HORTICULTURE, BS

Horticulturists work to enrich our lives by integrating and applying plant science, environmental science, molecular biology, biotechnology, genetics, physiology, and management. Specifically, horticultural science deals with the development, production, growth, distribution, and use of fruits, vegetables, greenhouse crops, ornamentals, and specialty plant crops (used for flavoring and medicine). Horticultural science is one of the most diverse biological sciences one can study at a university. Not only are the biology and genetics of crop plants interesting, but the application of this knowledge is equally important in a myriad of situations. Undergraduate horticulture majors will obtain specialized training in greenhouse/field management and the production and use of fruits, vegetables, nuts, and herbaceous/woody ornamentals through the bachelor of science degree program.

In addition to obtaining a job with an undergraduate degree in horticulture, the major provides an excellent background for graduate study in the field of plant sciences. Areas of graduate study include plant breeding and plant genetics, horticulture, agronomy, plant pathology, or other related fields such as biology, environmental science, natural resource management, agroecology, and genetics.

Students with either undergraduate or graduate degrees in horticulture have a variety of career opportunities. Recent studies show that there are more jobs in agriculture in the U.S. than there are students graduating with agricultural bachelor of science degrees to fill them. As our world grapples with the need to contribute science-based solutions to feeding 9 billion people by 2050, students trained in the agricultural and horticultural sciences will be called on to contribute.

Horticulture graduates may find opportunities to develop higher-yielding crops or crops that can withstand more stressful growing conditions. Others may find opportunities working on improving qualities such as flavor, appearance, texture, and postharvest shelf life for a wide range of horticultural commodities from fruits to vegetables to flowers. Sustainable production is an area of growth where horticultural expertise can make a contribution.

The horticulture degree serves as excellent preparation for careers in food production, plant nurseries, community-supported agriculture (CSA), public gardens, greenhouse production, teaching, public parks, vegetable production, urban agriculture, extension- and community-based educational work, work in research labs, and the health sciences. In addition, many horticultural science majors go on to work in public sector jobs including city and state positions with the Department of Natural Resources, the Wisconsin Department of Agriculture, and the University of Wisconsin Division of Extension. Students with degrees in horticulture also work in hospitals (horticultural therapy), aerospace (food and recycling in space labs), and zoos (managing environments for animals and visitors). Although the career opportunities are numerous, horticulture students have a common desire to work intensively with plants to improve our environment and our health.

HOW TO GET IN

HOW TO GET IN

To declare this major, students must be admitted to UW-Madison and the College of Agricultural and Life Sciences (CALS). For information

about becoming a CALS first-year or transfer student, see Entering the College (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#enteringthecollegetext).

Students who attend Student Orientation, Advising, and Registration (SOAR) with the College of Agricultural and Life Sciences have the option to declare this major at SOAR. Students may otherwise declare after they have begun their undergraduate studies. For more information, contact the advisor listed in the Contact Box for the major.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the *Guide*.

General Education

- Breadth-Humanities/Literature/Arts: 6 credits
- Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
- · Breadth-Social Studies: 3 credits
- · Communication Part A Part B *
- Ethnic Studies *
- Quantitative Reasoning Part A Part B *
- * The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

COLLEGE REQUIREMENTS FOR ALL CALS BS DEGREE PROGRAMS

Code	Title	Credits
•	lents must maintain a minimum nt average of 2.000 to remain in good ble for graduation.	
•	must complete 30 degree credits in dison after earning 86 credits toward degree.	
First year seminar (ht undergraduate/agric #CALSFirstYearSem	ultural-life-sciences/	1
International studies (http://guide.wisc.edu/ undergraduate/agricultural-life-sciences/ #CALSInternationalStudiesCourses)		3
Physical science fund	lamentals	4-5
CHEM 103	General Chemistry I	
or CHEM 108	Chemistry in Our World	
or CHEM 109	Advanced General Chemistry	
Biological science		5
Additional science (biological, physical, or natural)		3
Science breadth (biological, physical, natural, or social)		3
the requirements for requirements") (http://	rning Experience: included in each CALS major (see "major ://guide.wisc.edu/undergraduate/ nces/#CALSCapstoneRequirement)	

MAJOR REQUIREMENTS

Courses may not double count within the major (unless specifically noted otherwise), but courses counted toward the major requirements may also be used to satisfy a university requirement and/or a college requirement. A minimum of 15 credits must be completed in the major that are not used elsewhere.

