

ANIMAL SCIENCES (ANS)

ANS 100, ORIENTATION TO ANIMAL AND RANGELAND SCIENCES, 1 Credit

Designed to provide incoming Animal and Rangeland Sciences students an introduction to college life at OSU with an emphasis on the faculty, facilities, services, and the curricula of the Department of Animal and Rangeland Sciences.

ANS 121, *INTRODUCTION TO ANIMAL SCIENCES, 4 Credits

Principles of breeding, physiology, nutrition, and management as they apply to modern livestock and poultry production. Lec/lab. (Bacc Core Course)

Attributes: CPBS – Core, Pers, Biological Science

Equivalent to: ANS 121H

Available via Ecampus

ANS 121H, *INTRODUCTION TO ANIMAL SCIENCES, 4 Credits

Principles of breeding, physiology, nutrition, and management as they apply to modern livestock and poultry production. Lec/lab. (Bacc Core Course)

Attributes: CPBS – Core, Pers, Biological Science; HNRS – Honors Course Designator

Equivalent to: ANS 121

ANS 207, SOPHOMORE SEMINAR, 2 Credits

Examination of career opportunities in animal sciences.

Available via Ecampus

ANS 215, BEEF/DAIRY INDUSTRIES, 3 Credits

Introduction to beef and dairy industries; history, current industry status, and demonstration and practice of basic husbandry skills.

Recommended: ANS 121

ANS 216, SMALL RUMINANT/SWINE INDUSTRIES, 3 Credits

Introduction to the small ruminant and swine industries including history, current status and production practices, with demonstration and hands-on experience of basic husbandry practices.

Recommended: ANS 121

ANS 217, POULTRY INDUSTRIES, 3 Credits

Familiarization of the organizational structure and marketing arrangement of poultry industries; hands-on managerial techniques, practices and procedures carried out by the poultry industries.

ANS 220, INTRODUCTORY HORSE SCIENCE, 3 Credits

Introduction to horses, their history, breeds, form and function, performance evaluation, current industry status, and general management.

Recommended: ANS 121

ANS 223, EQUINE MARKETING, 2 Credits

Course covers practical concepts of equine marketing. Emphasis on market assessment, targeting buyers, marketing and advertising strategies, hands-on experience in product preparation and presentation, marketing legalities.

Recommended: ANS 121, ANS 220 and ANS 192

ANS 231, LIVESTOCK EVALUATION, 3 Credits

Focuses on an individual animal's economic merit as compared to a sample group. Visual appraisal, performance data, and carcass merit are stressed. Includes the evaluation of both market and breeding animals. The livestock species of concentration include beef cattle, swine, sheep, and meat goats. Lec/lab.

Recommended: ANS 121

ANS 251, PRINCIPLES OF ANIMAL FOODS TECHNOLOGY, 3 Credits

Processing of meat, milk and eggs into human food products. Lec/lab.

Recommended: ANS 121

ANS 280, COMPANION ANIMAL MANAGEMENT, 4 Credits

An introduction to the challenges, responsibilities, and benefits of interaction with selected companion animals. Topics covered will provide an overview of the human-animal bond, the position of companion animals in society, ethical issues of pet ownership and potential career opportunities. In addition, the course will serve as an introduction to preventive care and normal behavior of dogs, cats, and selected exotic pets. As the Department of Animal and Rangeland Sciences curriculum offers courses addressing equine care and husbandry, horses will not be discussed in this class.

Available via Ecampus

ANS 302, COMMON DISEASES OF COMPANION ANIMALS, 4 Credits

An introduction to common diseases of selected companion animals. Emphasis will be placed on identifying predisposing factors, clinical signs, common diagnostic procedures and potential implications for human health. A \$10 course fee will be required. Lec/rec.

Prerequisite: (((BI 211 with D- or better or BI 211H with D- or better) and (BI 212 [D-] or BI 212H [D-]) and (BI 213 [D-] or BI 213H [D-])) or ((BI 221 [D-] or BI 221H [D-]) and (BI 222 [D-] or BI 222H [D-]) and (BI 223 [D-] or BI 223H [D-]))) and CH 121 [D-] and CH 122 [D-] and CH 123 [D-]

Recommended: ANS 280

Available via Ecampus

ANS 311, PRINCIPLES OF ANIMAL NUTRITION, 3 Credits

Classification, digestion, absorption, and metabolism of nutrients in animals; consequences of nutritional deficiencies and toxicities.

