

# CALS Info



## Majors

- Agricultural Education and Communication
- Agricultural Operations Management
- Animal Sciences\*
- Biological Engineering
- Biology\*
- Botany
- Dietetics
- Entomology and Nematology\*
- Environmental Management in Agriculture and Natural Resources
- Environmental Science
- Family, Youth and Community Sciences
- Food and Resource Economics
- Food Science
- Forest Resources and Conservation
- Geomatics
- Marine Sciences
- Microbiology and Cell Science\*
- Natural Resource Conservation
- Nutritional Sciences\*
- Plant Science
- Soil, Water, and Ecosystem Sciences
- Wildlife Ecology and Conservation\*

*\*pre-professional majors*

## One-on-One Advising

A complete list of undergraduate advisors is available at [cals.ufl.edu/undergraduate](https://cals.ufl.edu/undergraduate)

## Enrichment Opportunities

### CAREER RESOURCES

- Financial assistance for experiential learning
- Annual CALS Career Expo
- Monthly engagement opportunities with industry leaders

### RESEARCH

- Opportunities for any student to create and apply knowledge
- Publish and present research as an undergraduate

### INTERNATIONAL EXPERIENCES

- CALS offers programs in 15 countries
- Programs vary in length from a week to a year
- Minor in International Studies in Agricultural and Life Sciences

## Scholarships

- CALS awards more than \$700,000 in scholarships annually
- Many departments offer additional scholarships

## Leadership

- More than 45 student organizations for CALS students
- CALS Ambassador Program
- CALS Leadership Institute
- Minors in Leadership and Nonprofit Organizational Leadership
- Global Leadership and Change Certificate

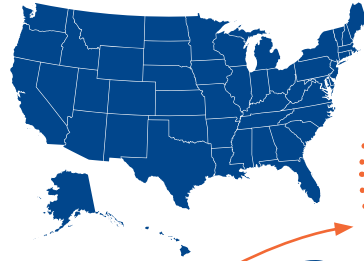


# UF/IFAS College of Agricultural and Life Sciences **FAST FACTS**

Fall 2023



CALS awards the largest undergraduate scholarship portfolio at UF with more than **\$1 million** of college and department scholarships



CALS students represent **87** different countries; come from all **50** states



CALS has one of **the top 5 highest enrollments** in study abroad programs at UF, with **20+ college-specific programs** across **6 continents**



**11:1**

student-to-faculty ratio

CALS hosts **Florida Youth Institute**, a week-long summer program for high schoolers to explore **science careers** that help solve global food insecurity

**73%** of bachelor's graduates live and work in Florida

**58%** of bachelor's graduates plan to earn an advanced degree

**71%** of bachelor's graduates completed a study abroad, research or internship experience

- 25** graduate majors
- 22** undergraduate majors
- 18** STEM majors in CALS, the most out of all colleges at UF
- 6** undergraduate pre-health majors

**10** master's & **2** bachelor's degrees **online**



**TOP 5**

One of the 5 largest colleges of agriculture and related sciences in the U.S.



**45+** student organizations

**6,582** total students

- 2,278** graduate students
- 3,885** undergraduate students
- 419** non-degree students
- 42,000+** living alumni around the world



CALS has **more USDA teaching awards** than any other land-grant institution



Home of the **ONLY** formal undergraduate upper-division Honors Certificate Program at UF

**UF** | **IFAS CALS**  
UNIVERSITY OF FLORIDA



# Resources in the College of Agricultural and Life Sciences

MAJORS QUIZ



TRANSFER GUIDE





# Agricultural Education and Communication

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.

*[aec.ifas.ufl.edu](http://aec.ifas.ufl.edu)*

**UF** | IFAS CALS  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## SPECIALIZATIONS

- Agricultural Education
- Communication and Leadership Development

## CAREERS

- Agriscience Teacher
- Communications Strategist
- Extension Agent
- Lawyer
- Lobbyist
- Marketer
- Sales Representative
- Science Writer
- Video Producer

