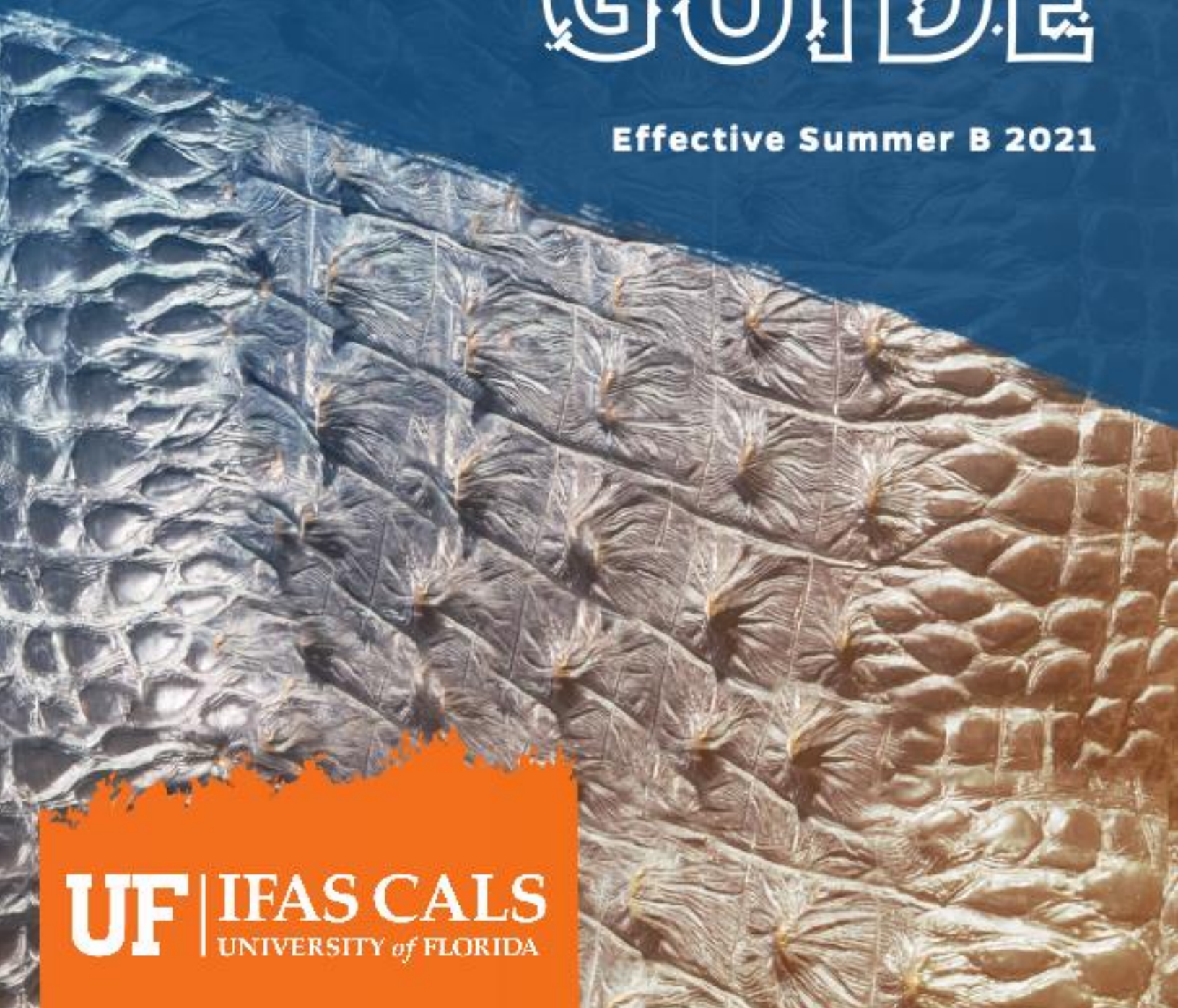
UF/IFAS COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

TRANSFER GUIDE

Effective Summer B 2021



UF | IFAS CALS
UNIVERSITY of FLORIDA

College of Agricultural and Life Sciences Transfer Guide

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CALS Majors

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

General Information

Important Contacts

College of Agricultural and Life Sciences
P.O. Box 110270 / 2020 McCarty Hall D
Gainesville, FL 32611-0270
(352) 392-1963 Fax (352) 392-8988
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 326 1
(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 GPA at each higher education institution attended as calculated by UF. (all graded attempts calculated, NO grade forgiveness).**
- **Meet the GPA required for the major (all graded attempts calculated, NO grade forgiveness).**
- **Complete specific prerequisite courses required for the major with the required GPA.**
- **Complete civic literacy requirement.**

This transfer guide includes GPA and course requirements organized by major and specialization.