Code	Title	Credits
Mathematics and S	statistics	
Select one of the fol	owing (or may be satisfied by	5-6
placement exam):		
MATH 112	Algebra	
& MATH 113	and Trigonometry	
MATH 114	Algebra and Trigonometry	
MATH 171	Calculus with Algebra and Trigonometry I ¹	
Select one of the fol	lowing:	3-5
MATH 211	Survey of Calculus	
MATH 217	Calculus with Algebra and Trigonometry II ¹	
MATH 221	Calculus and Analytic Geometry 1	
MATH 222	Calculus and Analytic Geometry 2	
STAT 301	Introduction to Statistical Methods	
STAT 371	Introductory Applied Statistics for the Life Sciences	
COMP SCI 300	Programming II	
Chemistry		
Select one of the fol	owing:	5-9

CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
Biology		
Select one of the fo	llowing options:	10-12
Option 1:		
BOTANY/ BIOLOGY 130	General Botany	
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/	Animal Biology Laboratory	
BIOLOGY 102		
Option 2:	lintura di cata in a Di ala ma	
BIOLOGY/ BOTANY/ ZOOLOGY 151	Introductory Biology	
BIOLOGY/ BOTANY/ ZOOLOGY 152	Introductory Biology	
Option 3:		
BIOCORE 381	Evolution, Ecology, and Genetics	
BIOCORE 383	Cellular Biology	
And select two o	f the following:	
BIOCORE 382	Evolution, Ecology, and Genetics Laboratory	
BIOCORE 384	Cellular Biology Laboratory	
BIOCORE 486	Principles of Physiology Laboratory	
Agricultural Bread	ith	
ENTOM/ ZOOLOGY 302	Introduction to Entomology	3-4
or ENTOM 351	Principles of Economic Entomology	
GENETICS 466	Principles of Genetics	3
Select one of the fo	llowing:	3-4
BOTANY 300	Plant Anatomy	
BOTANY 305	Plant Morphology and Evolution	
BOTANY 500	Plant Physiology	
PL PATH 300	Introduction to Plant Pathology	4
SOIL SCI 301	General Soil Science	4
& SOIL SCI 302	and Meet Your Soil: Soil Analysis and Interpretation Laboratory	
Horticultural Core	·	
HORT 120	Survey of Horticulture	3
HORT 121	Horticulture Colloquium	1
HORT 227	Propagation of Horticultural Plants	3
HORT 320	Environment of Horticultural Plants	3
	// Plant Nutrition Management	3
Select one of the fo	llowina:	3-4
HORT 334	Greenhouse Cultivation	
& HORT 333	and Survey of Controlled Environment Food Production	
HORT 334 & HORT 335	Greenhouse Cultivation and Greenhouse Cultivation Lab	
Select three of the 1	following:	8-11
HORT 234	Ornamental Plants	

HORT/ PL PATH 261 & HORT/ PL PATH 262	Sustainable Turfgrass Use and Management and Turfgrass Management Laboratory
HORT/ LAND ARC 263	Landscape Plants I
HORT 345	Fruit Crop Production (alternate years) ²
HORT 370	World Vegetable Crops
AGRONOMY 375	Special Topics (Crop, Seed, and Weed ID)
or HORT/ AGRONOMY 3	Plant Breeding and Biotechnology
Flectives	

Electives

Select 5 elective credits (see list below)

Capstone

Students can complete a pre-approved course or an independent study or internship. Independent study and internship require individual pre-approval from the program, and students should talk to the Horticulture advisor to learn more about the process and forms.

