

Transfer Guide

College of Agricultural and Life Sciences



UF | IFAS CALS
UNIVERSITY of FLORIDA

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College of Agricultural and Life Sciences Transfer Guide

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Important Contacts

College of Agricultural and Life Sciences

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www.cals.ufl.edu
info@cals.ufl.edu

UF Admissions Office

P.O. Box 114000
201 Criser Hall
Gainesville, FL 32611-4000
(352) 392-1365

www.admissions.ufl.edu

UF Dean of Students

P.O. Box 114075
202 Peabody Hall
Gainesville, FL 32611
(352) 392-1231

www.dso.ufl.edu

UF Student Financial Affairs

P.O. Box 114025
S07 Criser Hall
(352)-392-1275

www.sfa.ufl.edu

UF Housing

P.O. Box 112100
Gainesville, FL 32611
(352) 392-2161

www.housing.ufl.edu

The Basics of Transfer Admission

The College of Agricultural and Life Sciences (CALs) has a tradition of working closely with community/state college students to ensure a smooth transfer to the University of Florida. Prospective students can choose from 23 majors in CALs. The Biological Engineering major is offered by the Department of Agricultural and Biological Engineering through the College of Engineering.

IMPORTANT: CALs applicants must meet the following requirements before transferring:

- Obtain an Associate of Arts degree from a Florida public community/state college. Students transferring from private institutions, state universities in Florida or institutions outside Florida must have at least 60 semester hours of transferable credit. Vocational coursework is not accepted.
- Complete two years of sequential high school foreign language courses or 8-10 hours of sequential college-level foreign language courses (or prove proficiency).
- Have at least a 2.0 G.P.A. at each higher education institution attended as calculated by UF. (all graded attempts calculated, NO grade forgiveness).
- Meet the G.P.A. required for the major (all graded attempts calculated, NO grade forgiveness).
- Complete specific prerequisite courses required for the major with the required G.P.A.

This transfer guide includes G.P.A. and course requirements organized by major and specialization.

Application Process

Students may apply to CALs by completing the online application available at: www.admissions.ufl.edu. Applicants should apply no earlier than one year prior to the intended semester of transfer, and no later than the established deadline published at: www.admissions.ufl.edu/ugrad/appdates.html.

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

Opportunities in CALS

CALS Honors Program

The CALS Honors Program is the only formal upper-division honors program at the University of Florida. The program is designed for students with 60 or more hours and a G.P.A. of 3.75 or higher. Participation in a community/state college honors program is not required. For more information on the CALS Honors Program contact:

Dr. Al Wysocki, CALS Honors Program Director
(352) 392-1963

www.cals.ufl.edu/honors

Scholarships

CALS offers many scholarships and awards. Current or incoming students of the University of Florida who are enrolled or planning to enroll in a CALS program of study may submit applications. Biological Engineering students in the College of Engineering are also eligible. All scholarships awarded through CALS are contingent upon funding and academic performance. Applications can be accessed at www.cals.ufl.edu or by contacting CALS. Applications will be available beginning in December and must be submitted to CALS in March of each year. Specific deadlines will be posted at www.cals.ufl.edu.

Student Organizations

CALS boasts more than 48 student organizations associated with majors and areas of interest. In addition, CALS sponsors several organizations, including the Agricultural and Life Sciences College Council, CALS Ambassadors, Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) and Alpha Zeta. These organizations offer students opportunities for close interaction with faculty, professionals from various fields and peers. Additional information can be accessed at: www.cals.ufl.edu

Global Gators – International Travel

CALS is committed to preparing students for the diversity of international challenges they will face as tomorrow's leaders. To meet this goal, CALS encourages students to participate in international travel and study experiences offered by the University of Florida or in college sponsored international programs. Recent destinations include Italy, France, Costa Rica and India. More information about Global Gators can be accessed at: <http://www.cals.ufl.edu/global-gators/index.php>

Health-Related Preprofessional Curricula

Students may major in any area of study while preparing for professional studies in dentistry, medicine, optometry, pharmacy and veterinary medicine. The majors listed below include the general preprofessional requirements (math, biology, chemistry, organic chemistry and physics) as part of the required courses for the bachelor's degree along with other required and recommended courses for the health professions.

Animal Sciences

Animal Biology Specialization

Biology

Preprofessional Specialization

Entomology and Nematology

Preprofessional Specialization

Microbiology and Cell Science

Nutritional Sciences

Wildlife Ecology and Conservation

Preprofessional Specialization

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Statewide and Distance Education Programs

CALS is committed to bringing quality educational opportunities to students throughout Florida. Through statewide and distance education programs students can obtain Bachelor of Science degrees without traveling to Gainesville. Students wishing to transfer to the University of Florida following the completion of an Associate of Arts degree from a Florida community/state college may consider pursuing a bachelor's degree at one of five sites located throughout the state or online.