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

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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 GPA 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. Allen 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. https://cals.ufl.edu/current-students/scholarships/

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: https://cals.ufl.edu/getinvolved/studyabroad/

Health-Related Preprofessional Curricula
Students may major in any area of study while preparing for professional studies in dentistry, medicine, physical therapy, occupational therapy, 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 four sites located throughout the state or online. https://cals.ufl.edu/current-students/statewide/

Mid-Florida Research and Education Center
Programs: **Apopka, FL**
- *Plant Science*
  - *General Plant Science*
  - *Greenhouse and Landscape Industries*

Contact:
Danae Perry, Plant Science Advisor
d.perry@ufl.edu | (352) 273-4573
https://mrec.ifas.ufl.edu/teaching/

Ft. Lauderdale Research and Education Center
Programs: **Ft. Lauderdale, FL**
- *Geomatics*
  - *Geospatial Analysis*
  - *Surveying and Mapping*
- *Plant Science*
  - *General Plant Science*
  - *Greenhouse and Landscape Industries*

Contact:
Dr. Kimberly A. Moore, Environmental Horticulture Professor
klock@ufl.edu | (954) 577-6371
https://flrec.ifas.ufl.edu/teaching/academic-programs/

West Florida Research and Education Center
Programs: **Milton, FL**
- *Plant Science*
  - *General Plant Science*
  - *Greenhouse and Landscape Industries*
- *Natural Resource Conservation*

Contact:
Mark Long, Admissions Officer
marklong@ufl.edu | (850) 983-7138
http://wfrec.ifas.ufl.edu/teaching/

Gulf Coast Research and Education Center-Plant City Campus of Hillsborough Community College **Plant City, FL**
Programs:
- *Agricultural Education and Communication*
  - *Agricultural Education*
  - *Communication and Leadership Development*
- *Geomatics*
  - *Geospatial Analysis*
  - *Surveying and Mapping*

Contact:
Jason Steward, Academic Advisor
jsteward@ufl.edu | (813) 757-2280
https://gcrec.ifas.ufl.edu/uf-plant-city/

Online Programs

Environmental Management in Agriculture and Natural Resources – Interdisciplinary Studies

Contact:
Michael J. Sisk
mjsisk@ufl.edu | (352) 294-3152

Microbiology and Cell Science
Requires two face-to-face laboratory classes at statewide locations or in Gainesville.

Contact:
Dr. Georgina Olysse
gthompson@ufl.edu | (386) 334-4462

South Florida Recruitment, PaCE and UF Online

Contact:
Andrew Horvath
ahorvath@ufl.edu | (352) 273-3475

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Course Equivalencies

UF COURSE	COMMUNITY/ STATE COLLEGE EQUIVALENT	COURSE DESCRIPTION
ACG 2021	ACG 2001 & ACG 2011 or ACG 2011C	Principles of Accounting I Principles of Accounting II Introduction to Financial Accounting
BSC 2005	BSC 1005 BSC 2005 BSC 2007 BSC 1020 BSC 2020	Biological Sciences Human Biology
BSC 2005 Lab	BSC 1005 Lab BSC 2005 Lab BSC 1020 Lab	Laboratory in Biological Sciences Human Biology Lab
BSC 2010	BOT 1010C BOT 2010C BSC 1010 BSC 2010 ZOO 1010 ZOO 2010	Introductory Botany Integrated Principles of Biology 1 General Zoology 1
BSC 2011	BOT 1011C BOT 2011C BSC 1011 BSC 2011 ZOO 1011 ZOO 2011	Plant Diversity Integrated Principles of Biology 2 General Zoology 2
CHM 1025	CHM 1025 CHM 1025 & Lab	Introduction to Chemistry
	CHM 1083	Consumer Chemistry
CHM 2045	CHM 1040 CHM 1041 CHM 1045 CHM 2045	General Chemistry 1
CHM 2046	CHM 1046 CHM 2046	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 1013 ECO 2013	Principles of Macroeconomics
ECO 2023	ECO 1023 ECO 2023	Principles of Microeconomics
EDF 3110	DEP 1004 DEP 2102 DEP 2004	Child Development Human Growth and Development

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

Students may use https://www.transferology.com/index.htm as an additional resource.

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AGRICULTURAL EDUCATION AND COMMUNICATION

Agricultural Education
Communication and Leadership Development

With a focus on disseminating scientific knowledge, agricultural education and communication professionals empower communities to gain a balanced understanding of food systems, natural resources, and related sciences. **Agricultural Education and Communication** students supplement core technical agriculture courses with teaching, leadership, or media experiences.