Pre-approved course options:

AGRONOMY 376 & HORT 378	Tropical Horticultural Systems and Tropical Horticultural Systems International Field Study
PL PATH 315	Plant Microbiomes
dependent Study or e-approval):	Internship options (require individual
HORT 399	Coordinative Internship/ Cooperative Education
HORT 699	Special Problems
PL PATH 499	Independent Study in Organic Agriculture

69-84

Total Credits

ELECTIVE COURSES

Students may not double count courses within the major requirements (Agricultural Breadth, Horticultural Core, Electives, Capstone)

Code Business and Econo	Title mics	Credits
A A E 101	Introduction to Agricultural and Applied Economics	4
A A E/ENVIR ST 244	The Environment and the Global Economy	4
A A E 246	Climate Change Economics and Policy	3
A A E 319	The International Agricultural Economy	3
A A E 320	Agricultural Systems Management	3
A A E 323	Cooperatives and Alternative Forms of Enterprise Ownership	3

A A E/ECON/ ENVIR ST 343	Environmental Economics	3-4
GEN BUS 310	Fundamentals of Accounting and Finance for Non-Business Majors	3
GEN BUS 311	Fundamentals of Management and Marketing for Non-Business Majors	3
Ecology, Conservati	ion, and the Environment	
BOTANY/ F&W ECOL/ ZOOLOGY 460	General Ecology	4
F&W ECOL/ C&E SOC/SOC 248	Environment, Natural Resources, and Society	3
F&W ECOL/ ENVIR ST/ ZOOLOGY 360	Extinction of Species	3
F&W ECOL/ BOTANY 455	The Vegetation of Wisconsin	4
F&W ECOL 550	Forest Ecology	3
F&W ECOL/ LAND ARC/ ZOOLOGY 565	Principles of Landscape Ecology	2
F&W ECOL/ BOTANY/ENVIR ST/ ZOOLOGY 651	Conservation Biology	3
GEOG/ ENVIR ST 120	Introduction to the Earth System	3
GEOG/ENVIR ST 127	Physical Systems of the Environment	4
	2	
GEOG/ ENVIR ST 139	Global Environmental Issues	3
ENVIR ST 139		3
ENVIR ST 139	Global Environmental Issues	
ENVIR ST 139 GEOG/BOTANY 338 GEOG/	Global Environmental Issues Environmental Biogeography	3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460	Global Environmental Issues Environmental Biogeography Environmental Conservation	3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology	3 4
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History	3 4 3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic	3 4 3 4
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources	3 4 3 4 3 2
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources	3 4 3 4 3 2
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316 Food, Health and Hu A A E/C&E SOC/	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources Laman Well-being:	3 4 3 4 2 2-3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316 Food, Health and Hu A A E/C&E SOC/ SOC 340 AGRONOMY/ ENTOM/	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources Jaman Well-being: Issues in Food Systems	3 4 3 4 3 2 2-3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316 Food, Health and Hu A A E/C&E SOC/ SOC 340 AGRONOMY/ ENTOM/ NUTR SCI 203 AGRONOMY 300	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources Jaman Well-being: Issues in Food Systems Introduction to Global Health	3 4 3 4 3 2 2-3 3-4
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316 Food, Health and Hu A A E/C&E SOC/ SOC 340 AGRONOMY/ ENTOM/ NUTR SCI 203 AGRONOMY/ 300 AGRONOMY/A A E/ NUTR SCI 350 AGRONOMY 377	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources Issues in Food Systems Introduction to Global Health Cropping Systems World Hunger and Malnutrition Global Food Production and Health	3 4 3 4 3 2 2-3 3-4 3 3
ENVIR ST 139 GEOG/BOTANY 338 GEOG/ ENVIR ST 339 GEOSCI/ ENVIR ST 106 HISTORY/ENVIR ST/ GEOG 460 LAND ARC/ ENVIR ST 361 ZOOLOGY/ ENVIR ST 315 ZOOLOGY 316 Food, Health and Hu A A E/C&E SOC/ SOC 340 AGRONOMY/ ENTOM/ NUTR SCI 203 AGRONOMY 300 AGRONOMY/A A E/ NUTR SCI 350 AGRONOMY 377 C&E SOC/SOC 222	Global Environmental Issues Environmental Biogeography Environmental Conservation Environmental Geology American Environmental History Wetlands Ecology Limnology-Conservation of Aquatic Resources Laboratory for Limnology-Conservation of Aquatic Resources Issues in Food Systems Introduction to Global Health Cropping Systems World Hunger and Malnutrition	3 4 3 4 3 2 2-3 3-4 3

 $^{^{1}\,\,}$ If MATH 171 is taken, MATH 217 must also be taken.