## DID YOU KNOW?

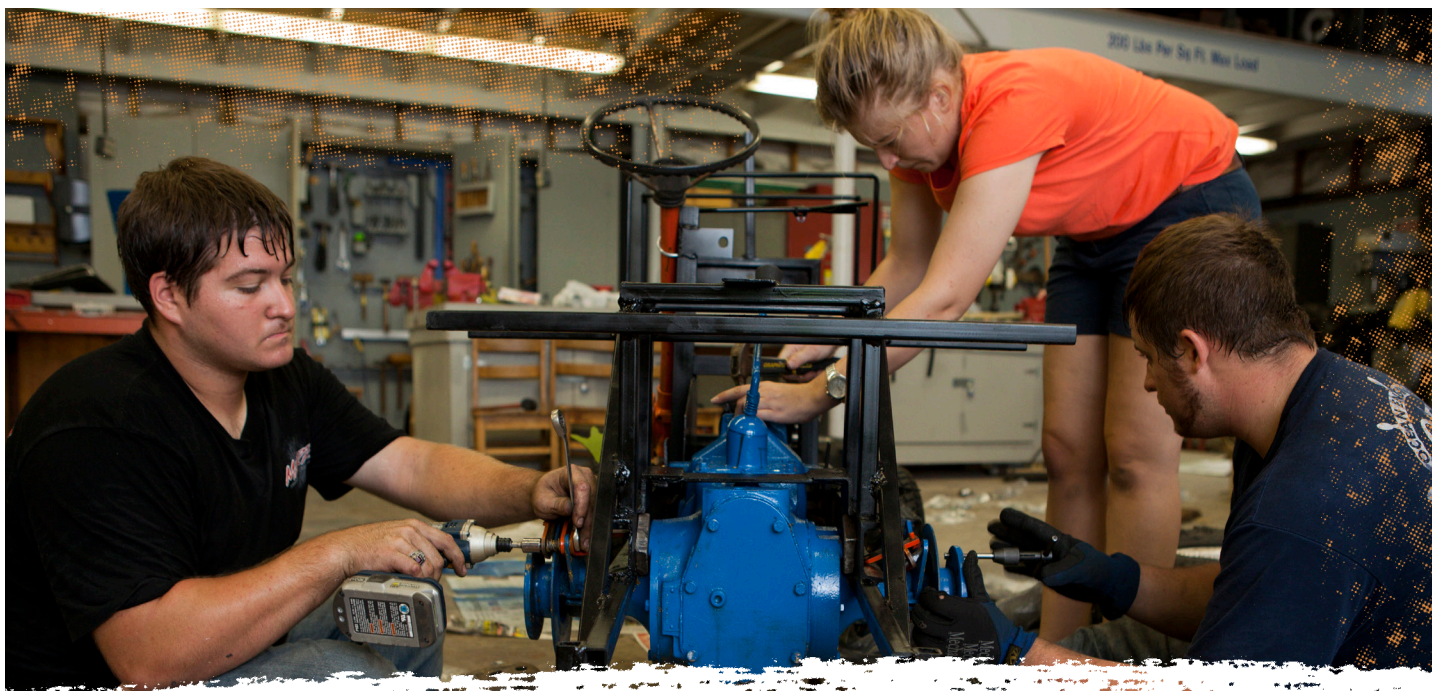
- Related Minors: Agricultural Communication, Extension Education, Leadership, Agricultural Curriculum and Development
- Student Organizations: Agricultural Communicators and Leaders of Tomorrow, Gator Collegiate FFA Alumni, Collegiate Farm Bureau
- Study abroad in Panama, Trinidad, and Spain
- State-of-the-art Mac Lab and video equipment available for student use
- Internship opportunities prepare students to earn Florida teacher certification

*Offered at both the Gainesville and Plant City locations.*

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals







# 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.

*[abe.ufl.edu](http://abe.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## CAREERS

- Commercial Construction Manager
- Farm or Ranch Manager
- Heavy Equipment Sales and Management
- Irrigation Specialist
- Landscape Manager
- Precision Ag Specialist
- Production Manager
- Sales Representative

## DID YOU KNOW?

- Related Minors: Packaging Science and Precision Agriculture
- Student Organization: Agricultural Operations Management Club
- Study abroad in Germany
- Hands-on lab experiences in irrigation, electricity, plumbing, machinery, concrete, and construction prepare students for a wide variety of professional opportunities

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# Animal Sciences

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.ufl.edu](http://animal.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## SPECIALIZATIONS

- Animal Biology\*
- Equine
- Food Animal

*\*Satisfies academic requirements for professional school programs in medicine, dentistry, veterinary medicine, pharmacy and other health-related programs*

## CAREERS

- Animal Health Researcher
- Animal Nutritionist
- Animal Technician
- Animal Welfare Specialist
- Doctor, Veterinarian, Pharmacist or Dentist
- Extension Agent
- Food Safety Inspector
- Herd Manager
- Meat Scientist
- Reproduction Specialist
- Sales Representative

## DID YOU KNOW?

- Student Organizations: Block and Bridle, Gator Collegiate Cattlewomen, Dairy Science Club, Pre-Veterinary Medicine Club, Minority Pre-Veterinary Students Club, Equestrian Club, People for Animal Wellness
- Students gain hands-on experience through instruction at beef cattle, dairy cattle, horse, and swine facilities
- More than \$40,000 in undergraduate scholarships are awarded annually by the department
- Students gain decision-making and critical thinking skills and travel across the United States through participation on horse, dairy, livestock, and meat judging teams

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# Biological 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.

[abe.ufl.edu](http://abe.ufl.edu)

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

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

## CAREERS

- Manufacturing Engineer
- Packaging Engineer
- Process Design Engineer
- Process Safety Engineer
- Project Engineer
- Quality Control Engineer
- Research and Development Engineer
- Technical Services Engineer
- Technical Manager

## DID YOU KNOW?

- Related Minors: Packaging Science, Precision Agriculture
- Student Organizations: American Society of Agricultural and Biological Engineers (ASABE), Packaging Science Club
- Study abroad in Germany
- Students participate in national competitions such as fountain wars, robotics team and quarter-scale tractor
- One of only two engineering-based packaging engineering programs in the nation
- Accredited by the Engineering Accreditation Commission of ABET
- The Biological Engineering major is a Herbert Wertheim College of Engineering program housed within the UF/IFAS Agricultural and Biological Engineering Department; while technically engineering students, you can enjoy the benefits of both colleges!

