

# AGRICULTURAL AND LIFE SCIENCES | GENERAL

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Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.

More Info (<https://one.ufl.edu/soc/>)

*Unless otherwise indicated in the course description, all courses at the University of Florida are taught in English, with the exception of specific foreign language courses.*

## Courses

### **AGG 3501 Environment, Food and Society 3 Credits**

**Grading Scheme:** Letter Grade

Global issues and trends in population growth, natural resource (soil, water, and plant genetic biodiversity) utilization, climate change, and potential impacts of current trends on agriculture, natural resources, global food security, and sustainability.

**Prerequisite:** Sophomore standing or higher.

### **AGG 4502 Nanotechnology in Food, Agriculture, and Environment 3 Credits**

**Grading Scheme:** Letter Grade

Application of nanotechnology in crop production, food processing and preservation, and environmental remediation; behavior of engineered nanoparticles in plant, soil and the environment, and environmental toxicology and regulations of engineered nanoparticles.

**Prerequisite:** SWS 3022.

**Attributes:** Artificial Intelligence

### **ALS 2410 Challenge 2050: Global Uncertainty 3 Credits**

**Grading Scheme:** Letter Grade

Explores questions in human well-being and sustainability building a foundation for addressing global challenges associated with global population. Transdisciplinary experts lead diverse and innovative discussions, complex adaptive problem solving; and the integration of economic, environmental, food, health, and social system perspectives.

**Prerequisite:** arrange with advisor and department permission.

### **ALS 2931 Agricultural Honors 1-4 Credits**

**Grading Scheme:** Letter Grade

Various courses offered. (WR)

**Prerequisite:** refer to the department.

**Attributes:** Satisfies 6000 Words of Writing Requirement

### **ALS 3030C Urban Agriculture 3 Credits**

**Grading Scheme:** Letter Grade

Work with faculty and guest field experts to explore the concepts, issues, and opportunities for urban agricultural sustainability, and on the development and implementation of demonstrations of community urban agricultural projects. Culminates in a group presentation for campus and community stakeholders.

**Prerequisite:** sophomore standing or higher.

### **ALS 3110 Home and Community Gardening: Collegiate Master Gardener 3 Credits**

**Grading Scheme:** Letter Grade

The Florida Master Gardener Program trains UF/IFAS Extension volunteers to provide horticultural education to residents and communities. Receive training to become a Master Gardener and learn horticulture, Integrated Pest Management, plant pathology, and garden planning. This online course is composed of digital lectures, discussions, and hands-on activities.

**Prerequisite:** (BSC 2005 or BSC 2010) and HOS 1014 or instructor permission.

### **ALS 3133 Agricultural and Environmental Quality 3 Credits**

**Grading Scheme:** Letter Grade

Analysis of effects of agriculture on environmental quality; emphasis on agricultural wastes and practices; potential for using agricultural systems for disposal of other wastes; effects of pollution on the agricultural environment.

**Prerequisite:** ABE 2062 or BOT 2010C or BSC 2005 or BSC 2010 or BSC 2862 or EVR 2001 or SWS 2008.

### **ALS 3153 Agricultural Ecology 3 Credits**

**Grading Scheme:** Letter Grade

Introduces the study of ecology from an agricultural perspective. Emphasizes ecological principles with examples and applications from agriculture.

**Prerequisite:** Sophomore standing or higher.

**ALS 3200C AI in Agricultural and Life Sciences 3 Credits****Grading Scheme:** Letter Grade

Artificial intelligence (AI) is used to solve problems in research and industry. Provides an understanding of and practical, hands-on experience building and using AI systems. Gain the skills and knowledge needed to use AI to solve real-world problems in agricultural and life sciences.

**Prerequisite:** (BSC 2891 or STA 2023 or STA 3032 or EEL 3872) with minimum grades of C.**Attributes:** Artificial Intelligence**ALS 3415 Challenge 2050: Developing Tools for Changing the World 3 Credits****Grading Scheme:** Letter Grade

The global population is projected to exceed 9 billion by the year 2050. Challenge 2050 requires innovative development of transdisciplinary solutions to complex, global issues. This course explores individual and team-based skills, competencies, and dispositions necessary to addressing the complex adaptive issues surrounding the challenge.

**Prerequisite:** ALS 2410.**ALS 3923 Honors Orientation 1 Credit****Grading Scheme:** Letter Grade

Introduces the CALS honors program and develop the skills needed to complete a creative, scholarly project and an honors thesis. A variety of guest speakers, in-class and outside activities, discussion, writing and oral presentation are used to accomplish the learning objectives.

**Prerequisite:** must be enrolled in CALS upper-division honors program.**ALS 3940 Challenge 2050: the Experience 3 Credits****Grading Scheme:** Letter Grade

Emphasizes trust building, accompaniment, and community development experiences within developing global contexts. Uses immersion experience to gain an understanding for concerns relating to population fluctuation, including issues related to economics, environment, food, health, and social systems. International immersion facilitates applying sustainable practices in developing areas.

**Prerequisite:** ALS 2410.**ALS 4161 Exotic Species and Biosecurity Issues 3 Credits****Grading Scheme:** Letter Grade

Studies US policies and programs affecting agricultural biosecurity as applied to current agricultural and extension and regulatory programs. Emphasizes policies and procedures used to detect and report non-indigenous species. Develop the analytical capabilities to assess the consequences of agricultural biosecurity threats.