Mid-Florida Research and Education Center

Apopka, FL

Geomatics

(Lectures available at Apopka; labs must be completed at Gulf Coast Research and Education Center in Plant City)

Plant Science

Landscape and Nursery Horticulture

Diane Mealo

Student Services Coordinator

dwm@ufl.edu

2725 Binion Road

Apopka, FL 32703

(407) 884-2034 Fax: (407) 814-6186

<http://mrec.ifas.ufl.edu/teaching>

Ft. Lauderdale Research and Education Center

Ft. Lauderdale, FL

Geomatics

Plant Science

Landscape and Nursery Horticulture

Joanne Korvick

Student Services Coordinator

duckweed@ufl.edu

3025 College Avenue

Davie, FL 33314

(954) 577-6371 Fax: (954) 475-4125

http://flrec.ifas.ufl.edu/academic_programs/index.shtml

Indian River Research and Education Center

Ft. Pierce, FL

Microbiology and Cell Science

Jonathan Orsini

Student Services Coordinator

jorsini@ufl.edu

West Florida Research and Education Center

Milton, FL

Plant Science

Landscape and Nursery Horticulture

Natural Resource Conservation

5988 Hwy 90 Bldg 4900

Milton, FL 32583

(850) 983-5216 Fax: (850) 983-5774

<http://wfrec.ifas.ufl.edu/academics/>

Gulf Coast Research and Education Center- Plant City Campus of Hillsborough Community College

Plant City, FL

Agricultural Education and Communication

Agricultural Education

Communication and Leadership

Development

Geomatics

1200 North Park Rd

Plant City, FL 33563

(813) 757-2280 Fax: (813) 707-7399

<http://gcrec.ifas.ufl.edu/pcc>

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

Online Programs

*Interdisciplinary Studies – Environmental
Management in Agriculture and Natural Resources*

Contact: Michael J. Sisk

mjsisk@ufl.edu

352-294-3152

Microbiology and Cell Science

Requires two face-to-face laboratory classes
available at locations around the state or in
Gainesville

Jonathan Orsini

jorsini@ufl.edu

352-846-1330

UF COURSE	COMMUNITY/ STATE COLLEGE EQUIVALENT	COURSE DESCRIPTION
ACG 2021	ACG 2011C or ACG 2001 & ACG 2011	Introduction to Financial Accounting Principles of Accounting I Principles of Accounting II
BSC 2005	BSC 2007 BSC 2005 BSC 1005 BSC 2020 BSC 1020	Biological Sciences Human Biology
BSC 2005 Lab	BSC 2005 Lab BSC 1005 Lab BSC 1020 Lab	Laboratory in Biological Sciences Human Biology Lab
BSC 2010	BSC 2010 BSC 1010 BOT 2010C BOT 1010C ZOO 2010 ZOO 1010	Integrated Principles of Biology 1 Introductory Botany General Zoology 1
BSC 2011	BSC 2011 BSC 1011 BOT 2011C BOT 1011C ZOO 2011 ZOO 1011	Integrated Principles of Biology 2 Plant Diversity General Zoology 2
CHM 1025	CHM 1025 CHM 1025 & Lab	Introduction to Chemistry
CHM 2045	CHM 2045 CHM 1045 CHM 1040 CHM 1041	General Chemistry 1
CHM 2046	CHM 2046 CHM 1046	General Chemistry 2
CHM 1030 CHM 1031	CHM 1020 CHM 1021	Basic Chemistry Concepts and Applications 1 Basic Chemistry Concepts and Applications 2
ECO 2013	ECO 2013 ECO 1013	Principles of Macroeconomics
ECO 2023	ECO 2023 ECO 1023	Principles of Microeconomics
EDF 3110	DEP 2004 DEP 1004 DEP 2102	Human Growth and Development Child Development

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).
Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

UF COURSE	COMMUNITY/ STATE COLLEGE EQUIVALENT	COURSE DESCRIPTION
ENC 2210	ENC 2210 ENC 1210 MMC 2100	Technical Writing Writing for Mass Communication Writing for Mass Communication
GEO 2200	GEO 2200	Physical Geography
GLY 2010C	GLY 2010	Physical Geology
MAC 1147	MAC 1147 MAC 1140 & MAC 1114	Precalculus: Algebra and Trigonometry Precalculus Algebra & Trigonometry
MAC 2233	MAC 2233	Survey of Calculus
MAC 2311	MAC 2311	Analytic Geometry and Calculus 1
MAC 2312	MAC 2312	Analytic Geometry and Calculus 2
MAC 2313	MAC 2313	Analytic Geometry and Calculus 3
MMC 2100	MMC 2100 MMC 1100 RTV 2102 JOU 2100 JOU 1100 CRW 2200 CRW 2600 JOU 1000	Writing for Mass Communication Writing for Mass Communication Writing for the Electronic Media Introduction to Journalism Introduction to Journalism Magazine Writing Writing for Film and TV Journalism I
PHY 2004	PHY 2004	Applied Physics 1
PHY 2005	PHY 2005	Applied Physics 2
PHY 2020	PHY 1020	Introduction to Principles of Physics
PHY 2048	PHY 2048	Physics with Calculus 1
PHY 2049	PHY 2049	Physics with Calculus 2
PHY 2053	PHY 2053 PHY 1053	Physics 1
PHY 2054	PHY 2054 PHY 1054	Physics 2
PSY 2012	PSY 2012	Principles of Psychology
SPC 2608*	SPC 2608 SPC 1608	Introduction to Public Speaking* <i>Note: SPC 1017 Fundamentals of Speech Communication is not the course equivalent of SPC 2608.</i>
STA 2023	STA 2023 STA 1023	Introduction to Statistics 1
SYG 2000	SYG 2000	Principles of Sociology
SYG 2430	SYG 2430 SYG 2410	Marriage and Family Marriage and Family

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count). Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

AGRICULTURAL EDUCATION AND COMMUNICATION

Agricultural Education Communication and Leadership Development

Agricultural Education and Communication prepares students for careers in agricultural education, the Cooperative Extension Service, business, industry and agricultural communication. Two specializations are offered: agricultural education and communication and leadership development. Both require a common core that includes technical agriculture courses and professional education. Both specializations are available at the UF/IFAS Gulf Coast Research and Education Center in Plant City.