² Alternate years.

FOOD SCI/ AN SCI 321	Food Laws and Regulations	1
GEOG/ ENVIR ST 309	People, Land and Food: Comparative Study of Agriculture Systems	3
HORT 345	Fruit Crop Production	3
HORT 350	Plants and Human Wellbeing	2
HORT/A A E/ AGRONOMY/ PL PATH 367	Introduction to Organic Agriculture: Production, Markets, and Policy	3
HORT 370	World Vegetable Crops	3
HORT 380	Indigenous Foodways: Food and Seed Sovereignty	2
NUTR SCI 132	Nutrition Today	3
PL PATH 311	Global Food Security (Food Systems, Sustainability, and Climate Change)	3
PL PATH 375	Special Topics	1-4
Landscape Horticul	ture	
BSE 243	Operating and Management Principles of Off-Road Vehicles	3
BSE 301	Land Information Management	3
F&W ECOL 375	Special Topics (Tree Risk Assessment and Decay Detection)	1-4
HORT 234	Ornamental Plants	3
HORT/PL PATH 261	Sustainable Turfgrass Use and Management	2
HORT/PL PATH 262	Turfgrass Management Laboratory	1
HORT/ LAND ARC 263	Landscape Plants I	3
HORT/SOIL SCI 332	Turfgrass Nutrient and Water Management	3
HORT 334	Greenhouse Cultivation	2
HORT 335	Greenhouse Cultivation Lab	1
LAND ARC 250	Survey of Landscape Architecture Design	3
LAND ARC 260	History of Landscape Architecture	3
LAND ARC 211	Shaping the Built Environment	3
Pest Management		
ENTOM/BOTANY/ ZOOLOGY 473	Plant-Insect Interactions	3
ENTOM/	Insects in Forest Ecosystem	2
F&W ECOL 500 PL PATH/	Function and Management	1
BOTANY 332	Fungi	4
Plant Biology		
BOTANY 300	Plant Anatomy	4
BOTANY 305	Plant Morphology and Evolution	4
BOTANY 400	Plant Systematics	4
BOTANY 401	Vascular Flora of Wisconsin	4
BOTANY/ANTHRO/ ZOOLOGY 410	Evolutionary Biology	3
BOTANY 422	Plant Geography	3
BOTANY/AMER IND/ ANTHRO 474	Ethnobotany	3-4