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# Biology

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.

*[cals.ufl.edu/biology](https://cals.ufl.edu/biology)*



COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

## SPECIALIZATIONS

- Applied Biology
- Biotechnology
- Natural Science
- Pre-professional\*

*\*Satisfies academic requirements for professional school programs in medicine, dentistry, veterinary medicine, pharmacy and other health-related programs*

## CAREERS

- Bioinformatics Assistant
- Biological or Laboratory Technician
- Conservation Scientist
- Doctor, Veterinarian, Pharmacist or Dentist
- Epidemiologist
- Field Biologist
- Medical Scribe
- Quality Assurance Specialist

## DID YOU KNOW?

- Related Minors: Bioinformatics
- Student Organizations: Pre-Veterinary Medicine Club, Minority Pre-Veterinary Students Club
- Through CALS, Biology students have two dedicated academic advisors
- Many Biology students elect to further their education through professional or graduate school
- This major is shared between two UF colleges, the core of the major is the same with Biology in CALS focusing on communication skills in addition to science







# Botany

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.

*[botany.biology.ufl.edu](http://botany.biology.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

- General Botany
- Botanical Research

## CAREERS

- Arborist
- Biophysicist
- Botanist
- Ecologist
- Museum Curator
- Plant Breeder
- Plant Technician
- Research Scientist
- Taxonomist

## DID YOU KNOW?

- Student Organization: Gators Reaching Out with Botany
- Botany provides a broad background in biodiversity and plant biology
- This major is shared between two UF colleges, the core of the major is the same with Botany in CALS focusing on communication skills in addition to science





# 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.

*[fshn.ifas.ufl.edu](http://fshn.ifas.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## CAREERS

- Clinical Dietitian/Nutritionist
- Corporate Wellness Specialist
- Eating Disorders Specialist
- Food Bank Nutrition Director
- Food Service Director
- Kitchen Design Consultant
- Nutrition/Health Educator
- Public Policy Consultant
- Sports Nutritionist

## DID YOU KNOW?

- Related Minors: Food Science, Nutritional Sciences
- Student Organizations: Food Science and Human Nutrition Club, The Campus Kitchens Project
- Study abroad in France, Greece and Italy
- Success rates at UF on the Registered Dietitian exam far exceed the national average





# Entomology and Nematology

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.

*[entnemdept.ufl.edu](http://entnemdept.ufl.edu)*

**UF** | IFAS CALS  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

- Biological Science of Insects
- Pre-professional\*
- Urban Pest Management

*\*Satisfies academic requirements for professional school programs in medicine, dentistry, veterinary medicine, pharmacy and other health-related programs*

## CAREERS

- Apiculturist
- Biosecurity Program Manager
- Customs and Border Protection Agriculture Specialist
- Doctor, Veterinarian, Pharmacist or Dentist
- Ecotourism Manager
- Extension Agent
- Pest Control Specialist
- Public Health Specialist
- Research Entomologist

## DID YOU KNOW?

- Related Minor: Entomology and Nematology
- Student Organizations: Entomology Club, Urban Entomological Society
- Study abroad in Brazil, Italy, and Honduras
- #1 Entomology Department in the world (2017 Center for World University Rankings)
- Student members of the Entomology Club develop skills in science communication through work with the club's Arthropod Petting Zoo





# Environmental Management in Agriculture and Natural Resources

INTERDISCIPLINARY STUDIES MAJOR

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** students study hydrology, soil science, pest management, water resources, ecology and natural resource policy.

*[soils.ifas.ufl.edu](http://soils.ifas.ufl.edu)*



COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

## CAREERS

- Energy Resource Manager
- Environmental Consultant
- Environmental Lawyer
- Erosion Control Specialist
- Extension Agent
- Hydrologist
- Resource Conservationist
- Restoration Ecologist
- Water Resource Manager

## DID YOU KNOW?

- Related Minors: Soil and Water Sciences, Environmental Science
- Student Organization: Wetlands Club
- Graduates find jobs with agricultural producers, consulting companies and government agencies involved in maintaining a sustainable environment

*Offered at the Gainesville location and through UF Online.*

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals







# 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.

*[snre.ufl.edu](http://snre.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## CAREERS

- Conservation Scientist
- Ecologist
- Environmental Consultant
- Environmental Educator
- Environmental Lawyer
- Environmental Policy Analyst
- Patent Attorney
- Project Manager
- Sustainability Coordinator

## DID YOU KNOW?

- Related Minor: Environmental Science
- Student Organization: School of Natural Resources and Environment Council, School of Natural Resources and Environment Liaisons
- Students can choose to pursue a Bachelor of Arts or a Bachelor of Science degree
- Environmental Science brings together professors and programs throughout the entire university