Agricultural Education prepares students for exciting and challenging careers in teaching and other related areas. Specifically, the program prepares students to be certified agriscience instructors and educational specialists. Students who complete the program of study in this specialization are prepared to meet the Florida Department of Education's requirements for agriculture teacher certification or for employment in the agricultural business and industry sector.

Communication and Leadership Development prepares students for entry into agribusiness and communication positions related to human resource development, corporate training and development, and agricultural literacy. Coursework focuses on a core of leadership and communication courses, including leadership development, digital media, interpersonal skills, working with groups, presentation development, intercultural communication, public relations campaign strategies for agriculture and technical writing.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Agricultural Education specialization

Required G.P.A. = 2.5 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

BSC 2005 & 2005L	Biological Sciences and Lab	4
SPC 2608	Introduction to Public Speaking	3
MAC 1140	Precalculus Algebra	3
or MAC 1105	Basic College Algebra	3
EDF 3110	Human Growth and Development	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

ENC 2210	Technical Writing	3
EDF 2085	Teaching Diverse Populations	3
CHM 1083	Consumer Chemistry	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics 1	3
or STA 2122	Statistics for Social Science	3

It is recommended for admission but not required, that students complete the General Knowledge portion of the Florida Teacher Certification Exam before transferring.

Communication and Leadership Development specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

BSC 2005 & 2005L	Biological Sciences and Lab	4
SPC 2608	Introduction to Public Speaking	3
MAC 1140	Precalculus Algebra	3
or MAC 1105	Basic College Algebra	3
MMC 2100	Writing for Mass Communication	3
or ENC 2210	Technical Writing	3
PSY 2012	General Psychology	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

CHM 1083	Consumer Chemistry	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics	3
or STA 2122	Statistics for Social Science	3
American History or Political Science Course		3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

AGRICULTURAL OPERATIONS MANAGEMENT

Agricultural Operations Management (AOM) combines emerging technologies with business principles to allow students to apply cutting edge techniques to a wide variety of career paths. Students gain technical expertise in systems management, environmental quality, energy efficiency, agricultural construction management, machinery, GIS/GPS remote sensing, safety, irrigation, power systems, water control and food processing. Students select a concentration based on their interest area.

The curriculum supports students who plan to seek career opportunities in commercial business operations and management. In addition to hands-on applied skills, students will take courses in economics, accounting, business, finance and management. Graduates become an integral part of the profitable operations of many types of businesses, such as agricultural production facilities, grove management, commercial nurseries, construction management and materials, regulatory agencies and citrus processing.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Agricultural Operations Management

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete 6 of the 8 courses listed below and include math, chemistry and physics.

MAC 2233	Survey of Calculus 1	3
or MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
CHM 2045 & 2045L	General Chemistry 1 and Lab	4
PHY 2004	Applied Physics 1	3
or PHY 2020	Introduction to Principles of Physics	3
BSC 2010/2010L	General Biology 1 and Lab	4
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ACG 2021	Introduction to Financial Accounting	4
PSY 2012	General Psychology	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

ECO 2013	Macroeconomics	3
ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics 1	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

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ANIMAL SCIENCES
Animal Biology
Equine
Food Animal

This major offers three specializations: animal biology, equine and food animal. Potential careers for animal sciences majors include various aspects of livestock production (beef cattle, dairy cattle and horses), livestock processing and utilization (meat, milk, performance and recreation), and allied service industries (feed, healthcare, genetics, equipment, supplies, marketing, promotion, finance and education). Animal Sciences students may also prepare for graduate school or veterinary medical school.

Animal Biology is designed for students who wish to become veterinarians, dentists, medical doctors, pharmacists or pursue graduate studies and want a strong basic science orientation in their undergraduate program. Students select elective courses in animal sciences, zoology, microbiology, wildlife ecology and veterinary science to strengthen their academic portfolios.

Equine prepares students for careers in the equine industry.

Food Animal prepares students for careers in livestock production, processing and allied industries. Through proper selection of electives, students may emphasize beef, dairy or meat science.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Animal Biology specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
STA 2023	Introduction to Statistics	3

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

**Equine and
Food Animal specializations**

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
ECO 2013	Macroeconomics	3
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
STA 2023	Introduction to Statistics 1	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
MCB 2000 & 2000L	Microbiology and Lab	4

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

BIOLOGICAL ENGINEERING

Agricultural Production Engineering
Biosystems Engineering
Land and Water Resources Engineering
Packaging Engineering

Biological engineering applies engineering principles to the biological sciences to produce biofuels, food and fiber products and other agricultural products from renewable bio-resources. It also aims to protect the environment and to conserve and replenish our natural resources. Biological engineers pioneer new techniques in agricultural robotics, remote sensing, bioprocessing, biofuels, precision agriculture, plant space biology, sustainability of our natural resources, and packaging techniques and design.

Biological Engineering (BE) is offered cooperatively by the Colleges of Engineering and Agricultural and Life Sciences. **Students majoring in BE are considered students of the College of Engineering and should refer to that college for admission questions and curriculum guidance.** BE students choose an area of concentration: agricultural production engineering, biosystems engineering, land and water resources engineering, or packaging engineering. The Biological Engineering program is accredited by the Accreditation Board for Engineering and Technology (ABET).

Agricultural Production Engineering – course topics may include designing environmental control systems or agricultural equipment, developing precision agriculture solutions, designing energy conservation and renewable energy systems, applying engineering design to food production systems and computer modeling.