BOTANY 500	Plant Physiology	3-4
F&W ECOL 415	, ,,	
HORT 240	Tree Physiology The Science of Cannabis	3
		'
AGRONOMY/	netics, and Biotechnology The Ethics of Modern Biotechnology	3
C&E SOC/	The Ethics of Modern Biotechnology	3
MED HIST/		
PHILOS 565	1. 1	2
BIOCHEM 501	Introduction to Biochemistry	3
CHEM 341	Elementary Organic Chemistry	3
CHEM 342	Elementary Organic Chemistry Laboratory	1
CHEM 343	Organic Chemistry I	3
HORT/ AGRONOMY 338	Plant Breeding and Biotechnology	3
HORT/AGRONOMY/ BOTANY 339	Plant Biotechnology: Principles and Techniques I	4
HORT/AGRONOMY/ BOTANY 340	Plant Cell Culture and Genetic Engineering	3
HORT/	Genetically Modified Crops:	2
AGRONOMY 360	Science, Regulation & Controversy	_
HORT/	Principles of Plant Breeding	3
AGRONOMY 501		
HORT/ AGRONOMY 502	Techniques of Plant Breeding	1
HORT/ GENETICS 550	Molecular Approaches for Potential Crop Improvement	3
HIST SCI 202	The Making of Modern Science	3
Public Policy and Er	<u> </u>	
-	Environmental Stewardship and	2
C&E SUC/SUC 541		3
C&E SOC/SOC 541	Social Justice	
ENVIR ST/ GEOG 439		3-4
ENVIR ST/	Social Justice US Environmental Policy and Regulation Assessment of Environmental	
ENVIR ST/ GEOG 439 ENVIR ST/	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact	3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact	3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human	3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science	3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy	3-4 3 4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy	3-4 3 4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources	3-4 3 4 3-4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI 321 SOIL SCI/	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry	3-4 3 4 3-4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI 321 SOIL SCI/ PL PATH 323 SOIL SCI/	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry Soil Biology	3-4 3-4 3-4 3-3
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI 321 SOIL SCI/ PL PATH 323 SOIL SCI/ ENVIR ST 324 SOIL SCI 327	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry Soil Biology Soils and Environmental Quality Environmental Monitoring and Soil Characterization for Earth's Critical	3-4 3-4 3-4 3-3 3
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI/ PL PATH 323 SOIL SCI/ ENVIR ST 324	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry Soil Biology Soils and Environmental Quality Environmental Monitoring and Soil Characterization for Earth's Critical Zone	3-4 3-4 3-4 3-4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI 321 SOIL SCI/ PL PATH 323 SOIL SCI/ ENVIR ST 324 SOIL SCI 327	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry Soil Biology Soils and Environmental Quality Environmental Monitoring and Soil Characterization for Earth's Critical Zone Assessment of Environmental Impact	3-4 3-4 3-4 3-4 3-4
ENVIR ST/ GEOG 439 ENVIR ST/ SOIL SCI 575 HORT/HIST SCI 301 POLI SCI 272 POLI SCI/ECON/ ENVIR ST/ URB R PL 449 Soil Science SOIL SCI 321 SOIL SCI/ PL PATH 323 SOIL SCI/ ENVIR ST 324 SOIL SCI 327 SOIL SCI/ ENVIR ST 324 SOIL SCI/ ENVIR ST 575	Social Justice US Environmental Policy and Regulation Assessment of Environmental Impact (Horti)Cultural Roots: Human Histories of Plants and Science Introduction to Public Policy Government and Natural Resources Soils and Environmental Chemistry Soil Biology Soils and Environmental Quality Environmental Monitoring and Soil Characterization for Earth's Critical Zone Assessment of Environmental Impact	3-4 3-4 3-4 3-4 3-4

ATM OCN/ ENVIR ST/ GEOSCI 102	Climate and Climate Change	3
ATM OCN/ ENVIR ST 171	Global Change: Atmospheric Issues and Problems	2-3
ATM OCN/ ENVIR ST/ GEOG 332	Global Warming: Science and Impacts	3
ATM OCN/ ENVIR ST 520	Bioclimatology	3

HONORS IN THE MAJOR

Students admitted to the university and to the College of Agricultural and Life Sciences are invited to apply to be considered for admission to the CALS Honors Program.

Admission Criteria for New First-Year Students:

· Complete program application including essay questions

Admission Criteria for Transfer and Continuing UW-Madison Students:

- UW-Madison cumulative GPA of at least 3.25
- Complete program application including essay questions

HOW TO APPLY

The application is available on the CALS Honors Program website (https://cals.wisc.edu/academics/undergraduate/current-students/honors-program/). Applications are accepted at any time.

New first-year students with accepted applications will automatically be enrolled in Honors in Research. It is possible to switch to Honors in the Major in the student's first semester on campus after receiving approval from the advisor for that major. Transfer and continuing students may apply directly to Honors in Research or Honors in the Major (after approval from the major advisor).

REQUIREMENTS

All CALS Honors programs have the following requirements:

- Earn at least a cumulative 3.25 GPA at UW-Madison (some programs have higher requirements)
- · Complete the program-specific requirements listed below
- · Submit completed thesis documentation to CALS Academic Affairs

REQUIREMENTS

To earn honors in the major, students are required to take at least 20 honors credits. In addition, students must take HORT 289 Honors Independent Study, HORT 681 Senior Honors Thesis and HORT 682 Senior Honors Thesis when completing their thesis project; please see the h (https://cals.wisc.edu/academics/undergraduate/current-students/honors-program/)onors program page (https://cals.wisc.edu/academics/undergraduate/current-students/honors-program/) for more information. The Department of Plant and Agroecosystems Sciences also works collaboratively to strongly support students through the honors in research program.

UNIVERSITY DEGREE REQUIREMENTS

Total Degree To receive a bachelor's degree from UW–Madison,

students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit

requirements.