# 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.

*[fyics.ifas.ufl.edu](http://fyics.ifas.ufl.edu)*



COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

## CAREERS

- Domestic Violence Specialist
- Family Lawyer
- Family Life Educator
- Financial Literacy Counselor
- Fundraiser
- Health Educator
- Non-profit Manager
- Social Worker
- Volunteer Coordinator
- Youth Programs Specialist

## DID YOU KNOW?

- Related Minors: Family, Youth and Community Sciences; International Development and Humanitarian Assistance; Nonprofit Organizational Leadership
- Student Organizations: Family, Youth and Community Sciences Club; Florida Collegiate 4-H
- Study abroad in Germany, India, Nepal, Greece, and Ireland
- All students complete a practical work experience, helping them be competitive in the job market after graduation





# 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.

*[fred.ifas.ufl.edu](http://fred.ifas.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

- Food and Agribusiness Marketing and Management
  - International Food and Resource Economics

## CAREERS

- Account Manager
- Credit Analyst
- Entrepreneur
- Lawyer
- Loan Officer
- Policy Adviser
- Pricing Strategy Analyst
- Production Supervisor
- Supply Chain Manager

## DID YOU KNOW?

- Related Minors: Agricultural and Natural Resource Law, Food and Resource Economics, Management and Sales in Agribusiness
- Student Organizations: Agricultural Economics Club, Collegiate Farm Bureau
- Students compete in the National Agri-Marketing Association Student Marketing Competition and Agricultural and Applied Economics Association Academic Bowl Competition

*Offered at both the Gainesville and Plant City locations.*

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# 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.

*fshn.ifas.ufl.edu*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## CAREERS

- Brewer
- Flavor Chemist
- Food Biotechnologist
- Food Safety Inspector
- Processing Plant Manager
- Product Development Director
- Public Health Analyst
- Regulatory and Compliance Manager
- Sales Manager
- Sensory Analyst
- Quality Control Manager

## DID YOU KNOW?

- Related Minors: Food Science, Nutritional Sciences
- Student Organization: Food Science and Human Nutrition Club, The Campus Kitchens Project
- Study abroad in France, Greece and Italy
- Student leaders work closely with the Institute of Food Technologists
- State-of-the-art facilities include a commercial grade test kitchen, sensory analysis panel, and product development pilot plant





# Forest Resources and Conservation

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.

*[ffgs.ifas.ufl.edu](http://ffgs.ifas.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

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

*\*Society of American Foresters accredited*

## CAREERS

- Environmental Attorney
- Environmental Consultant
- Forest Resource Manager
- Forest Restoration Specialist
- Hydrologist
- Park Service Specialist
- Recreation Specialist
- Urban Forester

## DID YOU KNOW?

- Related Minors: Forest Resources and Conservation
- Student Organizations: Forestry Club, Society of American Foresters
- This is the only nationally accredited four-year forest resources program in Florida
- The 2,080-acre Austin Cary Forest provides students with an outdoor laboratory for forest resource education, demonstration, and research





# Geomatics

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.

[ffgs.ifas.ufl.edu](http://ffgs.ifas.ufl.edu)



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## SPECIALIZATIONS

- Geospatial Analysis
- Surveying and Mapping

## CAREERS

- Cartographer
- Digital Mapping Specialist
- Entrepreneur
- Geographic Information Systems (GIS) Analyst
- Geospatial Intelligence Analyst
- Land Information Consultant
- Land Surveyor
- Photogrammetric Mapper
- Unmanned Aerial Vehicle (UAV) Operator

## DID YOU KNOW?

- Related Certificates: Geomatics, Mapping with Small Unmanned Aerial Systems
- Student Organization: Geomatics Student Association
- Florida's largest and longest running 4-year ABET-accredited degree program in Geomatics
- Students are active participants in making observations and taking and analyzing measurements using the latest technology, including drones and infrared cameras

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

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals







# Horticultural Science

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.

*[hos.ufl.edu](http://hos.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

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

## CAREERS

- Greenhouse Manager
- Field Agronomist
- Organic Program Manager
- Plant Geneticist
- Postharvest Physiologist
- Research Scientist
- Sales Representative
- Viticulturist
- Weed Scientist

## DID YOU KNOW?

- Related Minors: Horticultural Science, Organic and Sustainable Crop Production, Plant Molecular and Cellular Biology
- Student Organization: Gator Citrus Club, Gator Gardening Club, Organic and Sustainable Agriculture Club, Horticultural Sciences Students Club
- More than \$40,000 in scholarships are awarded annually to Horticultural Science students
- Students complement classroom learning with hands-on experience at farms and gardens





# 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.

*[ffgs.ifas.ufl.edu](http://ffgs.ifas.ufl.edu)*



COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

## CAREERS

- Aquaculture Specialist
- Biology Educator
- Environmental Consultant
- Ecotourism Manager
- Marine Biologist
- Marine Resource Ecologist
- Protected Species Manager
- Research Scientist
- Scientific Diver

## DID YOU KNOW?

- Related Minors: Fisheries and Aquatic Sciences
- Student Organizations: Marine Biology Club, Salty Gators, Gator Scuba Club
- Study abroad in Cuba
- This major is shared between two UF colleges, with Marine Sciences in CALS focusing on marine ecology and resource management