**Prerequisite:** BSC 2010/BSC 2010L and BSC 2011/BSC 2011L, or equivalent.**ALS 4162 Consequences of Biological Invasions 3 Credits****Grading Scheme:** Letter Grade

Non-native species invasions and environmental effects of these invaders. Students will develop analytical capabilities to assess the consequences of biological invasions.

**Prerequisite:** BSC 2010/BSC 2010L and BSC 2011/BSC 2011L, or equivalent.**ALS 4163 Challenges in Plant Resource Protection 3 Credits****Grading Scheme:** Letter Grade

Applied training in the regulatory aspects of plant protection, using real-world case studies, scenarios and issues.

**Prerequisite:** BSC 2010/BSC 2010L and BSC 2011/BSC 2011L, or equivalent.**Corequisite:** HOS 3020C or ENY 3005/ENY 3005L or PLP 3002C.**ALS 4210 Controlled Environment Plant Production 3 Credits****Grading Scheme:** Letter Grade

Foundational information on the principles of controlled environment plant production, including the interactions between plants and their microenvironments, climate control technologies and strategies, and economic principles and analysis methods.

**Prerequisite:** junior or senior standing.**ALS 4404 International Studies 1-15 Credits****Grading Scheme:** Letter Grade

Supervised study abroad.

**Prerequisite:** Sophomore standing or higher and minimum 18 years old..**ALS 4419 Challenge 2050: Creating Solutions 1 Credit****Grading Scheme:** Letter Grade

Through this capstone experience course, students demonstrate and apply knowledge, skills, and dispositions in assigned transdisciplinary teams. Students complete a comprehensive proposal for a developmental initiative focused on addressing the 2050 Challenge of sustaining a global population.

**Prerequisite:** ALS 2410.

**ALS 4900 Supervised Extension Experience in Agricultural and Life Sciences 0-3 Credits****Grading Scheme:** S/U

Firsthand, authentic extension experiences in agricultural and life sciences under the supervision of a faculty member. Projects may involve program planning, development, implementation, and evaluation.

**Prerequisite:** Instructor permission.**ALS 4905 Individual Study in Agricultural and Life Sciences 1-3 Credits****Grading Scheme:** Letter Grade

Individual study in agricultural and life sciences.

**Prerequisite:** permission of dean and instructor.**ALS 4911 Supervised Research in Agricultural and Life Sciences 0-3 Credits****Grading Scheme:** S/U

Firsthand, authentic research in agricultural and life sciences under faculty supervision. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

**Prerequisite:** Instructor permission.**ALS 4914 Project Team Research: Building Skills in Agrobiology 3 Credits****Grading Scheme:** Letter Grade

Hands-on experience in addressing a real-world problem faced by an agricultural industry partner. Production of a detailed plan, project design, and preliminary data for evaluating and solving the problem. Offered every term.

**Prerequisite:** Junior standing or higher.**ALS 4915 Honors Thesis Research in Agricultural and Life Sciences 0-3 Credits****Grading Scheme:** S/U

Independent research in agricultural and life sciences leading to an honors thesis. Student are mentored by a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

**Prerequisite:** junior standing, upper division GPA of 3.75 or higher and completed honors thesis proposal on file.**ALS 4932 Special Topics 1-3 Credits****Grading Scheme:** Letter Grade

Variable subjects provide content for the study of agricultural topics not offered in other courses.

**Prerequisite:** Instructor permission.**ALS 4936 CALS Leadership Institute Seminar 1 2 Credits****Grading Scheme:** Letter Grade

Discussion-based seminar provides an introduction to leadership studies and personal leadership development. Exploration of personal leadership characteristics through various assessments and the development of a personal leadership development plan.

**Prerequisite:** admission to the CALS Leadership Institute Program.**ALS 4937 CALS Leadership Institute Seminar 2 2 Credits****Grading Scheme:** Letter Grade

Discussion-based seminar provides an introduction to group and organizational leadership in local and global contexts. Personal assessment of strengths and further application of developed personal leadership plan to a global vision are included.

**Prerequisite:** ALS 4936.**ALS 4938 CALS Leadership Institute International Service and Learning Experience 2 Credits****Grading Scheme:** Letter Grade

This seminar focuses on an international service and learning experience as a context for application of course content previously covered in the program. A compilation of documentation supporting leadership growth and reflection serve as closure to leadership institute.

**Prerequisite:** ALS 4936.**ALS 4941 Full-time Practical Work Experience in Agriculture 1-4 Credits****Grading Scheme:** S/U

Variable subjects provide content for the study of agricultural topics not offered in other courses.

**Prerequisite:** prior arrangement with advisor and dean's office.**ALS 4950 Challenge 2050: Taking Action 2-6 Credits****Grading Scheme:** Letter Grade

Through supervised practical training, in conjunction with academic assignments at professional organizations, the Taking Action internship provides the opportunity to professionally examine and engage the global challenges associated with Challenge 2050.

**Prerequisite:** maintain GPA of 3.0, must be in good standing and must have completed the Challenge 2050 Global Challenge certificate with 3.0 average.