The **Agricultural Education** specialization provides the basic courses for agricultural teacher certification in Florida. Students must have a minimum 2.5 GPA to enter the teacher education specialization and, during their first semester, attain a passing score on the general knowledge portion of the FTCE. An internship is required for this specialization. In addition, graduates must apply to the Florida Department of Education for certification.

Communication and Leadership Development prepares students for entry into agribusiness and communication positions related to human resource development, strategic communication, governmental relations, media relations, corporate training and development, and non-formal education. To build the capacity of students within the CLD undergraduate specialization to serve as catalysts in society, they will take a sequence of courses in both communication and leadership to build upon individual skill sets and specific interests of the student. All students within this specialization will further enhance their knowledge and skills in communication and leadership within the context of agricultural and life sciences through courses that will provide them foundations in all forms of communication (digital, speaking, and writing) and leadership (interpersonal, groups and teams, organizations and global) in addition to specific areas such as social media, change, public issues and campaign strategies.

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

Agricultural Education specialization
Required GPA = 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**
	EDF 3110	**Human Growth and Development**	**3**
	MAC 1140	**Precalculus Algebra**	**3**
or	**MAC 1105**	**Basic College Algebra**	**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:

	CHM 1083	Consumer Chemistry	3
	ECO 2013	Macroeconomics	3
or	ECO 2023	Microeconomics	3
	EDF 2085	Teaching Diverse Populations	3
	ENC 2210	Technical Writing	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.

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Communication and Leadership Development specialization
Required GPA = 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**
	ENC 2210	**Technical Writing**	**3**
	MAC 1140	**Precalculus Algebra**	**3**
or	**MAC 1105**	**Basic College Algebra**	**3**
	PSY 2012	**General Psychology**	**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:

	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	3

Find the academic advisor and website for this major on the CALS website.

Offered at the Gainesville and Plant City locations.

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AGRICULTURAL OPERATIONS MANAGEMENT

Agricultural Operations Management combines hands-on applied coursework and core business principles with emerging technologies and sustainable methods. Students gain experience in systems management, environmental quality, energy efficiency, agricultural machinery, GIS/GPS technology, remote sensing, irrigation, power systems, water control, and precision agriculture.

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

Agricultural Operations Management
Required GPA = 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 with a minimum grade of "C" in all courses.

	ACG 2021	**Introduction to Financial Accounting**	**4**
	BSC 2010/2010L	**General Biology 1 and Lab**	**4**
	CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
	ENC 2210	**Technical Writing**	**3**
	MAC 2233	**Survey of Calculus 1**	**3**
or	**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**
	PSY 2012	**General Psychology**	**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:

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

Find the academic advisor and website for this major on the CALS website.

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ANIMAL SCIENCES

Animal Biology
Equine
Food Animal

Animal Sciences graduates work with the science and business of producing domestic livestock species or animal-related products. They may also pursue veterinary studies for future work with companion animals, livestock, or other species. **Animal Sciences** students study biotechnology, reproduction, genetics, nutrition, physiology, growth, behavior, management, and food processing.

Animal Biology is for students who wish to pursue professional or graduate programs. Students who plan to apply to the UF College of Veterinary Medicine in the equine, food animal or mixed-practice tracks are encouraged to select electives from the animal sciences programs.

Equine prepares students for careers in the equine industry. By choosing appropriate electives, students can earn a minor or a dual major in agribusiness management, extension education or agricultural operations management while completing the degree requirements for the equine or food animal specialization. Career preparation can be strengthened through electives.

Food Animal prepares students for careers in livestock production, processing and allied industries. By choosing appropriate electives, students can earn a minor or a dual major in agribusiness management, extension education or agricultural operations management while completing the degree requirements for the equine or food animal specialization. Through proper selection of electives, students may emphasize beef, dairy or meat science. Career preparation can be strengthened through electives.

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

Animal Biology specialization
Required GPA must be a 2.0 overall and 2.5 in the following courses. (This program is extremely competitive and the above GPA's are **MINIMUMS** and do not guarantee admission.)
Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
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Equine and
Food Animal specializations
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

	BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
	BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
	CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
	ECO 2013	**Macroeconomics**	**3**
or	**ECO 2023**	**Microeconomics**	**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:

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
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BIOLOGICAL ENGINEERING

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

Biological engineers apply principles of the life sciences to produce biofuels, food, feed, fiber, and other agricultural products from renewable bio-resources. They also protect the environment through conserving and replenishing our natural resources. **Biological Engineering** students study hydrodynamics, soil mechanics, thermodynamics, chemistry, biology, calculus, and more.