Biosystems Engineering – areas of study may include converting raw biological materials into useful products, creating fuels from renewable resources, designing microbes to clean the environment, creating mathematical models of biological systems, applying principles of genetic engineering and creating safe and efficient food production systems.

Land and Water Resources Engineering – focuses on sustainability of soil and water resources by designing effective drainage systems and efficient irrigation systems, identifying techniques for preserving wetlands and ecosystems and developing systems for maintaining water resources and water quality.

Packaging Engineering – focuses on the packaging requirements to protect and preserve products from the source to the consumer through evaluating the distribution and transportation processes, developing new materials and processes for packaging, designing and marketing new packages, recycling of post-consumer packaging and sustaining resources.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Biological Engineering – all areas of concentration

Required G.P.A. = 2.0 overall and 2.5 in the following courses (does not include labs)

Students MUST complete a minimum of **six** out of the following **eight** courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
MAC 2312	Analytic Geometry and Calculus 2	4
MAC 2313	Analytic Geometry and Calculus 3	4
MAP 2302	Elementary Differential Equations	3
PHY 2048 & 2048L*	Physics with Calculus 1 and Lab	4
PHY 2049 & 2049L	Physics with Calculus 2 and Lab	4

Please note: a grade of “C” or better is required within two attempts in the above listed courses and **PHY 2048 & 2048L (*)** must be completed as part of the minimum six courses before transferring.

The following course may be completed at the community/state college but is not required for admission to the College of Engineering:

ENC 2210	Technical Writing	3
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Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

BIOLOGY

Applied Biology
Biotechnology
Natural Science
Preprofessional

The College of Agricultural and Life Sciences offers a biology major that allows students to develop a broad, integrative background in the biological sciences. Each specialization develops fundamental knowledge of animals, plants and microorganisms and allows students to select courses to enhance their knowledge in specific areas. The Biology major is offered collaboratively with the College of Liberal Arts and Sciences.

Applied Biology is for students interested in learning how fundamental biology is applied to solving problems. This specialization provides exposure to the major issues facing sustainability of human populations and natural resources. This specialization prepares students for graduate study in the biological sciences.

Biotechnology prepares students for careers where knowledge of molecular biology and genetic engineering are important. Students will have the opportunity to learn various techniques and scientific procedures in molecular biology, virology, bioengineering, cell and tissue culture, microscopy and bioinformatics. This specialization prepares students for graduate study in the biological sciences.

Natural Science is for students who are interested in descriptive and interpretive biology. This specialization provides exposure to major forms of flora and fauna, and integrates elements that influence flora and fauna, namely soil and water resources and human activities. This specialization prepares students for graduate study in the biological sciences.

Preprofessional prepares students for further study in medicine, dentistry, pharmacy, veterinary medicine or other health professions. Degree requirements include the core prerequisite courses for professional school admission. Electives in the life sciences allow students to explore their particular interests.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Biology – all specializations

Required G.P.A. = 2.0 overall and 2.5 in the following courses. (Please note: This program is extremely competitive and the above GPA's are **MINIMUMS.**)

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

BOTANY
General Botany
Botanical Research

The Botany major is offered through both the College of Agricultural and Life Sciences and the College of Liberal Arts and Sciences. The program provides a broad background in the biology of plants and involves study and research in anatomy, ecology, genetics, physiology, taxonomy and molecular biology of plants and biochemistry. Students with a botany degree can pursue careers in other plant sciences, such as horticulture, agronomy, plant pathology and forestry.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

General Botany specialization is for students who may not intend to pursue a graduate degree but are interested in a career in plant biology.

Botanical Research Specialization is for students who intend to pursue a graduate degree and it requires research with a faculty member.

General Botany specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses, with a C or better in each.
Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	3
MAC 1147	Precalculus	4
or MAC 2311	Analytic Geometry and Calculus 1	4
or STA 2023	Introduction to Statistics	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences. A grade of C or better is required in each.

PHY 2004 & 2004L	Applied Physics 1 and Lab	4
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

Botanical Research

Required G.P.A. = 2.0 overall and 2.5 in the following courses, with a C or better in each.
Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	4
MAC 2311	Analytic Geometry and Calculus 1	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences. A grade of C or better is required in each.

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

DIETETICS

Dietetics is a challenging profession that applies the sciences of food and nutrition to the health and well-being of individuals and groups in a variety of settings. The curriculum includes courses in biological and physical sciences, math, communications, economics and business combined with in-depth courses in lifecycle nutrition, medical nutrition therapy, metabolism, community nutrition and counseling. The curriculum is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). Graduates are eligible to compete for placement in an ACEND-accredited dietetic internship. Following the completion of an internship, students take a national registration examination to earn the Registered Dietitian (RD) credential.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Dietetics

Required G.P.A. = 2.0 overall and 2.5 in the following courses with a C or better in each. (Please note: This program is extremely competitive and the above GPA's are **MINIMUMS.**)

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

STA 2023	Introduction to Statistics 1	3
PSY 2012	General Psychology	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
MCB 2000 & 2000L	Microbiology and Lab	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

ENTOMOLOGY AND NEMATOLOGY

Basic Science
Biosecurity
Ecotourism
Plant Protection
Preprofessional
Urban Pest Management

Entomology and nematology are biological sciences associated with the study of two principal groups of invertebrate animals: insects and nematodes. Students majoring in this area follow basic biological science or applied pest management curricula.

Basic Science prepares students for entomological careers, research and graduate school.

