



Animal Science Concentration

(Animal and Veterinary Sciences, B.S.)

The Animal Science curriculum provides career training for students wanting to go directly into employment, but also qualifies students to pursue an advanced degree. Students will take courses focused in the basic sciences and all areas of animal science including livestock and domestic animals from production to processing. Many of the courses will include laboratories where students will receive hands-on training in animal handling and research. Animal science courses will include opportunities for students to work directly with both large and small animals. Hands-on-training is reinforced through practicums at the university farms and through cooperative education. Our small class size promotes interaction between students and faculty. We are small enough to care for you as an individual but large enough to provide every career opportunity. Our department's unique balance of these areas has made ECU graduates successful with finding employment with high earning potential. Areas of study include the following:

Disciplines

- Nutrition
- Feeds and Feeding
- Genetics
- Reproduction and AI certification
- Livestock Evaluation
- Carcass Grading
- Anatomy and Physiology
- Animal Diseases
- Behavior and Welfare
- Forages and Grazing Management
- Business Planning
- Farm Management
- Applied Basic Research

Species

- Beef: Cow/calf, stocker/backgrounding, finishing
- Companion Animal and Exotics
- Dairy: Robotic milking, heifer development, calf care
- Equine
- Poultry
- Sheep
- Swine: Farrow to finish

There are many opportunities for Animal Science students to extend their education beyond the classroom through competition teams such as the Dairy Challenge Team or The Animal Science Quadrathlon Team. Students will also have the opportunity to travel and network with industry professionals through annual trips to the American Society of Animal Science Conference as well as various species and discipline conferences throughout the year.

Career Opportunities

A wide array of jobs are available in the public and private sector including state local and federal government agencies, private and commercial business, agriculture management, research, sales, and finance. The practical instruction and hands-on application you will receive enables you to be an immediate asset to employers or prepared to manage your own business. You will join the ranks of successful ECU graduates in areas such as pharmaceutical and feed sales, farm management, biotechnology research and development, communication and marketing consultant, food science, agriculture finance and banking, extension and 4-H agents, government agency employees, and pursuing advanced degrees. The U.S. Bureau of Labor Statistics and the U.S. Department of Agriculture predict the animal scientist job market to continue to grow at a faster than average rate. Animal science graduates are essential to maintaining the nation's priorities of food security, sustainable energy, and environmental quality.

Students graduating from the Animal Science Program will also be qualified to pursue advanced degrees in graduate research allowing them to specialize in any of the above areas and further increase their earning potential.

Philosophy

The Department of Agriculture blends scientific theory with practical application and hands-on experiences. Current concepts and theories are presented in the classroom and then applied in the laboratory with the faculty member as the laboratory supervisor using a hands-on approach. Practicum classes at the university enterprises and through cooperative education are further utilized to reinforce the practical application of scientific theory. Professors are experienced, enthusiastic, and passionate about providing students the skills necessary to succeed with the ever-changing technology and environment.

Department Facilities & Student Organizations

The Animal and Veterinary Sciences Program at ECU is supported by excellent classroom laboratories and facilities at the A.B. Carter Building, including a modern computer laboratory, ag mechanics shop, animal and plant science biotechnology laboratories equipped for research in nutrition and genetics. Students will have the unique opportunity to work directly with animals and observe practical applications of agricultural practices and ECU's Meadowbrook Farm. Meadowbrook Farm consists of a 1,100-acre laboratory which supports our instructional and practicum hands-on learning program. Located only eight miles from campus with an on-site classroom, the farm gives students an opportunity to experience all aspects of modern production in beef, dairy, sheep, swine, and crop enterprises. Students have the opportunity to develop their extracurricular leadership skills through the Agriculture/Collegiate Farm Bureau Club, Block & Bridle Club, Delta Tau Alpha Agriculture Honor Society, Horticulture Club, Pre-Vet Club, and Sigma Alpha Sorority.

