INTEGRATIVE ANIMAL SCIENCES

Animal Sciences students study reproduction, genetics, nutrition, physiology, growth, behavior, biotechnology, and management of livestock species. They also study animal sourced food processing. Increasingly, Animal Sciences students also take additional courses in communication, education, business economics, environmental science, and data science. Animal Sciences graduates often work with the science and business of producing domestic livestock species or animal-related products. Many Animal Sciences students prepare to pursue veterinary studies or graduate studies for future work with companion animals, livestock, or other species.

About this Program

- **College:** Agricultural and Life Sciences (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/)
- **Degree:** Bachelor of Science
- **Specializations:** Animal Biology (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ANS_BS/ANS_BS01/) | Equine (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ANS_BS/ANS_BS02/) | Food Animal (http://catalog.ufl.edu/UGRD/colleges-schools/UGAGL/ANS_BS/ANS_BS03/) | Integrative Animal Sciences (p. 1)
- **Credits for Degree:** 120

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

The Department of Animal Sciences creates new solutions to tomorrow's problems in the areas of teaching, research, and extension, by integrating the most modern technologies available with personal expertise and attention to the needs of both students and industry.
More Info (https://animal.ifas.ufl.edu/)

CONTACT

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Map (http://campusmap.ufl.edu/#/index/0459)

Curriculum

- Animal Genetics Certificate
- Animal Sciences
- Combination Degrees

This specialization is for students who wish to obtain a customized degree in animal sciences with a focus on a discipline rather than an animal species and are not pursuing a professional program in the health sciences. Examples include integration of the Animal Sciences with advanced training in Artificial Intelligence, or reproduction, or animal behavior, or environmental sciences. By choosing appropriate electives, students can earn a minor, or a dual-major in other fields.

Critical Tracking

Critical Tracking records each student's progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (https://cpm.flvc.org/advance-search/) may be used for transfer students.

SEMESTER 1

- Complete 2 of 6 critical-tracking courses, excluding labs: BSC 2010 and BSC 2010L, BSC 2011 and BSC 2011L, CHM 2045 and CHM 2045L, MAC 1147,STA 2023, and AEB 2014 or ECO 2013 or ECO 2023
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 2

- Complete 1 additional critical-tracking course, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 3

- Complete 2 additional critical-tracking courses, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 4

- Complete 1 additional critical-tracking course, excluding labs
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

SEMESTER 5

- Complete all critical-tracking courses, including labs
- Complete ANS 3006 and ANS 3006L
- 2.0 GPA required for all critical-tracking courses
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 6

- Complete ANS 3043 or ANS 3319C
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 7

- Complete ANS 3043 or ANS 3319C
- 2.0 upper division GPA required
- 2.0 UF GPA required

SEMESTER 8

- Complete ANS 4931 and ANS 4941
- 2.0 upper division GPA required
- 2.0 UF GPA required

Model Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Course	Title	Credits
Semester One		
BSC 2010 & 2010L	Integrated Principles of Biology 1 and Integrated Principles of Biology Laboratory (**Critical Tracking**; State Core Gen Ed Biological and Physical Sciences)	4
ENC 1101	Expository and Argumentative Writing (State Core Gen Ed Composition (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement)	3
MAC 1147	Algebra and Trigonometry (State Core Gen Ed Mathematics (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext))	4
State Core Gen Ed Humanities (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
	Credits	**14**
Semester Two		
Quest 1 (Gen Ed Humanities)		3
AEC 3030C or SPC 2608	Effective Oral Communication or Introduction to Public Speaking	3

BSC 2011 & 2011L	Integrated Principles of Biology 2 and Integrated Principles of Biology Laboratory 2 (**Critical Tracking**; Gen Ed Biological Sciences)	4
ECO 2013	Principles of Macroeconomics (**Critical Tracking**; State Core Gen Ed Social and Behavioral Sciences)	4
ENC 1102	Argument and Persuasion (Gen Ed Composition)	3
	Credits	**17**
Semester Three		
Quest 2 (Gen Ed Social and Behavioral Sciences)		3
Select one:		3
AEC 3033C	Research and Business Writing in Agricultural and Life Sciences (Writing Requirement)	
ENC 2210	Technical Writing	
ANS 2090	Survey of Veterinary Professions (or ANS 2XXX Careers in Animal Sciences)	2
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry Laboratory (**Critical Tracking**; Gen Ed Biological and Physical Sciences)	4
Elective		3
	Credits	**15**
Semester Four		
MCB 2000 & 2000L	Microbiology and Microbiology Laboratory (Gen Ed Biological Sciences)	4
STA 2023	Introduction to Statistics 1 (**Critical Tracking**; Gen Ed Mathematics)	3
Gen Ed International		3
Approved electives		5
	Credits	**15**
Semester Five		
ANS 3006 & 3006L	Introduction to Animal Science and Introduction to Animal Science Laboratory (**Critical Tracking**)	4
ANS 3440	Principles of Animal Nutrition	4
ANS Advisor approved electives		6
	Credits	**14**
Semester Six		
ANS 3319C	Reproductive Physiology and Endocrinology in Domestic Animals (**Critical Tracking**)	4
ANS 3384C	Genetics of Domestic Animals	3
ANS Advisor approved electives		4
Approved electives		4
	Credits	**15**
Summer After Semester Six		
ANS 4941	Full-Time Practical Work Experience in Animal Science (**Critical Tracking**)	3-8
	Credits	**3-8**
Semester Seven		
ANS 3043	Growth and Development of Farm Animals (**Critical Tracking**)	3
ANS 4931	Senior Seminar	1
ANS Advisor approved electives		10
	Credits	**14**
Semester Eight		
ANS Advisor approved electives		13
	Credits	**13**
	Total Credits	**120**