Biosecurity focuses on the study of invasive species and prepares students for careers with agribusiness or government agencies concerned with environmental protection, agro-terrorism, pest management and crop protection.

Ecotourism prepares students for careers in the ecotourism industry, including nature-based history education, theme parks, preserves and recreation.

Plant Protection offers instruction in entomology, nematology, plant pathology and weed science. Studies emphasize the theory and application of biological, chemical and integrated pest management (IPM) programs that will maintain a quality environment.

Preprofessional prepares students for programs in medicine, dentistry or veterinary medicine.

Urban Pest Management is designed for students who want to enter the commercial pest control industry.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Basic Science specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2233	Survey of Calculus 1	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

STA 2023	Introduction to Statistics 1	3
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
PHY 2005 & 2005L	Applied Physics 2 and Lab	4
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

Biosecurity specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

STA 2023	Introduction to Statistics 1	3
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
or PHY 2020	Introduction to Principles of Physics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

Ecotourism specialization

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045	General Chemistry 1	3
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
PHY 2004	Applied Physics 1	3
or PHY 2020	Introduction to Principles of Physics	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

Plant Protection specialization

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
STA 2023	Introduction to Statistics 1	3
ECO 2023	Microeconomics	3

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

Preprofessional specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics 1	3

Urban Pest Management specialization

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
or PHY 2020	Introduction to Principles of Physics	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

STA 2023	Introduction to Statistics 1	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2023	Microeconomics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

**ENVIRONMENTAL MANAGEMENT IN AGRICULTURE
AND NATURAL RESOURCES
Interdisciplinary Studies**

This interdisciplinary studies major emphasizes environmental management as it affects our land and water resources. Graduates will find employment with agricultural producers, consulting companies and governmental agencies that are involved in maintaining a sustainable environment. This major is also available via distance education.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Environmental Management in Agriculture and Natural Resources

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BSC 2005 & 2005L	Biological Sciences and Lab	4
MAC 2233	Survey of Calculus 1	3
STA 2023	Introduction to Statistics 1	3
SPC 2608	Introduction to Public Speaking	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

PHY 2020	Introduction to Principles of Physics	3
or PHY 2004	Applied Physics 1	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
GLY 2010C	Physical Geology	4
or GLY 2030C	Environmental and Engineering Geology	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

ENVIRONMENTAL SCIENCE

Environmental science is the science of people's role in natural systems, the basis of our economy. This program accesses courses university wide and provides numerous opportunities for international study. The environmental science degree approaches complex environmental issues with reliable knowledge and interdisciplinary perspectives. This includes the study of biological and physical sciences, ethics, economics, policy and law.

The degree prepares graduates for careers with environmental consulting companies, government environmental offices, land and water management agencies, or non-government organizations. Many graduates continue their studies in graduate or professional school. Students may seek either a Bachelor of Science or Bachelor of Arts degree.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Bachelor of Science

Required GPA = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
or MAC 2233	Survey of Calculus 1	3
MAC 2312	Analytic Geometry and Calculus 2	4
or MAC 2234	Survey of Calculus 2	3
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
PHY 2053 & 2053L	Physics 1 and Lab	5
or PHY 2004 & 2004L	Applied Physics 1 and Lab	4
PHY 2054 & 2054L	Physics 2 and Lab	5
or PHY 2005 & 2005L	Applied Physics 2 and Lab	4
STA 2023	Introduction to Statistics 1	3
ECO 2013	Macroeconomics	3
ECO 2023	Microeconomics	3

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

Bachelor of Arts

Required GPA = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2005 & 2005L	Biological Sciences and Lab	4
PHY 2004	Applied Physics 1	3
or PHY 2020	Introduction to Principles of Physics	3
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
POS 2041	American Federal Government	3
STA 2023	Introduction to Statistics 1	3
ECO 2013	Macroeconomics	3
ECO 2023	Microeconomics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

FAMILY, YOUTH AND COMMUNITY SCIENCES

The Family, Youth and Community Sciences (FYCS) major is an applied social science program that provides general and technical education for careers in human services, community development, Cooperative Extension and youth professions. Graduates find employment in public, private, nonprofit and for-profit organizations. FYCS prepares students to deal with complex problems in human and community services. Students develop in-depth knowledge in individual and family development/functioning in a community and societal context, contemporary problems facing youth, families and communities, and organizational policies and programs designed to alleviate concerns. Students also learn intervention skills such as interpersonal communication, program planning, management and administration, social policy, applied research and evaluation, and community-based education.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Family, Youth and Community Sciences

Required G.P.A. = 2.0 overall and 2.5 in the following courses with a C or better in each. Students MUST complete the following courses before transferring:

BSC 2005 & 2005L	Biological Sciences and Lab	4
MAC 1105	Basic College Algebra	3
or MAC 1140	Precalculus Algebra	3
SYG 2000	Principles of Sociology	3
PSY 2012	General Psychology	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics 1	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
SYG 2430	Marriage and Family	3
CHM 1083	Consumer Chemistry	3
or PHY 2020	Introduction to Principles of Physics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

FOOD AND RESOURCE ECONOMICS

Food and Agribusiness Marketing and Management International Food and Resource Economics

Food and resource economics is a diverse field. Graduates obtain positions in sales, international business, financial management, Cooperative Extension and government. To account for this diversity, the department offers two specializations: food and agribusiness marketing and management, and international food and resource economics.

Food and Agribusiness Marketing and Management is designed for students interested in food and fiber systems management, marketing, finance and international business. Employment opportunities include managerial positions with major agribusiness firms, sales positions, commercial banks, Farm Credit Service and insurance, and appraisal firms.