Students majoring in BE are considered students of the College of Engineering and should refer to that college for admission questions and curriculum guidance.

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 (GPA), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

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Biological Engineering – all areas of concentration
Required GPA = 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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

BIOLOGY

Applied Biology
Biotechnology
Natural Science
Preprofessional

This program provides a broad, general overview of the structure, function, growth, origin, evolution, and distribution of living organisms. **Biology** students take courses in biology, chemistry, physics, calculus, and statistics. The major is flexible and combines the faculty and resources of two UF colleges to prepare students for career success.

Applied Biology is for students who are 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 and bioinformatics.

Natural Science is for students interested in descriptive and interpretive biology, with an emphasis on field biology. The specialization provides exposure to the major forms of flora and fauna, and integrates some of the major elements that influence flora and fauna, namely soil/water relations and human activities.

Preprofessional is for students preparing for admission to medical, dental, physical therapy, occupational therapy, optometry, veterinary or other professional schools.

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

Biology – all specializations
Required GPA must be a 2.0 overall and 2.5 in the following courses. (This program is extremely competitive and the above GPA's are **MINIMUMS** and do not guarantee admission.)
Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

Find the academic advisor and website for this major on the CALS website.

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BOTANY

General Botany
Botanical Research

This program provides a broad background in the biology of plants, from the molecular to the whole-plant level. **Botany** students study anatomy, biochemistry, ecology, genetics, physiology, taxonomy, and molecular biology of plants. This flexible major combines the faculty and resources of two UF colleges to prepare students for career success.

General Botany is for students who may not intend to pursue a graduate degree but are interested in a career in plant biology. This specialization provides some flexibility in tailoring the courses needed in order to pursue specific interests. Students are encouraged to consult with an advisor and botany faculty member when deciding on which courses to take.

Botanical Research is for who intend to pursue a graduate degree and requires research with a faculty member. This specialization provides some flexibility in tailoring the courses needed in order to pursue specific interests. Students are encouraged to consult with an advisor and botany faculty member when deciding on which courses to take.

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

General Botany specialization
Required GPA = 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:

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

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

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Botanical Research specialization
Required GPA = 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:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BOT 2011C	**Plant Diversity**	**3**
or BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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.

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

DIETETICS

This program applies the science of food and nutrition to the health and well-being of individuals and groups. **Dietetics** students study chemistry, biology, microbiology, nutrition, communication, food science, and management. They are well-prepared for dietetic internships or graduate study.

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

Dietetics
Required GPA must be a 2.0 overall and 2.5 in the following courses. (This program is extremely competitive and the above GPA's are **MINIMUMS** and do not guarantee admission.)

Students MUST complete the following courses before transferring:

	BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
	BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
	CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
	CHM 2046 & 2046L	**General Chemistry 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:

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

ATTENTION: Beginning in the Summer 2022 students entering the University of Florida Dietetics undergraduate program will be required to earn a master's degree to be eligible to sit for the Registered Dietitian Nutritionist Credentialing Exam. As of January 1, 2024, the ACEND Accrediting Agency will implement a new requirement of a terminal degree of master's before a graduate will be eligible to enter a dietetic internship. Undergraduate students will need to plan accordingly for these academic requirements.

Please contact the Food Science & Human Nutrition Department advisors for additional information.

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

ENTOMOLOGY AND NEMATOLOGY

Biological Science of Insects
Preprofessional
Urban Pest Management

This biological science includes the study of insects, mites, ticks, spiders, and nematodes. These creatures can have both helpful and harmful effects on our food, environment, and health. **Entomology and Nematology** students study ecology, medically significant arthropods, social insects, insect management, physiology, behavior, evolution, natural ecosystem cycles, and systematics.

Biological Science of Insects prepares students for entry to entomological careers and to graduate school.

Preprofessional prepares students for programs in medicine, dentistry, optometry, veterinary, chiropractic, osteopathy and podiatry.

Urban Pest Management is for entry to the pest control industry. Students receive instruction about arthropods, nematodes, plant diseases and weeds with reference to the pest problems in residential and commercial property. A business curriculum prepares students for management responsibilities. Students planning to attend graduate school should consult an advisor for appropriate math, chemistry and physics courses.