Approved Electives

Code	Title	Credits
Approved Lectures: Minimum 6 credits		
ANS 2002	The Meat We Eat	3
ANS 2090	Survey of Veterinary Professions	2
ANS 3008	Domestic Animal Behavior and Welfare	3
ANS 3216	Introduction to Equine Science	3
ANS 3251	Biology and Management of Dairy Cattle	3
ANS 3404C	Food Animal Nutrition and Feeding	4

ANS 3405	Equine Nutrition and Feeding Management	2
ANS 4079C	Relationship of Form to Function in Horses	3
ANS 4320C	Applied Livestock Reproduction	3
ANS 4240C	Discovery of Sustainable Cattle Systems	2
ANS 4243	Beef Cow-Calf Management	5
ANS 4245	Beef Background and Feedlot Management	2
ANS 4382	Equine Genetics	2
ANS 4389L	Molecular Techniques in Domestic Animal Genetics	2
ANS 4931	Senior Seminar	1
ALS 4932	Special Topics (HACCP Systems)	1-3
ANS 4932	Special Topics in Animal Sciences (Seedstock Management & Marketing)	1-3
Approved Labs: Minimum 3 credits		
ANS 3239L	Techniques in Equine Science (Remedial Horsemanship)	2
ANS 3239L	Techniques in Equine Science (Ranch Horse Management; offered every other spring – odd years)	2
ANS 3246L	Beef Production Practicum (2 Fall and 2 Spring, 4 total)	2
ANS 3250L	Dairy Cattle Practicum	2
ANS 4212L	Techniques in Farrier Science	1-2
ANS 4218C	Horse Psychology and Training	2
ANS 4241C	Intermediate Horse Training	3
ANS 4231	Practicum in Horse Management and Training Technique (Horse Care & Grooming)	1
ANS 4231	Practicum in Horse Management and Training Technique (Weanling Handling)	1
ANS 4231	Practicum in Horse Management and Training Technique (Foaling Practicum)	1
ANS 4605	Animal and Products Evaluation	1
ANS 4932	Special Topics in Animal Sciences	1-3

Approved CALS Electives | 31 Credits

For a course to be eligible as an approved CALS elective it must be outside the ANS department, 3000/4000 level, and be within the College of Agricultural and Life Sciences.

Academic Learning Compact

Animal sciences majors receive a broad education in the healthy production of animals and animal products. Students' knowledge will be developed through formal courses, laboratories and field trips and will be applied in internships, team projects and presentations. Students will develop the ability to apply conceptual knowledge to solve problems in animal production and to make management decisions.

Before Graduating Students Must

Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes | SLOs

Content

1. Describe and explain fundamental concepts, skills and processes in animal sciences.
2. Apply fundamental concepts, skills and processes in animal sciences.

Critical Thinking

3. Critically evaluate information (or data) in animal sciences.
4. Solve problems in animal sciences.

Communication

5. Effectively communicate in written form in a manner appropriate in animal sciences.
6. Effectively communicate orally in a manner appropriate in animal sciences.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6
AEC 3030C						I, R, A
AEC 3033C					I, R, A	
ANS 3006	I	I			R	

ANS 3043	I, R, A	I, R, A	I	R	R
ANS 3319C	I, R, A	I, R, A	I	I, R	R
ANS 3384C	I, R, A	I, R, A	I, R, A	I, R, A	R
ANS 3440	I, R, A	I, R, A	I, R, A	I, R, A	R

Assessment Types

- Case studies
- Lab projects
- Exams
- Quizzes and tests
- Papers
- Presentations
- Non-exam course assignments