Prerequisite: ((BI 211 with D- or better or BI 211H with D- or better) and (BI 212 [D-] or BI 212H [D-])) or ((BI 221 [D-] or BI 221H [D-]) and (BI 222 [D-] or BI 222H [D-]) and (BI 223 [D-] or BI 223H [D-]))

Available via Ecampus

ANS 313, APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION, 4 Credits

Discusses topics relevant to feedstuff identification and nutrient analysis, feed processing and formulation of balanced animal diets based on nutrient requirements. Provides students hands-on experiences in identifying various feedstuffs and formulating rations based on the nutrient composition of those feedstuffs.

Recommended: MTH 111

Available via Ecampus

ANS 314, ANIMAL PHYSIOLOGY, 4 Credits

Biological basis of animal performance; describes how networks of cells act cooperatively to enable locomotion, provide a stable internal environment, allocate resources, remove metabolic end-products, and counteract microorganisms.

Recommended: General principles of biology equivalent to BI 211, BI 212, BI 213 and junior standing or higher

Available via Ecampus

ANS 315, *CONTENTIOUS SOCIAL ISSUES IN ANIMAL AGRICULTURE, 3 Credits

Discussion of contentious issues including role of animal products and human health; use of hormones and antibiotics; new animal biotechnologies; animal rights/welfare; livestock grazing on public lands. (Bacc Core Course).

Attributes: CSST – Core, Synthesis, Science/Technology/Society

Available via Ecampus

ANS 316, REPRODUCTION IN DOMESTIC ANIMALS, 4 Credits

Anatomy and physiology of mammalian and avian reproductive systems; fertilization, embryonic and fetal development, placentation and parturition; reproductive technologies. Lec/rec.

Prerequisite: ((BI 211 with D- or better or BI 211H with D- or better) or ((BI 221 with D- or better or BI 221H with D- or better) and (BI 222 [D-] or BI 222H [D-]) and (BI 223 [D-] or BI 223H [D-]))) and (CH 121 [D-] or CH 221 [D-] or CH 231 [D-] or CH 231H [D-])

Recommended: ANS 121

Available via Ecampus

ANS 317, REPRODUCTION IN DOMESTIC ANIMALS LABORATORY, 1 Credit

Gross and microscopic anatomy of the reproductive tract; semen collection, evaluation and extension; evaluation of fertilization, embryo and fetal development and placentation. Lec/lab.

Prerequisite: ANS 316 (may be taken concurrently) with D- or better

Available via Ecampus

ANS 320, PRINCIPLES OF COMPANION ANIMAL NUTRITION, 3 Credits

Learn about nutrients, the digestive process, and the application of nutritional sciences to the health and welfare of companion animals. Introduction to the metabolic basis and practical preventative management for nutritional diseases in companion animals.

Prerequisite: ((BI 211 with D- or better or BI 211H with D- or better) and (BI 212 [D-] or BI 212H [D-])) or ((BI 221 [D-] or BI 221H [D-]) and (BI 222 [D-] or BI 222H [D-]) and (BI 223 [D-] or BI 223H [D-]))

Available via Ecampus

ANS 321, AVIAN EMBRYO, 4 Credits

Discussion and experimentation involving the development and the environmental requirements for the artificial incubation of avian embryos. Lec/lab. Offered even-numbered years.

Recommended: ANS 121 and ANS 217 and BI 211

ANS 333, EQUINE STABLE MANAGEMENT, 3 Credits

Discusses developing a business plan, financial statements, and ratios, budgeting, financial planning, taxation, and employment issues within the current equine industry.

Prerequisite: ANS 220 with D- or better

Recommended: ANS 222

ANS 335, EQUINE HEALTH AND DISEASE, 3 Credits

Recognition of common diseases and disorders including their cause, treatment and prevention. Management of internal and external parasites. Recognizing common lameness issues.

Available via Ecampus

ANS 341, ANIMAL BEHAVIOR AND COGNITION, 3 Credits

Survey, discuss, and explore principles of animal behavior and cognition from a comparative perspective, taking into account the interacting influences of biology, environment, and life experience on the individual and group behavior of animals across species. Aspects of animal cognition, including reasoning, perception, memory and personality, that play an important role in animal behavior will also be addressed.