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

Biological Science of Insects specialization
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

	BOT 2010C	**Introductory Botany**	**3**
or	**BSC 2010 & 2010L**	**General Biology 1 and Lab**	**4**
	BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
	CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
	CHM 2046 & 2046L	**General Chemistry 2 and Lab**	**4**
	MAC 1147	**Precalculus**	**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 2023	Microeconomics	3
	ENC 2210	Technical Writing	3
	MCB 2000 & MCB 2000L	Microbiology and Lab	4
	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
	STA 2023	Introduction to Statistics 1	3

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Preprofessional specialization
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

Urban Pest Management specialization
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 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:

ECO 2023	Microeconomics	3
ENC 2210	Technical Writing	3
MCB 2000 & MCB 2000L	Microbiology and Lab	4
SPC 2608	Introduction to Public Speaking	3
STA 2023	Introduction to Statistics 1	3

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

ENVIRONMENTAL MANAGEMENT IN AGRICULTURE AND NATURAL RESOURCES

Interdisciplinary Studies

Using an interdisciplinary approach, students in this major develop the scientific and technical foundation needed to integrate and communicate the diverse environmental issues associated with urban, agricultural, and natural ecosystems. **Environmental Management in Agriculture and Natural Resources** students study hydrology, soil science, pest management, water resources, ecology, and natural resource policy.

*Students must complete an Associate of Arts degree, meet the required grade point average (GPA), 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 GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

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

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

ENVIRONMENTAL SCIENCE

Environmental science is the study of people's role in our natural systems. Using an interdisciplinary approach, the Environmental Science program approaches complex environmental issues across multiple perspectives. **Environmental Science** students study ecology, soil and water sciences, and natural resource management as well as environmental ethics, economics, policy, and law.

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

Bachelor of Arts
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

	BSC 2005 & 2005L	**Biological Sciences and Lab**	**4**
	CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
	CHM 2046 & 2046L	**General Chemistry 2 and Lab**	**4**
	ECO 2013	**Macroeconomics**	**3**
	ECO 2023	**Microeconomics**	**3**
	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**
	POS 2041	**American Federal Government**	**3**
	STA 2023	**Introduction to Statistics 1**	**3**

Bachelor of Science
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

FAMILY, YOUTH AND COMMUNITY SCIENCES

This social science major prepares students to address predictable human developmental changes, unpredictable events such as natural disasters, and persistent problems such as poverty and nutrition. **Family, Youth and Community Sciences** students study sociology, psychology, and economics as well as advanced topics in youth, family, and community development.

*Students must complete an Associate of Arts degree, meet the required grade point average (GPA), 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 GPA = 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**
	ECO 2013	**Macroeconomics**	**3**
or	**ECO 2023**	**Microeconomics**	**3**
	PSY 2012	**General Psychology**	**3**
	STA 2023	**Introduction to Statistics 1**	**3**
	SYG 2000	**Principles of Sociology**	**3**

While not required for admission to the College of Agricultural and Life Sciences, **students are <u>strongly</u> encouraged to take the following courses at their community/state college:**

	MAC 1105	Basic College Algebra	3
or	MAC 1140	Precalculus Algebra	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
	CHM 1083	Consumer Chemistry	3
or	PHY 2020	Introduction to Principles of Physics	3
	ENC 2210	Technical Writing	3
	SYG 2430	Marriage and Family	3

Find the academic advisor and website for this major on the <u>CALS website.</u>

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the <u>UF grades and grading policies webpage</u> for more information.

FOOD AND RESOURCE ECONOMICS

Food and Agribusiness Marketing and Management
International Food and Resource Economics

Through curriculum and experiential learning, students develop the skills to analyze complex situations such as the allocation of natural resources to meet the needs of people in local, state, national, and global communities. **Food and Resource Economics** students study sales, finance, marketing, management, environmental policy, law, international trade, math and economics.

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

International Food and Resource Economics provides a broad background in economic theory and international development and policy. Many who choose this specialization are 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 (GPA), 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 GPA = 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:

ACG 2021	**Introduction to Financial Accounting**	**4**
ECO 2013	**Macroeconomics**	**3**
MAC 2233	**Survey of Calculus 1**	**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:

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

Find the academic advisor and website for this major on the CALS website.

Offered at the Gainesville and Plant City locations.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

FOOD SCIENCE

This major uses engineering, biological, and physical sciences to study the nature of foods, the causes of food deterioration, the principles underlying food processing, and the development and improvement of foods for consumption. **Food Science** students study organic and food chemistry, biology, physics, government regulations in the food industry, food engineering, and microbiology.

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

Food Science
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

FOREST RESOURCES AND CONSERVATION

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

Providing students with a solid understanding of ecology, this major prepares students to manage and develop forest areas for economic, recreational, and ecological purposes. **Forest Resources and Conservation** students study natural resource management and analysis, soil and water sciences, plant identification, law and policy, fire management, and natural resource economics.