# 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.

*[microcell.ufl.edu](http://microcell.ufl.edu)*

**UF** | IFAS CALS  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## CAREERS

- Biotechnologist
- Doctor, Veterinarian, Pharmacist or Dentist
- Food Microbiologist
- Medical Technologist
- Microbiology Technician
- Molecular Biologist
- Public Health Scientist
- Quality Assurance Manager
- Research Assistant

## DID YOU KNOW?

- Related Minors: Bioinformatics
- Student Organizations: American Society for Microbiology (ASM) Gators, Virology Club
- Study abroad in Switzerland, Germany, France, and Holland
- This major is shared between two UF colleges with Microbiology and Cell Science in CALS focusing on communication skills in addition to science
- Many students pursue graduate or professional school

*Offered at the Gainesville location and through UF Online.*

[cals.ufl.edu](https://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# 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.

*[ffgs.ifas.ufl.edu](http://ffgs.ifas.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## CAREERS

- Conservation Biologist
- Ecologist
- Environmental Consultant
- Environmental Educator
- Natural Areas Guide
- Natural Resource Policy Adviser
- Natural Resource Specialist
- Protected Areas Manager
- Stewardship Manager

## DID YOU KNOW?

- Related Minors: Forest Resources and Conservation
- Student Organization: Natural Resources Diversity Initiative
- Curriculum can vary from very focused and specific to broad and multi-disciplinary depending on students' interests
- Students choose from faculty advisors in either the School of Forest, Fisheries, and Geomatics Sciences or the Wildlife Ecology and Conservation Department

*Offered at both the Gainesville and Milton locations.*

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals







# 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.

*[fshn.ifas.ufl.edu](http://fshn.ifas.ufl.edu)*

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## CAREERS

- Biochemist
- Clinical Nutrition Manager
- Doctor, Veterinarian, Pharmacist or Dentist
- Nutrition Educator
- Pharmaceutical Sales Representative
- Public Policy Consultant
- Scientific Researcher
- Sports Nutritionist

## DID YOU KNOW?

- Related Minors: Food Science, Nutritional Sciences
- Student Organizations: Food Science and Human Nutrition Club, The Campus Kitchens Project
- Study abroad in France, Greece and Italy
- State-of-the-art facilities include a commercial grade test kitchen, technology-enhanced lab, and human nutritional research facility





# Plant 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.

*[plantscience.ifas.ufl.edu](http://plantscience.ifas.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## SPECIALIZATIONS

- 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

## CAREERS

- Agronomist
- Crop Geneticist
- Extension Agent
- Landscaper
- Nursery Manager
- Plant Breeder
- Plant Pathologist
- Sports Turf Manager

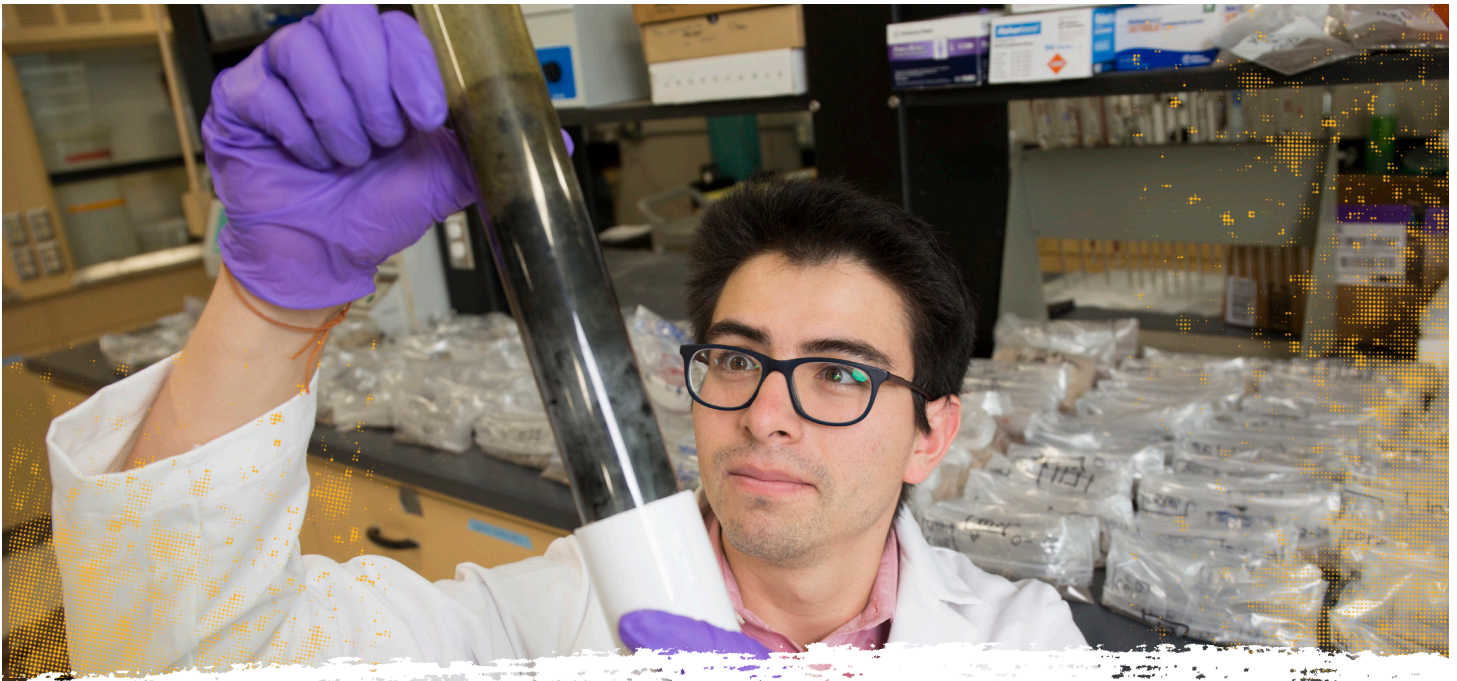
## DID YOU KNOW?

