Department of Agriculture
School of Applied Sciences and Technology
College of Business & Technology (2020-2021)

Animal Science Concentration

Animal and Veterinary Sciences B.S. Degree

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 EKU 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 and 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 Quadrathalon 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 disciple 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 EKU 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. The average starting salary for an animal scientist with a Bachelor's degree is around $58,000 per year and ranging from $36,000 to $100,000+.

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.

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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 in the ever-changing 21st Century environment.

Department Facilities
The Animal Science Program at EKU 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. There are also garden displays, turf plots, and 5 greenhouses.

Students will have the unique opportunity to work directly with animals and observe practical applications of agricultural practices at EKU's Meadowbrook Farm. Meadowbrook Farm consists of a 720-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. The Stateland Dairy features a state of the art robotic milking system, where registered Holstein and Brown Swiss cow's milk themselves. Other enterprises include both fall and spring calving beef cow herd, beef backgrounding operation, grazing hair sheep flock, farrow to finish swine facilities, and crop production that that produces forage and grain for the livestock. Students will work directly with faculty and staff in all areas throughout their academic career.

For More Information

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Suggested Curriculum Guide for Animal Science Concentration

Freshman (1st Semester) 15 hrs

BTO 100** Orientation (1 hr)
AGR 125 Principles of Animal Science
AGR 126 Animal Science Lab (1 hr)
E-2 MAT 112 or Higher Mathematics
E-4A BIO 112 Biology (4 hrs)
E-1A ENG 101 Composition

Freshman (2nd Semester) 16 hrs

E-1A ENG 102 Composition II
E-5A Historical Perspective (3 hrs)
E-5B ECO 120 Economics
E-1C CMS 100 or 210 Communications
E-4B CHE 111 Chemistry I
E-4B CHE 111L Chemistry I Lab (1 hr)

Sophomore (1st Semester) 15 hrs

AGR 321 Feeds and Feeding (4 hrs)
CHE 112 Chemistry II
CHE 112L Chemistry II Lab (1 hr)
BIO 111 Cell & Molecular Biology (4 hrs)
E-3B Humanities

Sophomore (2nd Semester) 13-14 hrs

AGR Animal Science
AGR 301 or 349 Experiential Learning (1 hr)
AGR 225 or 330 (2)
CHE 361 Organic Chemistry I
CHE 361L Organic Chemistry I Lab (1 hr)
E-6 Diversity – Writing Intensive (3 hrs)

Junior (1st Semester) 16 hrs

AGR Animal Production (4 hrs)
AGR Animal Science
AGR 308 Agriculture Economics
E-3A Arts
Science Elective

Junior (2nd Semester) 15-16 hrs

AGR Animal Science
AGR 301, 302 or 349 Experiential Learning (1 hr)
AGR 305 Professional Skills Seminar (1 hr)
E-6 Diversity (3 hrs)
Science Elective (4 hrs)
STA 215 or 270 Applied Statistics (4 hrs)

Senior (1st Semester) 15 hrs

AGR 310 Ag Business
AGR 301, 302 or 349 Experiential Learning (1 hr)
AGR Animal Production (4 hrs)
AGR 304 Pest Management (4 hrs)
Free Elective

Senior (2nd Semester) 13-15 hrs

AGR 499 or 509 Capstone
Animal Science Selection (3 hrs)
AGR 411 Senior Seminar (1 hr)
Free Elective (6-8 hs)
BTS 400 College to Careers Seminar (0 credit)**

*A total of 42 credits including electives must be upper division (>300). **Course must be taken in semester indicated.

UNIVERSITY GRADUATION REQUIREMENTS

University Requirements ..... 37 hrs
Orientation Course (1 hr) -waived for transfers with 30+ hrs.
General Education (36 hrs) -see also supporting course requirements

College Requirements:
AGR 305(1) and BTS 400 (CR only, no hrs) .....1 hr

Program Core Courses ..... 31-33 hrs
AGR 125, 126(1), 304 (4), 308, 321 (4), and 411 (1); three hours from 301, 302, or 349; one of the following: AGR 310, 350, or 440; AGR 499 or 509; two production classes from AGR 255, 326, 327(4), 328(4), 329(4), 332, or 380(4).

Animal Science concentration ..... 14-16 hrs
AGR 225 or 330(2); select four animal science courses from AGR 312(4), 372, 373, 374, 375, 376, 377, or 421.

Supporting Course Requirement..... 14 hrs
BIO (GE Element 4) 111(4), 112(4) and CHE (GE Element 4) 111/111L, 112/112L, 361/361L; ECO 120 (GE Element 5B).

Animal Science Supporting Course Requirement ..... 9-16 hrs

MAT (GE Element 2) 112A and 112B, 114, 120, 122(5), 211, or 234(4); STA 215 or 270(4); select two science electives from AGR 374 or BIO 315(4), 320(4), 331, 348, 546(4), CHE 362/362L, CHE 430, PHY 131(5) or PHY 132(5).

Free Electives ..... 3-14 hrs

Total Curriculum Requirements ..... 120 hrs