Environmental Pre-Law is accredited by the Society of American Foresters and provides a solid basis of forest and natural resources science and management upon which is built a broad introduction to the policies, ethics, and processes affecting the use of natural resources.

Forest Business Management is accredited by the Society of American Foresters and 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 accredited by the Society of American Foresters and is for students seeking careers as professional forest resource managers who apply science-based strategies to managing publicly and privately-owned forest lands.

Protected Areas Management is accredited by the Society of American Foresters and is for students interested in managing lands for conservation and restoration purposes, usually on public lands managed by the government or by lands owned by private conservation organizations.

Recreation Resources Management is accredited by the Society of American Foresters and focuses on the sustainable management of recreation lands as a natural resource and understanding human dimensions as related to their use.

Urban Forestry is accredited by the Society of American Foresters and 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.

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

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

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Forest Resources and Conservation – all specializations
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

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

PHY 2020	Introduction to Principles of Physics	3

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

GEOMATICS

Geospatial Analysis
Surveying and Mapping

The geomatics profession collects, manages, and analyzes geospatial data through ground surveying, photogrammetry, remote sensing, satellite positioning, inertial measurements, echo-sounding, and laser scanning. **Geomatics** students study geometry, statistics, boundary law, and surveying and mapping instrument usage.

Geospatial Analysis offers a broader set of courses in GIS and 3-D modeling.

Surveying and Mapping is accredited by the Accreditation Board for Engineering and Technology and prepares students for entry into the Surveying and Mapping profession.

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

Geomatics – all specializations
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

	ECO 2013	**Macroeconomics**	**3**
or	**ECO 2023**	**Microeconomics**	**3**
	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**
	Approved Computer Programming Course (COP 2800, COP 2271 and L)		

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

Find the academic advisor and website for this major on the CALS website.

Offered at the Gainesville, Fort Lauderdale and Plant City locations.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

HORTICULTURAL SCIENCE

Organic Horticultural Systems
Plant Biotechnology and Improvement
Science and Technology of Horticultural Crops

Horticultural Science graduates have a foundation of knowledge in the science behind fruit and vegetable production, including commodity production, cropping systems, basic plant science, and molecular biology. **Horticultural Science** students study genetics, crop nutrition, plant physiology, chemistry, physics, entomology and nematology, and soil and water sciences.

Organic Horticultural Systems emphasizes the cultural practices that maintain ecological and economical balance in horticultural crop production systems. This is a flexible option with many electives available to meet education and career objectives. Graduates will be prepared for a range of careers related to conventional, sustainable and organic crop production.

Plant Biotechnology and Improvement is a comprehensive program focusing on the molecular aspects of crops, including crop growth, development and cultivar improvement. This specialization is geared toward preparing for careers in laboratory research and is also an excellent preparation for pursuing graduate studies.

Science and Technology of Horticultural Crops offers a generalized program, covering growth and development of horticultural crops. This is a flexible option that can be tailored to individual interests and career objectives, ranging from applied production to basic biology. Career options include commodity production and management, research biologist, marketing, agricultural chemical sales, fertilizer sales, produce buyer for grocery stores or restaurants, retail flower sales, and a number of other opportunities.

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

Organic Horticultural Systems and
Science and Technology of Horticultural Crops specializations
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BOT 2011C	**Plant Diversity**	**4**
or BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 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:

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

Plant Biotechnology and Improvement specialization
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**
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:

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

MARINE SCIENCES

From oceans to coastal wetlands, students will learn about marine organisms and their behaviors and interactions with the environment. **Marine Sciences** students study oceanography, statistics, fisheries and aquatic sciences, and invertebrate biodiversity. Students can focus elective courses on ecology, organismal biology, economics, human dimensions, and/or quantitative or professional skills.

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

Marine Sciences
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**
OCE 1001	**Introduction to Oceanography**	**3**
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.

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

MICROBIOLOGY AND CELL SCIENCE

The study of small living organisms, **Microbiology and Cell Science** includes emphasis on molecular biology and genetics; immunology; virology; host-pathogen interactions; cellular ultrastructure; environmental microbiology; and microbial physiology, metabolism and regulation. Microbiology and Cell Science students study chemistry, physics, bacterial pathogens, and genetics.

*Students must complete an Associate of Arts degree, meet the required grade point average (GPA), 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 GPA = 2.0 overall and 2.5 in the following courses with a grade of C or better in each, and in two attempts. Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

NATURAL RESOURCE CONSERVATION

Conservationists protect and sustain our world's natural resources for future generations. Well-versed in economics and communications, Natural Resource Conservation students are equipped with strong analytical, critical thinking, and interpersonal skills. **Natural Resource Conservation** students study chemistry; biology; ecology; and forest, wildlife, fisheries, and aquatic resources.