Residency Degree candidates are required to earn a minimum of 30 credits in residence at UW-Madison. "In residence" means on the UW-Madison campus with an undergraduate degree classification. "In residence" credit also includes

UW-Madison courses offered in distance or online formats and credits earned in UW-Madison Study Abroad/Study

Away programs.

Quality of Undergraduate students must maintain the minimum grade
Work point average specified by the school, college, or academic

program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.

LEARNING OUTCOMES

LEARNING OUTCOMES

- Acquire, integrate and apply knowledge of plant science to horticultural systems.
- 2. Demonstrate interdisciplinary knowledge and competency in managing horticultural systems.
- Synthesize knowledge and use insight and creativity to better understand and improve horticultural systems.
- 4. Appreciate and communicate the diverse impacts of horticulture on people.
- 5. Demonstrate professionalism and proficiency in skills that relate to horticulture.

FOUR-YEAR PLAN

FOUR-YEAR PLAN

SAMPLE FOUR-YEAR PLAN WITH BIOLOGY/ BOTANY 130 IN THE FIRST SEMESTER

Students must complete at least 120 total credits to be eligible for graduation.

First Year

Fall	Credits Spring	Credits
HORT 120	3 MATH 113	3
HORT 121	1 BIOLOGY/	5
	ZOOLOGY 101	
	& BIOLOGY/	
	ZOOLOGY 102	
BIOLOGY/BOTANY 130 ¹	5 Ethnic Studies	3
MATH 112	3 Electives	5
COMM A Course	3	

1	
16	16
Credits Spring	Credits
3 CHEM 104	5
4 HORT 227	3
3 HORT 334 & HORT 335	3
6 Humanities	3-4
16	14-15
Credits Spring	Credits
6 Agricultural Breadth ²	6
3 Math / Statistics /	3
Computer Science	
3 Humanities	3-4
4-5 Elective	3
16-17	15-16
Credits Spring	Credits
3 Agricultural Breadth ²	3-4
6 Electives	9
3	
3-4	
	Credits Spring 3 CHEM 104 4 HORT 227 3 HORT 334 & HORT 335 6 Humanities 16 Credits Spring 6 Agricultural Breadth ² 3 Math / Statistics / Computer Science 3 Humanities 4-5 Elective 16-17 Credits Spring 3 Agricultural Breadth ² 6 Electives 3

Total Credits 120-125

BIOLOGY/BOTANY 130, BIOLOGY/ZOOLOGY 101, and BIOLOGY/ZOOLOGY 102 is the preferred course to complete the biology requirment.

15-16

- Please consult with a horticulture advisor to discuss when specific courses are typically offered.
- Students can choose to complete the CALS international studies requirement using HORT 370 or HORT/AGRONOMY 376 & HORT 378, which also fulfill horticulture major requirements.

SAMPLE FOUR-YEAR PLAN WITH CHEM 103 IN THE FIRST SEMESTER

Students must complete at least 120 total credits to be eligible for graduation.

First Year

Fall	Credits Spring	Credits
HORT 120	3 CHEM 104	5
HORT 121	1 BIOLOGY/BOTANY 130 ¹	5
CHEM 103	4 MATH 113	3
MATH 112	3 Ethnic Studies	3
COMM A Course	3	
CALS First Year Seminar	1	
	15	16

					_		
•	_	_	_	-	ᆈ	Year	
3	e	C	u	ш	u	rear	

Fall	Credits Spring	Credits
HORT 320	3 HORT 227	3
BIOLOGY/ ZOOLOGY 101 & BIOLOGY/ ZOOLOGY 102	5 HORT 334 & HORT 335	3
Horticulture Breadth	3 Horticulture Breadth	6
COMM B Course	3 Humanities	3-4
	14	15-16

Third Year

Fall	Credits Spring	Credits
Agricultural Breadth ²	6 Agricultural Breadth ²	6
Horticulture Breadth	3 Math / Statistics / Computer Science	3
CALS International Studies ³	3 Humanities	3-4
Electives	3-4 Elective	3
	15-16	15-16

Fourth Year

roui tii ieai		
Fall	Credits Spring	Credits
Agricultural Breadth ²	3 Agricultural Breadth ²	3-4
Social Sciences	3 Electives	9
Horticulture Capstone	3	
Electives	6-7	
	15-16	12-13

Total Credits 117-122

12-13

- BIOLOGY/BOTANY 130, BIOLOGY/ZOOLOGY 101, and BIOLOGY/ZOOLOGY 102 is the preferred biology track.
- Please consult with a horticulture advisor to discuss when specific courses are typically offered.
- ³ Students can choose to complete the CALS international studies requirement using HORT 370 or HORT/AGRONOMY 376 & HORT 378, which also fulfill horticulture major requirements.

