

AGRICULTURE LARGE ANIMAL OPTION

2009 – 2010

18 Months

Credits Required for Graduation: 75

Associate of Applied Science (A.A.S.) Degree

A Need For Someone Skilled With Large Animals

The large animal technician option will provide an education and experience enabling graduates to work with large animals such as cattle, horses, sheep, and swine in the areas of basic nutrition, health care, animal husbandry, animal handling, and herd management. This program would supply desperately needed skilled assistants to veterinarians and large livestock operations. However, it is important to note that this is not a Vet Tech program. No small animal work will be taught and no national accreditation is necessary.

Getting It All . . .

The primary objective of the Large Animal Technician Option within the Agriculture program would be to graduate students with the necessary skills to be employed in large livestock operations and as skilled assistants to veterinarians. Graduates will be trained as entry-level technicians that perform basic animal health care and nutrition, such as ration formulation; calculating rations for cattle, swine, sheep, horses; ferrier skills; proper techniques for vaccination and immunization; and animal handling. The technician will also be trained in large animal anatomy, exploration of common large animal diseases, care for large animal injuries, and basic artificial insemination practices.

Favorable Opportunities

Veterinarians are in need of assistants to help with large animal health care delivery and on the large-scale livestock operations, particularly in remote areas of South Dakota where one veterinarian has to cover a wide service region. South Dakota Department of Labor statistics indicate a favorable future employment projection. The national CareerInfoNet shows a 16% job opening growth for animal caretakers/vet assistants over the next eight years. Individuals pursuing this option will have many job possibilities including employment in ag businesses, selling animal care products and in animal nutrition. South Dakota's CareerInfo website also lists ag occupations as one of the top 50 occupations with the most openings.

Recommended Background Courses

Although not required, the following courses would be beneficial to this course of study prior to attending Lake Area Technical Institute: Ag Courses, Biology, Anatomy, Science, Computer, English.

COURSE DESCRIPTIONS

AED 100 – Automated External Defibrillator (.5 credit) To prepare individuals in the workplace to provide care for breathing emergencies, perform cardiopulmonary resuscitation (CPR), and use an automated external defibrillator (AED) for victims of sudden cardiac arrest.

AG 100 – Soils (3 credits) Determination of properties of various soils and their suitability for agricultural uses. Hands-on soil sampling and testing are emphasized; also, development of proficiency in interpreting soil survey maps.

AG 102 – Crop Science (3 credits) A comprehensive review of the plant development cycle, from seedling to harvest-ready maturity. Appropriate environmental conditions, insect and disease control, harvesting, and storage are discussed. Profitable management is emphasized.

AG 106 – Animal Health I (2 credits) The causes and management/control of disease and poisoning are determined.

AG 158 – Farm/Ranch Records (2 credits) Application of standard financial procedures, using the computer to record, compile and complete typical financial records for farming operations.

AG 200 – Animal Nutrition (2 credits) A comprehensive class dealing with general principles of animal nutrition.

AGR 101 – Basic Animal Husbandry (4 credits) This course will teach the student how to properly handle and work large animals. Topics will include types of restraints, working facilities, dehorning, castration, along with animal rights.

AGR 103 – Breeding Practices (3 credits) This course will teach the student the various breeding practices used on large animals. Topics covered are heat detection, synchronization, herd reproductive health, and proper selection of sires. Artificial insemination (hands on) will be covered every other year.

AGR 110 – Animal Science (3 credits) The history and development of the livestock industry in South Dakota as well as selection and management of breeding stock, animal health, housing requirements and marketing strategies.

AGR 155 – Large Animal Supervised Occupational Experience (SOE) (4 credits) Students will be provided the opportunity to gain hands-on practical experience through internships with establishments who work with large animals such as veterinarians, ag-businesses and large herd operations.

AGR 170 – Dairy Science (2 credits) The history and development of the dairy industry in South Dakota as well as selection and management of breeding stock, animal health, housing requirements, and marketing strategies.