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

Natural Resource Conservation
Required GPA = 2.0 overall and 2.5 in the following courses.
Students MUST complete the following courses before transferring:

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

PHY 2020	Introduction to Principles of Physics	3

Find the academic advisor and website for this major on the CALS website.

Offered at the Gainesville, Fort Lauderdale and Milton locations.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

NUTRITIONAL SCIENCES

The Nutritional Sciences major encompasses all aspects of the consumption and utilization of food by people and animals as well as how these processes affect the health of individuals and populations. **Nutritional Sciences** students study organic chemistry, physics, food science, genetics, nutrition, biology of microorganisms, and diseases.

Nutritional Sciences
Required GPA = 2.0 overall and 2.5 in the following courses. (Please note: This program is extremely competitive and the above GPA's are **MINIMUMS** and do not guarantee admission.)

Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
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**

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

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

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
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PLANT SCIENCE

General Plant Science
Greenhouse and Landscape Industries
Native Plant Conservation
Plant Breeding and Genetics
Plant Health and Protection
Soil Management and Plant Productivity
Sustainable Crop Production
Turfgrass Science

Plant scientists sustain and improve our current and future world as they work with foods, fibers, fuel, flowers, pharmaceuticals, urban forests, soil health, plant pests, and our natural environs. **Plant Science** students study biology, plant morphology and physiology, chemistry, entomology, physics, soil and water sciences, plant identification, plant pathology, plant propagation, and environmental horticulture.

General Plant Science focuses on the biology and science of growing plants. It combines courses in propagation, plant identification and use, soils and plant nutrition, plant diseases, weed identification, and insects to give students a well-rounded background on plant management. This specialization develops skills that allow students to increase plant productivity and improve plant quality with less labor while controlling pests and weeds safely and effectively. Career opportunities include research and development, plant management, plant production, and preparation for graduate school. Employment opportunities exist in laboratories, government agencies, and commercial operations.

Greenhouse and Landscape Industries provides skills and training for employment in the diverse ornamental horticulture industry, including theme parks, plant production facilities, and landscape management and landscape design firms. It studies the improvement of the human environment through proper selection, propagation, production, and placement of plants in the exterior and interior landscapes. It also combines business and plant production courses to provide the skills needed to manage a plant production facility or landscape firm.

Native Plant Conservation prepares students to apply concepts of plant conservation and ecology to control invasive plants and establish, manage, and protect native plant communities, primarily in natural areas. Students also develop skills necessary for native plant propagation for ecological restoration and sustainable landscapes.

Plant Breeding and Genetics play a critical role in enhancing the world's future food, fiber, and fuel supplies in response to challenges like climate change and population growth. Students will obtain a solid grounding in genetics and molecular genetics, plant processes and function, types and causes of plant stress and learn how this is applied for crop improvement and conservation of genetic resources. Modern plant breeding is an increasingly sophisticated, high-investment business. The majority of commercial plant breeding takes place within the private sector. Plant breeders are employed in plant breeding or agricultural biotechnology companies or academic institutions with the main goal to develop improved varieties or educate the general population about genetic techniques for plant improvement.

Plant Health and Protection is designed for students who want to pursue careers related to plant health management in the public or private sector. It will prepare students for entry into the workplace in insect and disease control, plant diagnostics, crop production management, plant pathology and entomology research, plant growth consulting, integrated pest management, cooperative extension or to pursue advanced degrees in plant pathology, entomology, plant medicine, or other related disciplines.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Soil Management and Plant Productivity closely integrates the study of soil science core disciplines with production agriculture and horticulture. Coursework focuses on foundational principles related to soil health, productivity, and fertility in relation to sustainable plant growth and agricultural practices. Among the principal outcomes of the program is to prepare students for certification as both Associate Professional Soil Scientists and Certified Crop Advisors to better position graduates for employment in related fields.

Sustainable Crop Production prepares students for professions related to crop production and management. Students will explore and understand production practices that meet present world food needs without compromising quality of life for future generations. Courses emphasize crop ecosystem function, aquatic and terrestrial weed management, the importance of insects to crops and optimizing management techniques including energy utilization, nutrient management, and soil and water conservation.

Turfgrass Science combines the study of grasses, soils, water, and pests affecting turf with the study of business and management. Career opportunities include work with golf courses, sports turf facilities, lawn-care companies, parks, agrichemical industries, cemeteries, environmental consulting firms, sod farms, government agencies, and preparation for graduate school.