- Related Minors: Environmental Horticulture, Golf and Sports Turf Management, Plant Molecular and Cellular Biology, Plant Science
- Student Organizations: Agronomy/Soils Club, Environmental Horticulture Club, Turfgrass Club
- Students compete at the Professional Landcare Network (PLANET) Student Career Days, developing necessary skills for green industry careers
- Complement in-class learning with hands-on experience in scientific laboratories, fields, and greenhouses

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

[cals.ufl.edu](http://cals.ufl.edu) | [cals-dean@ufl.edu](mailto:cals-dean@ufl.edu) | 352-392-1963 | @ufcals





# Soil and Water Sciences

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.

*[soils.ifas.ufl.edu](http://soils.ifas.ufl.edu)*



**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**



## SPECIALIZATIONS

- Soil Science
- Water Science

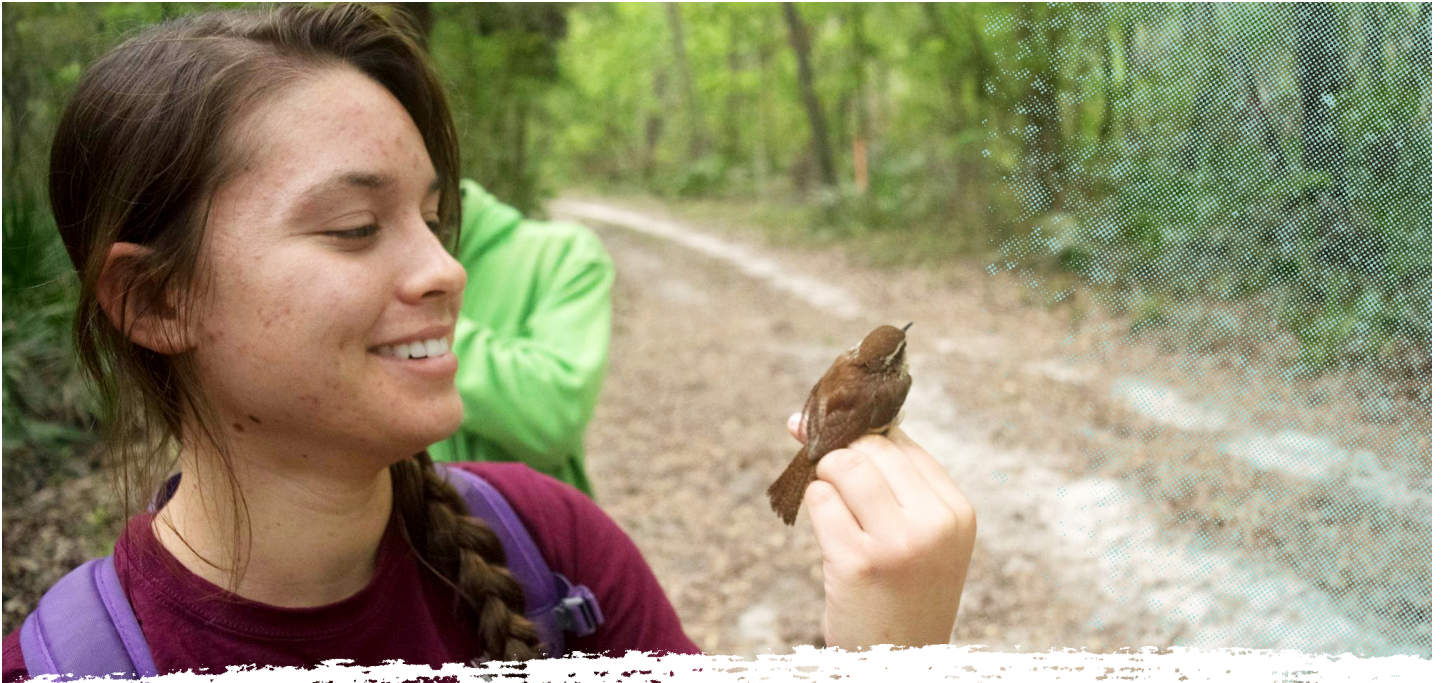
## CAREERS

- Environmental Lawyer
- Erosion Control Specialist
- Hydrologist
- Policy Analyst
- Reclamation Specialist
- Research Scientist
- Soil Chemist
- Soil Conservationist
- Water Resource Manager

