

ANIMAL SCIENCE (ANSC)

ANSC 500: Foundation Readings in Animal Science

1-2 Credits/Maximum of 2

Scientific articles that have significantly impacted the animal sciences will be read and discussed. AN SC 500 Foundation Readings in Animal Science (1 per semester/maximum of 2) This course is intended for graduate students in the animal sciences. The Course Objectives are: 1. To discuss the attributes of a "classic" or foundation paper; 2. To discuss papers that, in hindsight, affected our thinking and practice in the animal sciences and industries; 3. To encourage students to gain insight into a variety of sub-disciplines within the animal sciences. The class will meet for one period each week. Class format is a guided discussion. Selected guest instructors will be invited some weeks based upon the selected topic, and to add a broad perspective. The final grade will be based upon class participation (50%) and student performance on a final exam covering the class discussions (50%).

ANSC 502: Scientific Scholarship

2 Credits

Consideration of the scientific method and thinking relative to scholarship, grantsmanship, and the mechanism of grantsmanship.

ANSC 506: Ruminology

3 Credits

Physiological, biochemical, and microbiological activities occurring within the rumen and the relation of rumen function to animal response.

Prerequisite: at least one course in each of the following areas: animal nutrition, physiology, microbiology, and biochemistry
Cross-listed with: NUTR 506

ANSC 515: Advanced Physiology of Reproduction in Farm Animals

1-6 Credits

Advanced physiology of reproduction in farm animals.

Prerequisite: 3 credits each of reproductive physiology, systemic physiology, and endocrinology

ANSC 543: Animal Genomics

3 Credits

Foundations in genomics, proteomics, epigenomics, and basic bioinformatics, and their applications in animal breeding, health, production, reproduction, nutrition, and medicine. AN SC 543 Animal Genomics (3) Genomics is a branch of genetics concerned with the study of genome sequence, assembly, and analysis of the structure and function of genomes. It is an interdisciplinary field involving the marriage of molecular biology, robotics, and computing. The course is designed to foster an appreciation for the importance of genomics as applied to animal agriculture and medicine and to provide a knowledge base that enables students to successfully move on and master advanced topics in genomics. Additionally, the course will introduce students to approaches and techniques used to sequence and analyze animal genomes and provide a hands-on learning environment to familiarize students with genome databases and basic bioinformatics tools. The

course will combine lecture discussion of current literature with hands-on genomic analysis with focus on genome structure & organization, genome sequencing & annotation, animal genome projects & comparative mapping, single nucleotide polymorphism (SNP) discovery & genome-wide association study (GWAS), genomic selection, non-coding RNA, microarray analysis, proteomics, epigenomics, phylogenomics, and systems biology. Each topic will have one or more computer-based lab sections that are designed to provide students with further information related to the topic, with a particular focus on how to navigate genome databases and how to carry out basic bioinformatics analysis for their research projects. This course is suitable for graduate students, professional research scientists, and any student who has a BS in life science and wants to learn more about animal genomics and its sub-disciplines.

ANSC 590: Colloquium

1-9 Credits/Maximum of 9

Continuing seminars which consist of a series of individual lectures by faculty, students, or outside speakers.

ANSC 596: Individual Studies

1-9 Credits/Maximum of 9

Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

ANSC 597: Special Topics

1-9 Credits/Maximum of 9

Formal courses given on a topical or special interest subject which may be offered infrequently; several different topics may be taught in one year or term.

ANSC 598: Special Topics

1-9 Credits/Maximum of 9

Formal courses given on a topical or special interest subject which may be offered infrequently; several different topics may be taught in one year or semester.

ANSC 600: Thesis Research

1-15 Credits/Maximum of 999

No description.

ANSC 601: Ph.D. Dissertation Full-Time

0 Credits/Maximum of 999

No description.

ANSC 602: Supervised Experience in College Teaching

1-3 Credits/Maximum of 6

Experience in developing, organizing, and conducting lectures/laboratories; evaluation and counseling students and related resident education activities.

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ANSC 610: Thesis Research Off Campus

1-15 Credits/Maximum of 999

No description.

ANSC 611: Ph.D. Dissertation Part-Time

0 Credits/Maximum of 999

No description.