPPING
3 credits.

Computing-intensive course to prepare students for genetic mapping research; linkage analysis and QTL mapping in designed crosses; linkage disequilibrium and association analysis (GWAS). Enroll Info: Recommended preparation is undergraduate courses in genetics and statistics and prior experience writing R scripts (such as module 1 of STAT 327).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

HORT/BOTANY/SOIL SCI 626 — MINERAL NUTRITION OF PLANTS
3 credits.

Essential and beneficial elements, solutions and soil as nutrient sources, rhizosphere chemistry, nutritional physiology, ion uptake and translocation, functions of elements, nutrient interactions, genetics of plant nutrition. Enroll Info: None
Requisites: BOTANY 500 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Sustain - Sustainability
Repeatable for Credit: No
Last Taught: Fall 2019
HORT 681 — SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under
direct guidance of a Horticulture faculty or instructional academic staff
member. Enroll Info: Students are responsible for arranging the work and
credits with the supervising instructor. Intended for students in the CALS
Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2015

HORT 682 — SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under
direct guidance of a Horticulture faculty or instructional academic staff
member. Enroll Info: Students are responsible for arranging the work and
credits with the supervising instructor. Intended for students in the CALS
Honors Program. Continuation of HORT 681
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2016

HORT 699 — SPECIAL PROBLEMS
1-4 credits.

Provides academic credit for directed study under direct guidance of a
Horticulture faculty member or instructional academic staff member.
Enroll Info: Students are responsible for arranging the work and
credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HORT 799 — PRACTICUM IN HORTICULTURE TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the
agricultural and life sciences, direct teaching experience under faculty
supervision, experience in testing and evaluation of students, and the
analysis of teaching performance. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

HORT/AGRONOMY 811 — BIOMETRICAL PROCEDURES IN PLANT
BREEDING
3 credits.

Use of statistical methods to facilitate improvements in quantitative
traits of cultivated plants. Enroll Info: None
Requisites: Graduate/professional standing and STAT/F&W ECOL/
HORT 572
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: No
Last Taught: Fall 2021

HORT/AGRONOMY 812 — SELECTION THEORY FOR QUANTITATIVE
TRAITS IN PLANTS
2 credits.

Discuss advanced topics in selection theory and the utilization of
molecular markers in selection. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: No
Last Taught: Spring 2022

HORT 875 — SPECIAL TOPICS
1-4 credits.

Special topics on issues relevant to Horticulture. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

HORT 910 — SEMINAR
1 credit.

Weekly seminar topics in agronomy and horticulture. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HORT/AGRONOMY/GENETICS 957 — SEMINAR-PLANT BREEDING
1 credit.

Graduate seminar in Plant Breeding Plant Genetics (PBPG) that requires
students to give oral scientific presentations on topics chosen by
the instructors and/or the student’s thesis research. This seminar is
coordinated by PBPG faculty on a rotating basis. Enroll Info: None
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
HORT 990 — RESEARCH
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member. Enroll Info: None

Requisites: Consent of instructor

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Spring 2022