International Food and Resource Economics provides a broad background in economic theory and international development and policy. This specialization is particularly appropriate for students preparing for graduate school or for careers working for international organizations and governments.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Food and Resource Economics – all specializations

Required G.P.A. = 2.0 overall and 2.0 in the following courses, with a C or better in each.
Students MUST complete the following courses before transferring:

MAC 2233	Survey of Calculus 1	3
ACG 2021	Introduction to Financial Accounting	4
ECO 2013	Macroeconomics	3
STA 2023	Introduction to Statistics 1	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

CHM 1083	Consumer Chemistry	3
or PHY 2020	Introduction to Principles of Physics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
BSC 2005 & 2005L	Biological Sciences and Lab	4

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

FOOD SCIENCE

Food Science professionals work in the food industry and government agencies in areas such as product development, quality assurance, sensory evaluation, packaging, regulations and safety. The curriculum emphasizes a strong technical background in biology, chemistry, microbiology and engineering and the applications of these sciences to the safety, quality and nutritional value of food. The curriculum is approved by the Institute of Food Technologists (IFT) and is excellent preparation for graduate study.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Food Science

Required G.P.A. = 2.0 overall and 2.5 in the following courses, with a C or better in each. Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

PHY 2004 & 2004L	Applied Physics 1 and Lab	4
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
STA 2023	Introduction to Statistics 1	3
MCB 2000 & 2000L	Microbiology and Lab	4

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

FOREST RESOURCES AND CONSERVATION

Environmental Pre-Law
Forest Business Management
Forest Resource Management
Protected Areas Management
Recreation Resource Management
Urban Forestry
Watershed Science and Management

The School of Forest Resources and Conservation offers Florida's only nationally accredited, four-year program of forestry education. The Forest Resources and Conservation major (FRC) provides a thorough understanding of natural and managed forest ecosystems and prepares students to work with natural resources and modern technology to meet the expanding needs and expectations of a nonexpanding forest land base. The program emphasizes sustainable, multiple-use management and includes substantial field work and group projects. Graduates are employed by private industry, local, state and federal agencies; nonprofit conservation groups, or are self-employed as consultants. A strong employment market, competitive salaries, and excellent career advancement opportunities abound.

Environmental Pre-Law provides a solid undergraduate basis of forest and natural resources science and management upon which is built a broad understanding of policies and processes affecting the use of natural resources.

Forest Business Management gives students a sound background in natural resource management and a broad introduction to business as appropriate for students interested in consulting, real estate or working for forest industry.

Forest Resource Management is for students seeking a comprehensive education in forest resource science and management. This specialization is accredited by the Society of American Foresters.

Protected Areas Management is for students interested in managing lands for conservation and restoration purposes, usually on lands owned by the government or by private conservation organizations.

Recreation Resource Management focuses on the sustainable management of our natural resources for recreation and understanding human dimensions as related to natural resource use.

Urban Forestry is for students with interests in forest management in the typically local-scale forests in urban-suburban landscapes and at the interface of urban and undeveloped lands. This specialization is accredited by the Society of American Foresters.

Watershed Science and Management prepares students to address the many management issues associated with water resources, including soils, policy and water quality.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Forest Resources and Conservation - all specializations

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045	General Chemistry 1	3
or CHM 1030	Basic Chemistry Concepts and Apps	3
BSC 2010 & 2010L	General Biology 1 and Lab	4
MAC 1105	Basic College Algebra	3
STA 2023	Introduction to Statistics 1	3
SPC 2608	Introduction to Public Speaking	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
ENC 2210	Technical Writing	

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

GEOMATICS

Geomatics is the modern scientific term referring to the integrated approach of measurement, analysis, and management of the descriptions and locations of Earth-based data, often termed spatial data. These data come from many sources, including earth-orbiting satellites, air and sea-borne sensors and ground-based instruments. Data are processed and manipulated with state-of-the-art information technology using computer software and hardware. Geomatics has applications in all disciplines that depend on spatial data, including environmental studies, planning, engineering, navigation, geology and geophysics, land development, and landownership. Thus it is fundamental to all geoscience disciplines that use spatially related data, such as Surveying, Geodesy, Remote Sensing & Photogrammetry, Cartography, Geographic Information Systems and Global Positioning Systems. Upon graduating with a degree in Geomatics, students are employed with private firms and governmental agencies. This major is accredited by the Accreditation Board for Engineering and Technology (ABET). The Geomatics major is also available at the UF/IFAS Fort Lauderdale Research and Education Center and the UF/IFAS Gulf Coast Research and Education Center in Plant City.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Geomatics

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

MAC 2311	Analytic Geometry and Calculus 1	4
or MAC 1114 & MAC 2233	Trigonometry & Survey of Calculus	6
PHY 2053 & 2053L	Physics 1 and Lab	4
or PHY 2004 & 2004L	Applied Physics 1 and Lab	4
PHY 2054 & 2054L	Physics 2 and Lab	4
or PHY 2005 & 2005L	Applied Physics 2 and Lab	4
SPC 2608	Introduction to Public Speaking	3
STA 2023	Introduction to Statistics 1	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
Approved Computer Programming Course		3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

ENC 2210	Technical Writing	3
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Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

HORTICULTURAL SCIENCE

Horticultural Production
Horticultural Science
Organic Crop Production
Plant Molecular and Cellular Biology

Students in the Horticultural Science major study the biology, production, processing and marketing of fruits and vegetables to prepare for a variety of careers in the green industry.