## DID YOU KNOW?

- Related Minor: Soil and Water Sciences
- Student Organizations: Wetlands Club, Agronomy/Soils Club
- Students can become Certified Professional Soil Scientists through the Soil Science Society of America or Wetland Professionals in Training (WPIT) through the Society of Wetland Scientists
- Students in this major help to protect and manage the world's most valuable resources





# 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.

[wec.ufl.edu](http://wec.ufl.edu)

**UF** | **IFAS CALS**  
UNIVERSITY of FLORIDA

**COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

## SPECIALIZATIONS

- Pre-professional\*
- Wildlife Ecology and Conservation

*\*Satisfies academic requirements for professional school programs in medicine, dentistry, veterinary medicine, pharmacy and other health-related programs*

## CAREERS

- Conservation Coordinator
- Doctor, Veterinarian, Pharmacist or Dentist
- Environmental Educator
- Habitat Manager
- Nuisance Wildlife Technician
- Public Health Specialist
- Scientific Researcher
- Wildlife Biologist
- Wildlife Rehabilitator

## DID YOU KNOW?

- Related Minor: Wildlife Ecology and Conservation
- Student Organizations: The Wildlife Society, Natural Resources Diversity Initiative, Gators Ready for Exceptional Birding Experiences
- Study abroad in Belize, New Zealand, Nicaragua, and Swaziland
- Course locations include the UF Natural Area Teaching Lab and the Ordway-Swisher Biological Station
- UF has the only Wildlife Ecology and Conservation undergraduate major in Florida



# What is a *Land-Grant* Institution?

UF | IFAS CALS  
UNIVERSITY of FLORIDA

**A land-grant college or university is an institution** designated to receive the benefits of the Morrill Acts of 1862 and 1890. The original mission of these institutions was to teach agriculture, military tactics and the mechanical arts in addition to classical studies so members of the working classes could obtain an education.

## The Beginning

During the Civil War, President Abraham Lincoln signed the first Morrill Act, establishing the land-grant university system and initiating what could be defined as “The Education Revolution” that thrives to this day. Some of the most highly regarded universities in the nation are land-grant institutions.

## The Land-Grant Vision at UF

The University of Florida is **one of only six universities** in the country with colleges of law, medicine, engineering, agriculture and veterinary medicine on one central campus. UF is also **one of only 17 universities** in the country to share the distinction of land-grant, sea-grant and space-grant status.

## The UF/IFAS Tradition

The University of Florida’s Institute of Food and Agricultural Sciences (UF/IFAS) is a federal-state-county partnership dedicated to developing knowledge in agriculture, human and natural resources, and the life sciences, and enhancing and sustaining the quality of human life by making that information accessible. The College of Agricultural and Life Sciences (CALS) administers the degree programs of UF/IFAS, preparing students to address the world’s critical challenges related to agriculture, food systems, human wellbeing, natural resources and sustainable communities.



Florida Agricultural  
College building  
in Lake City, Fla.  
(Source: UF/IFAS)



# Historic Moments

**1853**

The East Florida Seminary in Ocala is created in response to public funds being used to support higher education.

**UF traces its higher education founding to this date.**

**1887**

The Hatch Act provides for the establishment of an agricultural experiment station at each of the land-grant colleges.

**The Florida Agricultural Experiment Station was established in 1888 as a part of the Florida Agricultural College at Lake City.**

**1911**

The alligator is selected as the University of Florida mascot. The orange and blue colors are believed to be a combination of the colors from the former Lake City and Ocala schools.

**1924**

The Florida Legislature permits women to enroll during regular semesters at UF for programs unavailable at the Florida State College for Women (now FSU).

**Lassie Goodbread-Black became the first woman to enroll at UF in 1925 in the College of Agriculture, now College of Agricultural and Life Sciences.**

**1958**

UF integrates enrollment with African-American students.

**2001**

UF is labeled a "Public Ivy League" and continues to rise in U.S. News & World Report college and university rankings.

**Currently, UF is ranked as a Top 5 public university, according to U.S. News & World Report.**

**1884**

The Florida Agricultural College at Lake City is established under the Morrill Act, becoming the first land-grant institution in the state.

**In 1903, the Florida Legislature changed the school's name to the "University of Florida."**

**1906**

The University of Florida in Gainesville opens its doors.

**Under the Buckman Act of 1905, Florida consolidated its higher education institutions segregated by race and gender into what are now known as UF, FSU, FAMU and the Florida School for the Deaf and Blind.**

**1914**

The Smith-Lever Act passes, providing federal support for land-grant institutions to offer educational programs for the public through cooperative Extension efforts.

**Each of Florida's 67 counties is served by a dedicated UF/IFAS Extension office.**

**1944**

The G.I. Bill is introduced, providing for the higher education of veterans.

**In the 1950s, the university underwent rapid expansion of campus buildings due to the large influx of students.**

**1985**

UF becomes a member of the Association of American Universities, an organization made up of the top 62 public and private research universities.

**TODAY**

UF has established itself as the state's flagship university. Those who graduate from UF enjoy greater opportunities than their peers at many other universities because of the land-grant system.