ADVISING AND CAREERS

ADVISING AND CAREERS ADVISING

Students interested in learning more about the Horticulture major should meet with Kathryn Jones, kjones26@wisc.edu, or schedule an advising appointment via Starfish (https://advising.wisc.edu/facstaff/starfish/starfish-student-resources/).

CAREERS

Majoring in horticulture prepares students for numerous career paths, including plant breeding and genetics, applied plant science, food crop production, greenhouse production, urban agriculture, community-supported agriculture (CSA), gardening and landscaping, horticulture education, extension- and community-based education, horticultural therapy, and the health sciences.

PEOPLE

PEOPLE PROFESSORS

Colquhoun, Goldman, Krysan (chair)

ASSOCIATE PROFESSORS

Atucha, Dawson, Endelman, Jull, Wang

ASSISTANT PROFESSORS

Ellison, Kovaleski

INSTRUCTIONAL STAFF

Calderon, Luiken, Oosterwyk

WISCONSIN EXPERIENCE

WISCONSIN EXPERIENCE INTERNSHIPS

Internships are a great way for Horticulture students to get handson experience. Many of our students intern at locations that vary
from seed companies to greenhouses to wineries to public gardens.
Horticulture students also have many opportunities to intern
during the year on or near campus at facilities such as the Allen
Centennial Garden (https://allencentennialgarden.org/), the UW
Arboretum (https://arboretum.wisc.edu/), and the Agricultural
Research Stations (https://ars.wisc.edu/). Students have also interned
abroad through the International Internship Program (https://
internships.international.wisc.edu/).

RESEARCH EXPERIENCE

Horticulture students have many opportunities to get involved in research labs and fieldwork in the department. Students primarily find research opportunities by directly contacting faculty (https://pasdept.wisc.edu/people/faculty/). Occasionally, opportunities are posted on the Student Job Center (https://studentjobs.wisc.edu/).

STUDY ABROAD

Horticulture students are encouraged to participate in study abroad experiences. Studying abroad provides students the unique opportunity to contextualize the learning acquired in traditional face-to-face courses on campus. There are many opportunities for Horticulture students to study abroad through short-term and semester-long programs. Students can explore opportunities utilizing the Horticulture Major Advising Page (https://studyabroad.wisc.edu/academics/major-advising-pages-maps/horticulture/) and consulting with their advisor.

Horticulture students also have some exciting opportunities to participate in short-term field experiences abroad led by program leaders from the Department of Plant and Agroecosystem Sciences. Some of these programs include UW Tropical Horticulture in Costa Rica (https://studyabroad.wisc.edu/program/?programId=517) and UW Food Systems and the Environment in Northern Japan (https://studyabroad.wisc.edu/program/?programId=650).

STUDENT ORGANIZATIONS

Connect with other Horticulture students and those interested in food and agriculture by joining a student organization. Organizations of particular interest to Horticulture students include People's Farm: Students for Sustainable Agriculture (https://win.wisc.edu/organization/thepeoplesfarm/), Slow Food UW (https://win.wisc.edu/organization/slowfood-uw/), WUD Cuisine Committee (https://win.wisc.edu/organization/cuisine/), Food Recovery Network - Madison Chapter (https://win.wisc.edu/organization/frnuw/), UW Campus Food Shed (https://goldman.horticulture.wisc.edu/outreach-and-program-resources/uw-campus-food-shed/), and Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) (https://win.wisc.edu/organization/manrrs/).

COMMUNITY ENGAGEMENT AND VOLUNTEERING

Students can choose from a variety of volunteer opportunities related to food, agriculture, gardening, etc. The Morgridge Center for Public Service (https://morgridge.wisc.edu/) provides resources to help students connect with volunteer opportunities based on their interests and goals.