Horticultural Production is a comprehensive specialization for students planning careers in any phase of the fruit and vegetable industry. This specialization emphasizes crop production and management. Career options include production management, agricultural sales, marketing, technical representation and many other opportunities.

Horticultural Science offers students a generalized program, covering growth and development of all horticultural crops. This is a flexible option that can be tailored to individual students' interests and career objectives. Career options include greenhouse management, crop production, biological research, commodity marketing, retail and agricultural chemical sales, and produce brokering.

Organic Crop Production emphasizes the cultural practices that maintain ecological and economical balance in horticultural crop production. This is a flexible option with many electives available to meet educational and career objectives. Individuals in this specialization will be prepared for a range of careers related to conventional, sustainable and organic crop production.

Plant Molecular and Cellular Biology focuses on the molecular aspects of crops, including crop growth, development and cultivar improvement. This specialization prepares students for careers in laboratory research and is also excellent preparation for graduate study.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

**Horticultural Production,
Horticultural Science and
Organic Crop Production specializations**

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	4
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalc Algebra and Trigonometry	6
PHY 2004	Applied Physics 1	3
or PHY 2020	Introduction to Principles of Physics	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

STA 2023	Introduction to Statistics 1	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3

Plant Molecular and Cellular Biology specialization

Required G.P.A. = 2.0 overall and 2.0 in the following courses with a grade of C or better in each.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
PHY 2048 & 2048L	Physics with Calculus 1 and Lab	4
or PHY 2053 & 2053L	Physics 1 and Lab	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

MARINE SCIENCES **Interdisciplinary Studies**

The Marine Sciences major is offered through both the College of Agricultural and Life Sciences and the College of Liberal Arts and Sciences. The curriculum provides students with the core scientific and quantitative skills necessary for success. CALS students complete an upper-division core that concentrates on biological and ecological marine science essentials while also giving students a critical understanding of how statistics and economics are integrated into marine science and resource management. Students work closely with a faculty adviser to create an individualized plan of at least 18 approved electives, which can include courses in resource management, human dimensions, conservation and quantitative population assessment.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Marine Sciences

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
OCE 1001	Introduction to Oceanography	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences.

ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
SPC 2608	Introduction to Public Speaking	3
STA 2023	Introduction to Statistics 1	3
ENC 2210	Technical Writing	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

MICROBIOLOGY AND CELL SCIENCE

This major involves the study of bacteria, plant and animal cells, and viruses. Students majoring in Microbiology and Cell Science complete most of the preprofessional course requirements for medical and dental school and are also well-prepared for graduate school. Departmental electives offer the opportunity to focus on specific areas such as the sources and carriers of infectious diseases. This major is also available by distance education with laboratory instruction and testing facilities at Miami Dade College and the UF/IFAS Indian River Research and Education Center in Fort Pierce.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Microbiology and Cell Science

Required G.P.A. = 2.0 overall and 2.5 in the following courses with a grade of C or better in each.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences, a grade of C or higher is required in each.

ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

Refer to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for more information.

NATURAL RESOURCE CONSERVATION

Working in close cooperation with an academic adviser, Natural Resource Conservation (NRC) students prepare programs of study according to their educational and career goals, or they follow one of several specialized options in environmental education, wetland ecosystems, ecotourism, landscape ecology, environmental pre-law, computer information systems, or biology education.

Based on their program of study, NRC students are assigned to faculty advisers in the School of Forest Resources and Conservation or in the Department of Wildlife Ecology and Conservation. The NRC major also is available at the UF/IFAS West Florida Research and Education Center in Milton. NRC students find employment in government agencies, consulting firms, nonprofit conservation groups and environmental education programs. Many NRC students pursue advanced degrees in the biological, ecological, and social sciences, as well as the professional areas of education and law.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Natural Resource Conservation

Required G.P.A. = 2.0 overall and 2.5 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045	General Chemistry 1	3
or CHM 1030	Basic Chemistry Concepts and Apps	3
BSC 2010 & 2010L	General Biology 1 and Lab	4
MAC 1105	Basic College Algebra	3
STA 2023	Introduction to Statistics 1	3
SPC 2608	Introduction to Public Speaking	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
ENC 2210	Technical Writing	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

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NUTRITIONAL SCIENCES

Nutritional Sciences graduates have entered medical, dental, pharmacy, optometry, veterinary, physician assistant and other professional programs. The curriculum emphasizes the basic sciences and includes prerequisite courses for most professional schools. Courses in nutritional sciences emphasize the role of nutrition in growth, development, health, disease risk reduction and disease treatment. The curriculum is excellent preparation for graduate study in nutrition, health and other science fields.

Nutritional Sciences

Required G.P.A. = 2.0 overall and 2.5 in the following courses, with a C or better in each. (Please note: This program is extremely competitive and the above GPA's are **MINIMUMS.**)

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
STA 2023	Introduction to Statistics 1	3

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLANT SCIENCE

Crop Ecology (B.S.)
Landscape and Nursery Horticulture (B.S.)
Plant Genetics (B.S.)
Plant Health (B.S.)
Restoration Horticulture (B.S.)
Sustainable Food Production (B.S.)
Community Food Systems (B.A.)
Garden Design and Management (B.A.)

Plant science is a diverse major offered collaboratively by the departments of Agronomy, Environmental Horticulture and Plant Pathology. Students earn B.S. or B.A. degrees depending on their specialization. The degree prepares students for careers in production agriculture, turf and ornamentals production, agribusiness sales and marketing, design and management of gardens, private consulting in plant production and protection, restoration of land and aquatic spaces, public policy and regulation related to agriculture, community garden management, international agriculture or laboratory technical support. Plant science can also be used as preparation for studies in graduate or professional school.