For More Information

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Department of Agriculture
College of Science, Technology, Engineering, and Math (2026-27)

Suggested Curriculum Guide for Animal Science Concentration

Freshman (1st semester) 14 hrs			Freshman (2nd semester) 16-18 hrs		
GSD 101	Foundations of Learning	3	AGR 225	Evaluation and Selection of Livestock -OR-	3
AGR 125	Principles of Animal Science	3	AGR 330	Animal Products	
AGR 126	Animal Science Laboratory	1	^E BIO 111	Cell and Molecular Biology	3
BIO 112	Ecology and Evolution	3	BIO 111L	Cell and Molecular Biology Lab	1
BIO 112L	Ecology and Evolution Lab	1	^E MAT Elective		3-5
Element 1A (ENG 101)		3	Element 1B (ENG 102)		3
			Element 3A (Arts)		3
Sophomore (1st semester) 15 hrs			Sophomore (2nd semester) 16-17 hrs		
AGR 321	Feeds and Feeding	4	AGR 308	Agricultural Economics	3
AGR 301	Directed Work Experience -OR-	1	AGR 374	Genetics of Livestock Improvement	3
AGR 349	Applied Learning in Agriculture		CHE 112	General Chemistry II	3
^E CHE 111	General Chemistry I	3	CHE 112L	General Chemistry Lab II	1
CHE 111L	General Chemistry Lab I	1	STA 215	Introduction to Statistical Reasoning -OR-	
^E ECO 120	Economic Reasoning and Issues	3	STA 270	Applied Statistics	3-4
Element 1C (Oral Communications)		3	Element 3B (Humanities)		3
Junior (1st semester) 13-16 hrs			Junior (2nd semester) 12-18 hrs		
AGR 304	Pest Management	4	AGR 310	Principles of Agribusiness Management -OR-	3
AGR 305	Professional Skills Seminar	1	AGR 350	Agricultural Marketing	
AGR 375	Reproduction of Domestic Animals	4	Animal Science Elective		3
CHE 361	Organic Chemistry I	3	Animal Production Elective		3-4
CHE 361L	Organic Chemistry Lab I	1	Science Elective		3-5
Free Elective		0-3	Free Elective		0-3
Senior (1st semester) 15-18 hrs			Senior (2nd semester) 12-13 hrs		
AGR 301	Directed Work Experience -OR-	1	AGR 301	Directed Work Experience -OR-	1
AGR 349	Applied Learning in Agriculture		AGR 349	Applied Learning in Agriculture	
Animal Science Elective		3	AGR 411	Senior Seminar	1
Animal Production Elective		4	AGR 499	Ag Advocacy and Issues Capstone -OR-	3
Science Elective		4	AGR 509	Ag Research Methods and Interpretation	
Element 4A (Historical and Global Perspective)		3	AGR 521	Animal Nutrient Metabolism	3
Free Elective		0-3	Animal Production Elective		4
			Free Elective		0-1

^E Denotes that 3 credit hours from the course are/can be applied to fulfill Essential Education Requirements.

UNIVERSITY GRADUATION REQUIREMENTS..... 33 hours

- Essential Education.....30 hours
- Foundations in Learning (GSD 101; waived for transfers with 30+ hrs)..... 3 hours
- Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)

MAJOR REQUIREMENTS

Core Courses.48 hours

AGR 125, AGR 126(1), Plus three credit hours: AGR 301 or AGR 349 (3), AGR 304(4), AGR 305(1), AGR 308, AGR 310 or AGR 350, AGR 321(4), AGR 374, AGR 375(4), AGR 411(1), AGR 499 or AGR 509, AGR 521, BIO 112, BIO 112L(1), CHE 112, CHE 112L (1), CHE 361, CHE 361L(1).

Animal Science Concentration Requirements.18-23 hours

AGR 225 or AGR 330; Plus two courses from animal science electives: AGR 312(4), AGR 372(2-6), AGR 373, AGR 376(4), AGR 377; Plus three courses from animal production electives: AGR 255, AGR 326(4), AGR 327(4), AGR 328(4), AGR 329(4), AGR 332, AGR 380(4).

Supporting Course Requirements.9-15 hours

^EBIO 111/111L, ^ECHE 111/111L, ^EECO 120, STA 215 or STA 270(4); Plus one course from ^EMAT elective: MAT 112A/B, MAT 114, MAT 120, MAT 122 (5), MAT 211, MAT 234(4); Plus two courses from: BIO 320(4), BIO 331, BIO 348, BIO 546(4), CHE 362/362L(4), CHE 430, CHE 431, PHY 131(5), PHY 132(5).

Free Electives..... 0-10 hours

Total Curriculum Requirements

120-122 hours



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