Prerequisite: BI 102 with D or better or (BI 213 with D or better or BI 213H with D or better) or ((BI 221 with D or better or BI 221H with D or better) and (BI 222 [D] or BI 222H [D]) and (BI 223 [D] or BI 223H [D]))

Available via Ecampus

ANS 351, ADVANCED PRINCIPLES OF ANIMAL FOODS TECHNOLOGY, 4 Credits

Provides in-depth coverage of both fresh and processed meats and eggs into products suitable for human consumption.

Recommended: ANS 251

ANS 378, ANIMAL GENETICS, 4 Credits

Fundamentals of inheritance, principles of genetic segregation, population and quantitative genetics, response to natural selection and artificial manipulation of populations.

Prerequisite: BI 211 with D- or better or BI 211H with D- or better or BI 212 with D- or better or BI 212H with D- or better or BI 213 with D- or better or BI 213H with D- or better or BI 221 with D- or better or BI 221H with D- or better or BI 222 with D- or better or BI 222H with D- or better or BI 223 with D- or better or BI 223H with D- or better

Recommended: ANS 121 and ST 351

Available via Ecampus

ANS 380, PRINCIPLES OF ANIMAL ANATOMY AND PHYSIOLOGY, 3 Credits

An introductory course in animal anatomy to provide a foundation for advanced courses in the Animal Science curriculum. Emphasis is on acquisition of a basic knowledge of minute and gross anatomical structures, their operation, and integration. Begins with anatomical nomenclature such as body planes and directional terms then covers the following tissues and organ systems: epithelium, connective tissue, blood and bone marrow, bone/cartilage, muscle tissue, nervous tissue, digestive system, circulatory system, reproductive system, urinary system, and respiratory system.

Prerequisite: (((BI 211 with D or better or BI 211H with D or better) and (BI 212 [D] or BI 212H [D]) and (BI 213 [D] or BI 213H [D])) or ((BI 221 [D] or BI 221H [D]) and (BI 222 [D] or BI 222H [D]) and (BI 223 [D] or BI 223H [D])))

Available via Ecampus

ANS 385, FOUNDATIONS OF MAMMALIAN HISTOLOGY, 3 Credits

Provides a basic knowledge of mammalian microscopic anatomy. Emphasis will be on the appearance, organization and function of minute anatomical structures that can only be observed with the help of a visual enhancer, such as a microscope. Covers basic histological techniques and histology and related functions of the following tissues and organ systems: epithelium, connective tissue, bone/cartilage, blood, muscle tissue, nervous tissue, circulatory system, digestive system, reproductive system, urinary system, respiratory system, immune system, integument, eye and ear. Also covers gametogenesis, fertilization, and early development of the vertebrate embryo. Lec/rec.

Prerequisite: (((BI 211 with C- or better or BI 211H with C- or better) and (BI 212 [C-] or BI 212H [C-]) and (BI 213 [C-] or BI 213H [C-])) or ((BI 221 [C-] or BI 221H [C-]) and (BI 222 [C-] or BI 222H [C-]) and (BI 223 [C-] or BI 223H [C-]))) and (BB 314 [C-] or BB 314H [C-])

Available via Ecampus

ANS 390, GROSS ANATOMY OF DOMESTIC ANIMALS, 4 Credits

Provides a foundation for advanced courses in the Animal Sciences curriculum. Emphasis on gaining knowledge of mammalian anatomy. Lectures cover anatomical nomenclature, structure, operation, and integration of major organ systems. The dog is used as the general model while comparative domestic animal anatomy is also covered. Lec/lab.

Prerequisite: (((BI 211 with D or better or BI 211H with D or better) and (BI 212 [D] or BI 212H [D]) and (BI 213 [D] or BI 213H [D])) or ((BI 221 [D] or BI 221H [D]) and (BI 222 [D] or BI 222H [D]) and (BI 223 [D] or BI 223H [D])))

ANS 401, RESEARCH, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 403, THESIS, 1-16 Credits

This course is repeatable for 16 credits.