Crop Ecology is for students who wish to apply ecological and basic science principles to the design and study of sustainable cropping systems and agricultural ecosystem function.

Landscape and Nursery Horticulture is for students who want to understand the scientific principles of turf and ornamental plant production and use and who desire business knowledge and management skills. **This specialization is also available at the UF/IFAS Research and Education Centers in Ft. Lauderdale, Apopka, and Milton.**

Plant Genetics is for students who want to learn how to use genetic tools to create plants with characteristics beneficial to the environment and society.

Plant Health is for students who want to pursue careers related to plant health management in the public or private sector.

Restoration Horticulture prepares students to apply horticultural-based knowledge to the establishment, management and protection of plant communities.

Sustainable Food Production explores crop production and management practices that meet present world food needs without compromising quality of life for future generations.

Community Food Systems is for students who want to learn about contemporary food systems from an interdisciplinary perspective, including consideration of political, economic, ethical, social and cultural aspects of food systems.

Garden Design and Management is for students who are interested in the relationship of plants to people, including garden design, plants and human behavior, and management of plants in landscapes and public garden spaces.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

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**Bachelor of Science:
 Crop Ecology
 Plant Genetics
 Plant Health and
 Restoration Horticulture specializations**

Required G.P.A. = 2.0 overall and 2.0 in the following courses.
 Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	4
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
STA 2023	Introduction to Statistics 1	3
PHY 2004 & 2004L	Applied Physics 1 and Lab	4
MAC 2233	Survey of Calculus 1	3

NOTE: Restoration Horticulture specialization requires BOT 2010C, BOT 2011C and BSC 2011/2011L. All may be completed at community college, but only two are required for admission.

**Bachelor of Science:
Landscape and Nursery Horticulture and
Sustainable Food Production specializations**

Required G.P.A. = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	4
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
STA 2023	Introduction to Statistics 1	3
PHY 2004	Applied Physics 1	3
or PHY 2020	Introduction to Principles of Physics	3

**Bachelor of Arts:
Community Food Systems and
Garden Design and Management specializations**

Required G.P.A. = 2.0 overall and 2.0 in the following courses. Students MUST complete the following courses before transferring:

CHM 1030	Basic Chemistry Concept and Apps	3
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BOT 2010C	Introductory Botany	3
BSC 2011 & 2011L	General Biology 2 and Lab	4
or BOT 2011C	Plant Diversity	4
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3
MAC 1147	Precalculus	4
or MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
STA 2023	Introduction to Statistics 1	3
*PHY 2004	Applied Physics 1	3
or *PHY 2020	Introduction to Principles of Physics	3
or *GEO 2200	Geography	3
or *ESC 1000	Introduction to Earth Sciences	3
** HUN 2201	Fundamentals of Human Nutrition	3
** CHM 1031	Elements of Chemistry 2	3

* Students must have two of the three courses listed for the B.A. degree

** Denotes courses for Community and Food Systems specialization ONLY

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

SOIL AND WATER SCIENCE

Soil Science
Water Science

Students majoring in Soil and Water Science complete core requirements that stress a balance between the fundamentals of science and a foundation in the humanities, social sciences, business and natural science. A capstone experience through which a student will gain employment skills needed to solve environmental and agricultural problems is required.

Soil Science students can focus their studies in a variety of areas including soil and land use, environmental management, physical and biological sciences and business.

Water Science builds understanding of water's role in the environment and in our lives. This interdisciplinary specialization provides students with opportunities to develop skills essential for a diversity of careers in government and the private sector.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Soil and Water Science – both specializations

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
or BSC 2005 & 2005L	Biological Sciences and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
PHY 2004 & 2004L	Applied Physics 1 and Lab	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

MCB 2000 & 2000L	Microbiology and Lab	4
SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
or ECO 2023	Microeconomics	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

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WILDLIFE ECOLOGY AND CONSERVATION

Preprofessional

Wildlife Ecology and Conservation

Preprofessional includes prerequisite course work for admission to veterinary medicine, pharmacy, dentistry or medicine. Requirements for certification by The Wildlife Society as an associate wildlife biologist can be met by completing additional courses.

Wildlife Ecology and Conservation allows students to select a secondary focus in human dimensions of wildlife conservation, land management, or application of quantitative sciences to conservation. Students also can satisfy requirements for certification by The Wildlife Society as an associate wildlife biologist by selecting specific electives.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Preprofessional specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses. Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
CHM 2046 & 2046L	General Chemistry 2 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
ECO 2023	Microeconomics	3
MAC 2311	Analytic Geometry and Calculus 1	4
STA 2023	Introduction to Statistics 1	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3

Wildlife Ecology and Conservation specialization

Required G.P.A. = 2.0 overall and 2.5 in the following courses. Students MUST complete the following courses before transferring:

CHM 2045 & 2045L	General Chemistry 1 and Lab	4
BSC 2010 & 2010L	General Biology 1 and Lab	4
BSC 2011 & 2011L	General Biology 2 and Lab	4
MAC 2311	Analytic Geometry and Calculus 1	4
STA 2023	Introduction to Statistics 1	3
ECO 2023	Microeconomics	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3

Find the academic adviser and website for this major at www.cals.ufl.edu/undergraduate

PLEASE NOTE: G.P.A. is calculated using UF's grade point system (all attempts at a course count).

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