ANIMAL SCIENCE MAJOR: EQUINE STUDIES OPTION (B.S.)

https://colsa.unh.edu/agriculture-nutrition-food-systems/program/bs/animal-science-equine-studies-option

Description

The Animal Science: Equine Studies option is designed to provide students with a foundation in the sciences, a breadth within the animal science discipline, and the depth to serve the equine industry. Through a hands-on curriculum, equine studies students receive training in areas important to pursuing a successful career in equine management and to pursue additional training leading to the M.S. or Ph.D. degree in equine science or its related disciplines. The UNH Equine facilities include a 40-stall barn, indoor and outdoor riding arenas, 3 regulation-size dressage competition arenas, an outdoor competition course, reproductive laboratory, as well as classrooms and conference space.

Requirements

Degree Requirements

Minimum Credit Requirement: 128 credits

Minimum Residency Requirement: 32 credits must be taken at UNH

Minimum GPA: 2.0 required for conferral*

Core Curriculum Required: Discovery & Writing Program Requirements

Foreign Language Requirement: No

All Major, Option and Elective Requirements as indicated.
**Major GPA requirements as indicated.*

Major Requirements

Students will be required to earn a C- or better in the foundation courses and all required courses for the animal science major to receive credit toward graduation. Students failing to do this will need to retake the course in order to receive credit.

A. Foundation Science Courses required for all Animal Science majors

Code	Title	Credits
BIOL 411	Introductory Biology: Molecular and Cellular	4
BIOL 412	Introductory Biology: Evolution, Biodiversity and Ecology	4
BIOL 528	Applied Biostatistics I	4
BMCB 501	Biological Chemistry [1]	4
BMS 503 & BMS 504	General Microbiology and General Microbiology Laboratory	5
CHEM 403	General Chemistry I	4
CHEM 404	General Chemistry II	4

B. Animal Science Core Courses required for all ANSC:Equine Studies option majors

Code	Title	Credits
ANSC 406	Careers in Animal Science	1
ANSC 511	Animal Anatomy and Physiology I	4
ANSC 512	Animal Anatomy and Physiology II	4
ANSC 543	Technical Writing in Animal Sciences [2]	2
ANSC 602	Animal Rights and Societal Issues	4
ANSC 609	Principles of Animal Nutrition	4
ANSC 612	Genetics of Animals	4
ANSC 625	Animal Diseases	4
ANSC 724	Reproductive Management and Artificial Insemination	4

C. Equine Core Courses required for all ANSC:Equine Studies option majors.

Code	Title	Credits
AAS 432	Introduction to Forage and Grassland Management	3
ANSC 427	Introduction to Equine Science	4
ANSC 522	Ethical Horsemanship - Considerations and Theory	3
ANSC 526	Equine Conformation, Movement, and Performance	4
ANSC 538	Equine Handling/Longeing	1
ANSC 647	Equine Stable Management	4
ANSC 665	Agricultural & Equine Event Design, Planning and Management	2
ANSC 704	Advanced Equine Physiology and Lameness	4
ANSC 797	Equine Capstone Experience	4

D. Equine Elective Courses

All Equine Option students will complete ≥ 8 elective credits of the courses listed below. Some courses are not offered every academic year. Students will work with their advisor to plan accordingly and customize their course selection to support their career goals and interests.

Code	Title	Credits
AAS 434	Equipment and Facilities Management	3
ANSC 500	Equine Assisted Services	4
ANSC 536	Preparation and Competition Techniques for the Modern Sport Horse	4
ANSC 548	Agricultural Business Management	4
ANSC 622	Further Explorations in Horsemanship Theory	2
ANSC 640	Principles of Riding Instruction	4
ANSC 641	Principles of Dressage Instruction	2
ANSC 642	Principles of Jumping Instruction	2
ANSC 643	Principles of Therapeutic Riding Instruction	4
ANSC 695	Supervised Teaching Experience	2
ANSC 799	Honors Senior Thesis	1-4

E. Professional Internship or Related Work Experience

Equine Studies option students will demonstrate evidence of a substantive work or internship experience in the equine industry. In collaboration with their advisors, students will select an appropriate setting based on their professional and career interests. Students will document this work via either credit-based ANSC 600 Field Experience or no-credit AAS 597 Applied Animal Science Work Experience.

1. Students interested in graduate school should take 2 semesters of Organic Chemistry (CHEM 651/CHEM 653 and CHEM 652/CHEM 654) and one semester of General Biochemistry (BMCB 658/BMCB 659) in place of BMCB 501.
2. ENGL 501 Introduction to Creative Nonfiction, ENGL 502 Professional and Technical Writing, ENGL 503 Persuasive Writing or ENGL 419 How to Read Anything.