ANS 405, READING AND CONFERENCE, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 407, SEMINAR, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 410, ANIMAL SCIENCE INTERNSHIP, 1-12 Credits

On- or off-campus, occupational work experience supervised by the department. Graded P/N.

This course is repeatable for 16 credits.

Available via Ecampus

ANS 420, ^ETHICAL ISSUES IN ANIMAL AGRICULTURE, 3 Credits

Students are provided with an opportunity to discuss, debate and write extensively about current, relevant, and controversial social issues dealing with modern animal agriculture. (Writing Intensive Course)

Attributes: CWIC – Core, Skills, WIC

Available via Ecampus

ANS 427, APPLIED PHYSIOLOGY OF REPRODUCTION, 5 Credits

Principles, techniques and recent development in semen collection, evaluation, extension and preservation; artificial insemination, estrus detection and synchronization; pregnancy diagnosis and embryo transfer.

Prerequisite: ANS 316 with C or better and ANS 317 [C]

Equivalent to: ANS 327

ANS 430, EQUINE SYSTEMS I: EXERCISE SCIENCE, 4 Credits

Seniors and graduate students intensively explore and apply science to real-life situations regarding cardiorespiratory, muscle physiology, and bone physiology responses to exercise, climate, and altitude. Lec/lab.

Recommended: ANS 314

ANS 431, EQUINE SYSTEMS II: NUTRITION, 3 Credits

Senior and graduate students intensively explore and apply science to real-life situations regarding starch, fiber, protein, and fat metabolism in performance horses, breeding stock, and growing horses.

Recommended: ANS 313

ANS 432, EQUINE SYSTEMS III: REPRODUCTION, 4 Credits

Senior and graduate students explore the fundamentals of equine reproduction and their application in horse breeding. Includes practical training of laboratory techniques. Lec/lab.

Prerequisite: ANS 220 with D- or better and ANS 316 [D-]

Recommended: ANS 327

ANS 433, POULTRY MEAT PRODUCTION SYSTEMS, 3 Credits

Fundamental applications and the analysis of management principles applied to brooding, rearing, feeding and housing meat-type chickens and turkeys and their respective breeders. Decision case studies and practical management problems are incorporated into the course. Offered odd number years.

Recommended: ANS 217 and ANS 313 and ANS 316 and ANS 378

ANS 434, EGG PRODUCTION SYSTEMS, 3 Credits

Applications and analyses of egg production systems for brooding, rearing, feeding and housing egg producing chickens. Decision case studies and practical management problems are incorporated into the course. Offered even-numbered years.

Recommended: ANS 217 and ANS 313 and ANS 316 and ANS 378

ANS 435, APPLIED ANIMAL BEHAVIOR, 3 Credits

Exploration of the fundamental processes of animal behavior and implications for animal management, production, housing and welfare. Examples provided in class will cover a range of species, with emphasis on domestic animals. Lec/lab.

Recommended: ANS 314 and BI 350 or Z 350

ANS 436, SHEEP PRODUCTION SYSTEMS, 3 Credits

Integration of nutrition, genetics, reproduction, behavior, and health principles into management systems for production and marketing of lamb and wool.

Recommended: ANS 216 and ANS 311 and ANS 316 and ANS 378

ANS 439, DAIRY PRODUCTION SYSTEMS, 4 Credits

Fundamentals of nutrition, breeding, reproductive physiology and health programs and their applications in the care and management of dairy cattle.

Recommended: ANS 215 and ANS 313 and ANS 316 and ANS 378

ANS 440, DAIRY PRODUCTION SYSTEMS, 3 Credits

Decision case analysis or special topics in application of dairy management principles.

Prerequisite: ANS 439 with D- or better

ANS 441, TOPICS IN ANIMAL LEARNING, 3 Credits

Explore when and how the behavior of animals can be shaped by the environment, individual experiences, and interactions with other animals (including humans).

Prerequisite: ((BI 211 with D- or better or BI 211H with D- or better) and (BI 212 [D-] or BI 212H [D-])) or ((BI 221 [D-] or BI 221H [D-]) and (BI 222 [D-] or BI 222H [D-]) and (BI 223 [D-] or BI 223H [D-]))

Recommended: ANS 435 or ANS 535 and (BI 350 or Z 350) and BI 213

ANS 443, BEEF PRODUCTION SYSTEMS: COW/CALF, 4 Credits

Fundamentals of nutrition, reproductive physiology, health and care, and financial management of beef cow/calf operations in the western U.S. Discussions will focus on critical management stages and practices common to the beef cow/calf production cycle. Taught at EOU La Grande campus only.