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

General Plant Science
Greenhouse and Landscape Industries
Sustainable Crop Production and
Turfgrass Science specializations
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BOT 2011C	**Plant Diversity**	**4**
or BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
ECO 2013	**Macroeconomics**	**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:

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

***NOTE:** Not required for Sustainable Crop Production

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Native Plant Conservation,
Plant Breeding and Genetics and
Plant Health and Protection specializations
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BOT 2011C	**Plant Diversity**	**4**
or BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
CHM 2046 & 2046L	**General Chemistry 2 and Lab**	**4**
ECO 2013	**Macroeconomics**	**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:

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

***NOTE:** Only required for Native Plant Conservation

Soil Management and Plant Productivity specialization
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

BOT 2010C	**Introductory Botany**	**3**
or BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
CHM 2046 & 2046L	**General Chemistry 2 and Lab**	**4**
ECO 2013	**Macroeconomics**	**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:

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

Find the academic advisor and website for this major on the CALS website.

Offered at the Gainesville, Apopka, Milton and Fort Lauderdale locations.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
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SOIL AND WATER SCIENCES

Soil Science
Water Science

Soil and Water Sciences involves managing land and water resources across a wide range of ecosystems, including agricultural, forested, range, urban and wetlands. **Soil and Water Sciences** students have a strong science and math background and study biology, calculus, microbiology, chemistry, physics, and ecology.

In the **Soil Science** specialization, areas of study include soil and land use (with an emphasis on natural resources and the environment), environmental management (with an emphasis on agricultural and other applied aspects of soil sciences), physical and biological sciences (with an emphasis on physics, microbiology, botany and/or other biological sciences) and business (with an emphasis on policy, economics, business administration or entrepreneurship).

Water's abundance, quality, distribution and properties are essential to all people. Understanding water's role in the environment and in our lives is integral to the future of this important resource. The **Water Science** specialization is an interdisciplinary specialization that provides students with opportunities to develop skills essential for a diversity of careers in both government and private sectors. Students will work closely with advisors to develop a course of study tailored to their professional goals.

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

Soil and Water Sciences – all specializations
Required GPA = 2.0 overall and 2.0 in the following courses.
Students MUST complete the following courses before transferring:

	BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
or	**BSC 2005 & 2005L**	**Biological Sciences and Lab**	**4**
	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**
	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:

	ECO 2013	Macroeconomics	3
or	ECO 2023	Microeconomics	3
	ENC 2210	Technical Writing	3
	MAC 2312	Analytic Geometry and Calculus 2	4
or	STA 2023	Introduction to Statistics	3
	MCB 2000 & 2000L	Microbiology and Lab	4
	SPC 2608	Introduction to Public Speaking	3

Find the academic advisor and website for this major on the CALS website.

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
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WILDLIFE ECOLOGY AND CONSERVATION

Preprofessional
Wildlife Ecology and Conservation

This major focuses on developing students' knowledge of the conservation and management of wildlife and habitats for the greatest aesthetic, ecological, economic, and recreational values. Students in the **Wildlife Ecology and Conservation** major study biology, chemistry, ecology, calculus, soil science, plant taxonomy, entomology, geography, zoology, and sustainability.

Preprofessional satisfies the coursework requirements for admission to the Doctor of Veterinary Medicine program. Students pursuing admission to the College of Veterinary Medicine must take six credits of general education composition, nine credits of humanities and six credits of social and behavioral sciences. Some students can also satisfy requirements for certification as an associate wildlife biologist by The Wildlife Society. Certification requirements and application material are available at www.wildlife.org.

Wildlife Ecology and Conservation students study in the biological, social, physical and management sciences, and excel at both the scientific and human dimensions of managing wildlife and natural resources. With appropriate choice of electives and course options, graduates satisfy requirements for certification as an associate wildlife biologist with The Wildlife Society. Students select a focus area comprised of four courses (minimum of 12 credits) in one of the following areas: ecology, management, human dimensions, quantitative science or urban and regional planning (combined degree program only).

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

Preprofessional specialization
Required GPA = 2.0 overall and 2.5 in the following courses. Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 and Lab**	**4**
CHM 2046 & 2046L	**General Chemistry 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:

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

PLEASE NOTE: GPA is calculated using UF's grade point system (all attempts at a course count).
Refer to the UF grades and grading policies webpage for more information.

Wildlife Ecology and Conservation specialization
Required GPA = 2.0 overall and 2.5 in the following courses. Students MUST complete the following courses before transferring:

BSC 2010 & 2010L	**General Biology 1 and Lab**	**4**
BSC 2011 & 2011L	**General Biology 2 and Lab**	**4**
CHM 2045 & 2045L	**General Chemistry 1 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:

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

Find the academic advisor and website for this major on the CALS website.

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