Total Credits: 91

Degree Plan

Sample Degree Plan

This sample degree plan serves as a general guide; students collaborate with their academic advisor to develop a personalized degree plan to meet their academic goals and program requirements.

First Year		
Fall		**Credits**
ANSC 427	Introduction to Equine Science	4
BIOL 411	Introductory Biology: Molecular and Cellular	4
CHEM 403	General Chemistry I	4
Discovery Course or Elective [1]		4
	Credits	**16**
Spring		
BIOL 412	Introductory Biology: Evolution, Biodiversity and Ecology	4
CHEM 404	General Chemistry II	4
ENGL 401	First-Year Writing (WI)	4
Discovery course or Elective [1]		4
	Credits	**16**
Second Year		
Fall		
AAS 432	Introduction to Forage and Grassland Management	3
ANSC 511	Animal Anatomy and Physiology I	4
ANSC 522	Ethical Horsemanship - Considerations and Theory (WI)	3
ANSC 538	Equine Handling/Longeing	1
Elective		4
	Credits	**15**
Spring		
ANSC 406	Careers in Animal Science	1
ANSC 512	Animal Anatomy and Physiology II	4
ANSC 526	Equine Conformation, Movement, and Performance	4
ANSC 543	Technical Writing in Animal Sciences (WI)	2
Discovery		4
	Credits	**15**
Third Year		
Fall		
ANSC 612	Genetics of Animals	4
ANSC 625	Animal Diseases	4
ANSC 647	Equine Stable Management	4
BMS 503 & BMS 504	General Microbiology and General Microbiology Laboratory	5
	Credits	**17**
Spring		
ANSC 609	Principles of Animal Nutrition	4
ANSC 665	Agricultural & Equine Event Design, Planning and Management	2
BMCB 501	Biological Chemistry	4
Discovery course		4
Elective		4
	Credits	**18**
Fourth Year		
Fall		
ANSC 704	Advanced Equine Physiology and Lameness	4
BIOL 528	Applied Biostatistics I	4
Elective		4
Discovery course		4
	Credits	**16**
Spring		
ANSC 602	Animal Rights and Societal Issues (WI)	4
ANSC 724	Reproductive Management and Artificial Insemination	4
ANSC 797	Equine Capstone Experience	4
Discovery course		4
	Credits	**16**
	Total Credits	**129**

[1] ANSC 402 Horsemanship is a popular elective for ANSC: EQU students; the course requires permission of the instructor.

Student Learning Outcomes

Program Learning Outcomes

As part of the foundation and core courses, all Animal Science students will gain a fundamental knowledge of the disciplines of:

Anatomy & Physiology

- Students will be able to recognize the complimentary relationship of anatomic structure and function and accurately describe the basic physiologic processes of mammalian organ systems.

Nutrition

- Students will be able to identify, compare, contrast, and link different concepts regarding animal feeding and metabolism of carbohydrates, lipids, and protein in major livestock species and equine.

Genetics

- Students will understand basic principles and applications of inheritance, the difference between qualitative and quantitative genetics, and be able to discuss the various disciplines within genetics.

Disease

- Students will understand the modes of transmission of infectious diseases, recognize signs of illness associated with notable diseases in livestock species, and be able to appropriately apply general concepts of disease prevention and biosecurity to a variety of management situations.

Reproduction

- Students will comprehend the mechanisms and endocrine control of gametogenesis, fertilization, pregnancy, and lactation and understand the variety of factors that can influence reproductive success.

Animal Ethics

- Students will recognize the numerous ways that humans use, benefit from, and conflict with non-human animals and have an awareness of the variety of motivations and influences that drive these relationships.

Critical Analysis & Communication

- Students will be able to develop critical questions that facilitate their independent investigation of topics related to animal science and demonstrate an integration of discipline specific knowledge through engaging in experiential education opportunities.
- Students will be able to conduct literature searches using relevant databases to critically evaluate both academic and popular press resources pertinent to the animal sciences.
- Students will be able to construct well-supported, effectively organized written arguments to express informed perspectives on animal science related topics. These writings will demonstrate professional style, appropriate mechanics (grammar, punctuation, and spelling), and the correct use of citations.

By completing the Equine Core, students will be able to:

- Identify, explain, and demonstrate safe, effective, and humane equine handling and stable management skills.
- Identify, explain, and demonstrate equine health management practices and basic equine first aid.
- Explain guidelines for equine nutrition, feeding, and parasite management.
- Demonstrate technical proficiency with English tack, boots, bandages, and blankets.
- Demonstrate safe, competent longeing technique using a trained horse.
- Demonstrate an understanding of the principles of riding practices in equestrian sport.
- Communicate effectively, in written and verbal form, about professional topics in the equine industry.