Recommended: ANS 121 and ANS 313 and (BA 321 or AEC 211)

ANS 444, BEEF PRODUCTION SYSTEMS: STOCKER/FEEDLOT, 4 Credits

A continuation of the study of beef cattle management. Content will encompass the growth and development of weaned calves through slaughter for consumer beef production, with particular focus on the management of growing and yearling cattle in forage-based (stocker cattle) and drylot (feedlot) systems. Taught at EOU La Grande campus only.

Recommended: ANS 121 and ANS 313 and (BA 321 or AEC 211)

ANS 445, BEEF PRODUCTION SYSTEMS, 4 Credits

Students will be exposed to the fundamentals of nutrition, reproductive physiology, selection, health programs, and their applications in the care and management of beef cattle from conception through calving, weaning, stocker/back grounding and the feedlot. Students will practice decision-making processes using working case studies. Overnight field trip with extra fee charged.

Recommended: ANS 313 and ANS 316 and ANS 317 and ANS 378

ANS 446, GRAZING LIVESTOCK PRODUCTION, 4 Credits

Equips non-animal science majors with basic ruminant livestock (beef cattle, sheep and meat goat) production knowledge, so they may communicate and collaborate effectively with livestock producers.

Prerequisite: ANS 121 with D- or better

Available via Ecampus

ANS 448, LIVESTOCK PRODUCTION ON PASTURE, 4 Credits

Focuses on grazing management in cultivated pastures in Oregon and other regions with similar agro-ecological conditions. Become familiar with the basic principles of pasture production, grazing management and feed planning and management in large and small ruminant production systems. Provides information on the underlying factors affecting pasture and animal production and product quality in pasture-based production systems. CROSSLISTED as ANS 448/CROP 448/RNG 448 and ANS 548/CROP 548/RNG 548.

Equivalent to: CROP 448, RNG 448

ANS 452, LIVESTOCK HOUSING AND WASTE MANAGEMENT, 3 Credits

Basics in where, how, and why one would build, insulate, and ventilate livestock buildings. Manure and wastewater collection, treatment, storage, and utilization.

Available via Ecampus

ANS 456, COMPANION ANIMAL PRODUCTION SYSTEMS, 3 Credits

Fundamentals of dog and cat breeding stock selection, feeding and housing as well as biology and management from estrus through parturition to weaning. Due to the nature of this class, a variety of animals may be present during class session. Questions and interactions are encouraged but, while precautions are taken, any contact with animals carries some risk of injury or illness.

Prerequisite: (ANS 313 with D- or better and ANS 316 (may be taken concurrently) [D-] and ANS 317 (may be taken concurrently) [D-] and ANS 378 [D-])

Available via Ecampus

ANS 460, SWINE PRODUCTION SYSTEMS, 4 Credits

Students will be exposed to the fundamentals of nutrition, reproductive physiology, selection, health programs, and their applications in the care and management of swine from conception through farrowing, weaning, and the growing/finishing phases. Students will practice decision-making processes using working case studies. Overnight field trip with extra fee charged.

Recommended: ANS 121 and ANS 216 and ANS 311 and ANS 316 and ANS 378

ANS 499, SPECIAL TOPICS, 0-16 Credits

This course is repeatable for 16 credits.

ANS 501, RESEARCH, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 503, THESIS, 1-16 Credits

Graded P/N.

This course is repeatable for 999 credits.

ANS 505, READING AND CONFERENCE, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 507, GRADUATE SEMINAR, 1 Credit

Section 1: Seminar/general for all graduate students. Preparation of effective visual aids. Practice explaining the validity or significance of experimental results to an informed audience. Section 2: Seminar/endocrinology, for graduate students interested in physiology.

This course is repeatable for 99 credits.

ANS 508, WORKSHOP, 1-16 Credits

This course is repeatable for 16 credits.

ANS 509, TEACHING PRACTICUM, 1-16 Credits

This course is repeatable for 16 credits.