AGR 201 – Animal Medical Terminology (Veterinary) (2 credits) This course will familiarize the student with medical terminology used within the large animal field. The student will be able to understand, pronounce, and break down medical terms into their prefix, root, and suffix. The student will also be able to describe the major systems of the body, their organs, and function within the body.

AGR 203 – Animal Phlebotomy/Sample Collection (4 credits) This course will teach the student on the proper procedures used to collect blood, fecal, urine, respiratory, and necropsy samples from large animals. Also the student will learn how to use the various types of equipment used to collect these samples.

AGR 204 – Animal Health II (2 credits) Designed to familiarize students with animal diseases, health products and feed additives.

AGR 205 – Treatment of Animal Injuries (2 credits) This course will show the student how to properly care for injuries that might occur to animals. Topics will be signs to look for, proper cleaning, dressing, and care of injuries.

AGR 209 – Biologics and Pharmaceutical Administration (2 credits) This course will teach the student the proper injection sites and procedures used for large animals. Proper handling and storage of drugs will also be covered.

AGR 210 – Forages/Grasses (2 credits) Production and management of common forages and grasses; management of tame pastures and rangelands; and various aspects of grazing practices.

AGR 211 – Animal Anatomy (4 credits) This course will familiarize the student with the different parts of the animal body (cattle, swine, horse, sheep). Students will look at the skeletal, muscle, respiratory, digestive, and reproductive systems and identify them.

AGR 244 – Supervision (2 credits) Development of knowledge and skills in planning, organization, communication, motivation and leadership. An important course for anyone, especially in the business world.

AGR 250 – Computer Software Applications for Agriculture (2 credits) A review and evaluation of various software packages available today. Application of software to complete typical farm/ranch use exercises so that the student will be able to use a computer effectively to meet the needs of his/her own farm or ranch.

AGR 252 – Advanced Nutrition (2 credits) Advanced discussion of nutrition and its effects on livestock.

AGR 253 – Large Animal Supervised Occupational Experience (SOE) (4 credits) Students will be provided the opportunity to gain hands-on practical experience through internships with establishments who work with large animals such as veterinarians, ag-businesses and large herd operations.

CIS 102 – Windows Applications for Technicians (3 credits) Using a Windows-based microcomputer and related software, you will gain an understanding and basic operational knowledge about the Windows XP operating system, Microsoft Office word processing, and spreadsheets, presentation software, and publishing software. You will demonstrate this knowledge by scoring at least 80% on assignments, related objective, and performance tests.

HAZ 100 – Hazardous Materials Safety (.5 credit) Hazardous material covers identifying types of hazardous material, demonstrating personal protective equipment, and identifying blood borne pathogens.

Agriculture Electives (Choose Two)

AG 224 – Facilities (2 credits) Introduction to facility planning and design. Includes analysis of EPA regulation pertaining to on-farm fuel storage, chemical and fertilizer storage/handling, and livestock waste management.

AG 226 – Commodity Marketing (2 credits) Maximizing farm profit: Using the futures market; hedging; avoiding dangers of speculation; participating in the options market; developing a personal market strategy.

AGR 202 – Livestock Nutrition Problems (2 credits) Application of principles discussed in AGR 200: evaluation and formulation of suitable rations. Computers are used in this process.

To fulfill graduation requirements, students must select one course in each of the areas listed. Courses marked with an asterisk can be transferred directly to the university system under the terms of articulation agreements.

Behavioral Science

PSYC 100 – Psychology of Human Relations
PSYC 101 – General Psychology *

Communications

SPCM 101 – Fundamentals of Speech *
ENGL 101 – Composition *
COMM 101 – Contemporary Communication

Mathematics

MATH 100 – Applied General Math
MATH 101 – Intermediate Algebra
MATH 102 – College Algebra *

Social Science

ECON 101 – Economic Geography
ECON 105 – Leadership in the Global Workplace
ECON 201 – Principles of Microeconomics I *
ECON 202 – Principles of Macroeconomics II *
SOC 100 – Introduction to Sociology *