**UF/IFAS alone has 12 Research and Education Centers in 20 locations throughout Florida, 14 departments, two schools, portions of the College of Veterinary Medicine, the Florida Sea Grant program, international programs, and the College of Agricultural and Life Sciences.**

# Make Yourself Interesting



In a university of more than 52,000 students, it can be challenging to stand out and differentiate your college experience from your peers. Consider the following ways to bolster your student experience and enhance your skills by getting involved beyond the classroom.

## Study Abroad

Students who study abroad explore new nations, gaining an appreciation of another culture while discovering themselves in the immersion process. The College of Agricultural and Life Sciences (CALS) offers several discipline-specific study abroad programs. Students may wish to pursue opportunities offered by other colleges or at other institutions. Consider international internships and apply for CALS and UF study abroad scholarships.

## Internships

CALS faculty are some of the best educators in the country, but internships allow for advanced, hands-on learning opportunities. Apply for a paid internship with UF/IFAS Extension offices or find an internship opening at a company you enjoy. Landing a government internship at the state or federal level also makes you eligible for the CALS Loop Legislative Internship Program.

## Research



Immerse yourself in the scientific process and help advance our knowledge in agriculture, natural resources and related sciences by taking part in a paid research internship. Develop a one-on-one relationship with a faculty mentor as you learn more about generating solutions for complex challenges in our world. Additional undergraduate research opportunities are available.





## CALS Leadership Institute



A unique leadership development program for undergraduates enrolled in CALS, the Leadership Institute provides an international community service opportunities, guest speakers and an introduction to leadership over the course of three semesters. The experience prepares students for positions in business, communications, science, natural resources and pre-professional studies.

## CALS Ambassadors



The CALS Ambassadors are a select group of students who have demonstrated outstanding achievement in academics and student leadership. The students create awareness of the academic programs and career opportunities in food, agriculture and natural resources among students, teachers, advisers and the general public in the state of Florida. CALS Ambassadors are seasoned speakers who regularly address diverse audiences throughout Florida.

## Minor(s)



A minor can be a great asset to place students in a niche area of interest and help them stand out. Minors give students the opportunity to explore something new to supplement a major course of study.

Adding a second major or a certificate are great alternatives to a minor, and more than one minor can be declared.

## CALS Honors Scholar Certificate Program



The CALS Honors Scholar Certificate Program is the only formal upper division honors certificate program at the University of Florida. Honors scholars complete nine credits of honors coursework and an undergraduate honors thesis under a designated adviser. The

certificate appears on the student's final transcript. Those who complete the CALS Honors Program will also graduate from UF with magna cum laude or summa cum laude honors.

## Join a Student Group



CALS offers more than 45 student organizations that help develop leadership skills and build a student's network. Attend the CALS Kickoff in the fall semester to learn more about involvement opportunities and identify student organizations or volunteer activities that will help you explore interests and gain experience.

## Explore Fellowships and Part-Time Jobs

Attend the annual CALS Career Expo to learn about part-time and full-time job and internship opportunities for CALS majors. Consider investigating fellowships and other programs, such as the Peace Corps or Fulbright Scholarships. Several CALS students have created their own career paths by crafting their dream careers through a fellowship program. These experiences show future employers the dedication a student has for their chosen career field and enhances a student's knowledge of a particular job.



# Pre- Professional Majors



The following CALS majors include the prerequisite courses for professional schools, such as medicine, dentistry, pharmacy and veterinary medicine.

## ANIMAL SCIENCES

### ANIMAL BIOLOGY SPECIALIZATION

Many pre-vet students select this major because of the practical experiences offered through laboratory courses.

Courses include:

- Principles of Animal Nutrition
- Reproductive Physiology and Endocrinology
- Growth and Development

## BIOLOGY

### PRE-PROFESSIONAL SPECIALIZATION

This major develops fundamental knowledge of animals, plants and microorganisms. Life sciences electives allow students to explore their interests.

Courses include:

- Biochemistry and Molecular Biology
- Physiology
- Genetics

## ENTOMOLOGY AND NEMATOLOGY

### PRE-PROFESSIONAL SPECIALIZATION

These biological sciences majors focus on insects and nematodes while giving students flexibility with electives.

Courses include:

- Ecology
- Vertebrate Biodiversity
- Medical and Veterinary Entomology

## MICROBIOLOGY AND CELL SCIENCE

Students gain an understanding of the biological world at the cellular and molecular level.

Courses include:

- Molecular Genetics
- Bacterial and Viral Pathogens
- Biochemistry

## NUTRITIONAL SCIENCES

Many pre-health students select this major because it provides a strong background in nutrition that aids any health profession, specifically studying how food impacts human health.

Courses include:

- Nutrition and Disease
- Nutrition Through the Life Cycle
- Nutrition and Metabolism

## WILDLIFE ECOLOGY AND CONSERVATION

### PRE-PROFESSIONAL SPECIALIZATION

This major applies biological, social, physical and management sciences to wildlife and natural resources.

Courses include:

- Wildlife Ecology and Management
- Genetics
- Conservation Biology