ANS 511, DIGESTIVE PHYSIOLOGY AND NUTRITION OF RUMINANT ANIMALS, 4 Credits

Anatomy and physiology of the ruminant digestive tract including rumen microbiology and digestive processes. Nutritional biochemistry and physiology of ruminants. Feed chemistry, feed intake and principles of ration balancing. Theory of energy and protein metabolism.

Recommended: ANS 311 or ANS 313

ANS 512, MONOGASTRIC AND POULTRY NUTRITION, 3 Credits

Anatomical differences in digestive tracts of monogastrics; nutritional biochemistry of poultry; practical feeding of avian species; least-cost ration techniques; techniques for determining nutrient needs of monogastrics.

Recommended: ANS 311 and ANS 313

ANS 515, REVIEW OF APPLIED RUMINANT NUTRITION RESEARCH TECHNIQUES, 3 Credits

Review and discussion and applied techniques and methodology used for ruminant nutrition research.

ANS 530, EQUINE SYSTEMS I: EXERCISE SCIENCE, 4 Credits

Senior and graduate students intensively explore and apply science to real-life situations regarding cardiorespiratory, muscle physiology, and bone physiology responses to exercise, climate, and altitude. Lec/lab.

Recommended: ANS 314

ANS 531, EQUINE SYSTEMS II: NUTRITION, 3 Credits

Senior and graduate students intensively explore and apply science to real-life situations regarding starch, fiber, protein, and fat metabolism in performance horses, breeding stock, and growing horses.

Recommended: ANS 313

ANS 532, EQUINE SYSTEMS III: REPRODUCTION, 4 Credits

Designed for seniors and graduate students to explore the fundamentals of equine reproduction and their application in horse breeding. Includes practical training in laboratory techniques. Lec/lab.

Recommended: ANS 220 and ANS 316 and ANS 327

ANS 533, POULTRY MEAT PRODUCTION SYSTEMS, 3 Credits

Fundamental applications and the analysis of management principles applied to brooding, rearing, feeding and housing meat-type chickens and turkeys and their respective breeders. Decision case studies and practical management problems are incorporated into the course. Offered odd number years.

Recommended: ANS 217 and ANS 313 and ANS 316 and ANS 378

ANS 534, EGG PRODUCTION SYSTEMS, 3 Credits

Applications and analyses of egg production systems for brooding, rearing, feeding and housing egg producing chickens. Decision case studies and practical management problems are incorporated into the course. Offered even-numbered years.

Recommended: ANS 217 and ANS 313 and ANS 316 and ANS 378

ANS 535, APPLIED ANIMAL BEHAVIOR, 3 Credits

Exploration of the fundamental processes of animal behavior and implications for animal management, production, housing and welfare. Examples provided in class will cover a range of species, with emphasis on domestic animals. Lec/lab.

Recommended: ANS 314 and BI 350 or Z 350

ANS 536, SHEEP PRODUCTION SYSTEMS, 3 Credits

Integration of nutrition, genetics, reproduction, behavior, and health principles into management systems for production and marketing of lamb and wool.

Recommended: ANS 216 and ANS 311 and ANS 316 and ANS 378

ANS 538, BIOLOGY OF LACTATION, 3 Credits

Physiological and environmental factors affecting mammary gland development and function. Offered alternate years.

Recommended: Z 431 or Z 531

ANS 539, DAIRY PRODUCTION SYSTEMS, 4 Credits

Fundamentals of nutrition, breeding, reproductive physiology and health programs and their applications in the care and management of dairy cattle.

Recommended: ANS 215 and ANS 313 and ANS 316 and ANS 378

ANS 540, DAIRY PRODUCTION SYSTEMS, 3 Credits

Decision case analysis or special topics in application of dairy management principles.

Recommended: ANS 439

ANS 541, TOPICS IN ANIMAL LEARNING, 3 Credits

Explore when and how the behavior of animals can be shaped by the environment, individual experiences, and interactions with other animals (including humans).

Recommended: BI 211 and BI 212 and BI 213 and (ANS 435 or ANS 535) and (BI 350 or Z 350)

ANS 543, BEEF PRODUCTION SYSTEMS: COW/CALF, 3 Credits

Fundamentals of nutrition, reproductive physiology and health programs and their applications in the care and management of beef cattle.

Overnight field trip with extra fee charged. Lec/lab. Taught at EOU La Grande campus only.

Recommended: ANS 315 and ANS 313 and ANS 316 and ANS 378

ANS 544, BEEF PRODUCTION SYSTEMS: STOCKER/FEEDLOT, 3 Credits

Continuation of the study of beef cattle management. Students will practice decision-making processes using area beef cattle operations as case studies. Overnight field trip with extra fee charged. Taught at EOU La Grande campus only.

Recommended: ANS 443 or ANS 543

ANS 545, BEEF PRODUCTION SYSTEMS, 4 Credits

Students will be exposed to the fundamentals of nutrition, reproductive physiology, selection, health programs, and their applications in the care and management of beef cattle from conception through calving, weaning, stocker/back grounding and the feedlot. Students will practice decision-making processes using working case studies. Overnight field trip with extra fee charged.

Recommended: ANS 313 and ANS 316 and ANS 317 and ANS 378

ANS 548, LIVESTOCK PRODUCTION ON PASTURE, 4 Credits

Focuses on grazing management in cultivated pastures in Oregon and other regions with similar agro-ecological conditions. Become familiar with the basic principles of pasture production, grazing management and feed planning and management in large and small ruminant production systems. Provides information on the underlying factors affecting pasture and animal production and product quality in pasture-based production systems. CROSSLISTED as ANS 448/CROP 448/RNG 448 and ANS 548/CROP 548/RNG 548.

Equivalent to: CROP 548, RNG 548

ANS 550, ORGANIC ANIMAL PRODUCTION SYSTEMS, 3 Credits

Topics include the principles of livestock production, legislation, animal welfare, and marketing of organic production systems. Course emphasizes principles, concepts, and techniques of organic and sustainable production of animals.

Available via Ecampus

ANS 552, LIVESTOCK HOUSING AND WASTE MANAGEMENT, 3 Credits

Basics in where, how, and why one would build, insulate, and ventilate livestock buildings. Manure and wastewater collection, treatment, storage, and utilization. Offered alternate years.

ANS 556, COMPANION ANIMAL PRODUCTION SYSTEMS, 3 Credits

Fundamentals of dog and cat breeding stock selection, feeding and housing as well as biology and management from estrus through parturition to weaning. Due to the nature of this class, a variety of animals may be present during class session. Questions and interactions are encouraged but, while precautions are taken, any contact with animals carries some risk of injury or illness.

Recommended: ANS 313 and ANS 378 and completion or concurrent enrollment in ANS 316 and ANS 317

ANS 560, LIPID METABOLISM, 3 Credits

Digestion, absorption and metabolism of lipids with emphasis on lipoprotein metabolism, regulation of lipid metabolism in various tissues and metabolism of eicosanoids. Offered alternate years.

Equivalent to: NUTR 560

Recommended: BB 452 and BB 492

ANS 599, SPECIAL TOPICS, 1-16 Credits

This course is repeatable for 16 credits.

ANS 601, RESEARCH, 1-16 Credits

Graded P/N.

This course is repeatable for 16 credits.

ANS 603, THESIS, 1-16 Credits

This course is repeatable for 999 credits.

ANS 605, READING AND CONFERENCE, 1-16 Credits

This course is repeatable for 16 credits.

ANS 606, PROJECTS, 1-16 Credits

This course is repeatable for 16 credits.

ANS 607, GRADUATE SEMINAR, 1 Credit

This course is repeatable for 99 credits.

ANS 608, WORKSHOP, 1-16 Credits

This course is repeatable for 16 credits.

ANS 609, TEACHING PRACTICUM, 1-16 Credits

This course is repeatable for 16 credits.

ANS 662, HORMONE ACTION, 3 Credits

Mechanisms of action of peptide and steroid hormones and related compounds at the cellular level. Offered every other year, winter term.

Prerequisite: BB 551 with C or better or BB 592 with C or better

Equivalent to: PHAR 662

ANS 673, BIOLOGY OF MAMMALIAN REPRODUCTION, 4 Credits

Physiological, neuroendocrine, endocrine and environmental factors that regulate reproduction of mammals. Offered alternate years.

Equivalent to: BI 673

Recommended: ANS 316 and BB 350

ANS 699, SPECIAL TOPICS, 1-16 Credits

This course is repeatable for 16 credits.