

COURSES

AGRICULTURE

- AG100** **0.0 UNITS**
- AG101 Agriculture Orientation** **1.0 UNIT**
Starting off in your college career is a new and exciting experience. An orientation to CCC is designed to set students up for success by facilitating the transition into college life. You will be exposed to a regional study of agriculture and will consider career opportunities for graduates in agriculture and related areas as well as examining the role of the agricultural college in the industry.
- AG103 Agriculture Workplace Communication** **1.0 UNIT**
Students will gain a basic understanding of Spanish pertaining to the agriculture industry. Students will acquire the skills necessary to speak the Spanish language as a form of communication for all aspects of the cattle feedlot industry.
- AG104 Feedlot Horsemanship** **1.0 UNIT**
Students will be able to incorporate the use of horses and low stress handling techniques of livestock in a feedlot setting. Basic skills such as opening and closing gates, pen riding, and moving cattle will be obtained by the end of the course.
- AG105 Ag OSHA Certification** **1.0 UNIT**
This course enables the student to receive their OSHA Certificate in agricultural equipment training so they are equipped and know how to safely operate equipment that is typically used on a daily basis within an agricultural operation.
- AG106 Principles of Agricultural Economics** **3.0 UNITS**
The principles of economics will challenge you to "think like an economist" in the context of agricultural issues; past, present, and future. You will become acquainted with the decisions that producers and consumers make in agricultural markets and the economic challenges of scarcity that they face. This understanding will lead to the discovery that markets will have in the production, distribution, and consumption of food and fiber in the U.S. economy.
- AG107 Crop Science (w/Lab)** **4.0 UNITS**
For success in the field of agronomy, you will find this course beneficial. Principles underlying the practices used in the culture of grain and forage crops are studied. Crop classification, structure, growth, and improvement are also discussed. In addition, crop response to environmental factors, soils, pests, and associated management practices are addressed. Laboratories will enable you to discuss management decisions on planting, harvesting, irrigation, production economics, and problem-solving.
- AG109 Farm Records & Accounts** **3.0 UNITS**
You will spend time learning the application of accounting concepts and principles to farms and other agribusiness firms. Cash and accrual accounting methods, whole-farm and enterprise analysis, income tax management, and electronic farm accounting technology are considered as well.
- AG117 Soils (w/Lab)** **4.0 UNITS**
Prerequisite: AG107/Crop Science; CH176/Fundamentals of Chemistry or CH177/Chemistry I. A strong foundation in the study of soils is paramount to a degree in Agronomy. An introduction to the fundamentals of the physical, chemical, and biological properties of soils is the focus. In addition, soil development, classification, distribution, and management are included.
- AG118 Marketing of Agricultural Products** **3.0 UNITS**
The practices and processes of marketing agricultural goods, cash and futures prices, and commodity marketing techniques are examined in this course. Attention is given to the market organization and price analysis, marketing functions, standards and grading, and specific marketing practices related to crops and livestock. Methods of price analysis and marketing strategies are developed.
- AG120 Beef Cattle Clipping and Handling** **2.0 UNITS**
Preparing cattle for show and exhibition is a lucrative skill that can be beneficial to anyone interested in cattle production. You will hone your skills of halter breaking, training hair, and clipping cattle through hands-on teaching. CCC calves are used in the class to be included in the annual CCC bull sale.
- AG121 Beef Cattle Clipping and Handling II** **2.0 UNITS**
Preparing cattle for show and exhibition is a lucrative skill that can be beneficial to anyone interested in cattle production. You will hone your skills of halter breaking, training hair, and clipping cattle through hands-on teaching. CCC calves are used in the class to be included in the annual CCC bull sale.
- AG124 Techniques of Livestock Selection** **2.0 UNITS**
Prerequisite: AG149/Principles of Animal Science. Focus is given to livestock selection and evaluation of cattle, hogs, sheep, and goats. You will gain an understanding of form and function as it relates to livestock selection. Time is spent learning descriptive terminology, evaluating structural correctness, body capacity, balance, and muscularity. You will also gain an in-depth understanding of genetic tools used in each species to aid in evaluation such as Expected Progeny Differences. REQUIRED FOR LIVESTOCK JUDGING TEAM MEMBERS.
- AG125 Techniques of Livestock Selection** **2.0 UNITS**
Prerequisite: AG149/Principles of Animal Science. Focus is given to beef selection and evaluation. You will gain an understanding of form and function as it relates to beef cattle selection. Time is spent learning structural correctness, body capacity, balance, and muscularity. You will also gain an in-depth understanding of genetic tools used in each species to aid in evaluation such as Expected Progeny Differences. In addition, the different beef breeds are evaluated for strengths and weaknesses.
- AG126 Principles of Livestock Nutrition** **3.0 UNITS**
Corequisite: AG 149/Principles of Animal Science. An introduction to basic livestock nutrition is the emphasis of this course. You will learn the basic anatomy of the digestive system and the process of nutrition. Time is spent learning the origin, chemistry, and feeding value of different feeds, the nutritional requirements of different livestock species, and the theory of practical economics for the maintenance and growth of livestock.

AG131 Range Management 3.0 UNITS

This course emphasizes the principles and practices of grass management to be utilized for resource sustainability, and environmental stewardship. You will gain experience in identifying regional grasses, forbes, and invader plant species. In addition, you will gain knowledge of pasture management practices designed for maximum production and will learn to calculate stocking rates.

AG149 Principles of Animal Science 3.0 UNITS

The basic principles of animal science are of utmost importance for students interested in a career in any segment of animal agriculture. You will explore the different major production systems of cattle, swine, sheep, poultry, and horses. The broad field of animal science requires knowledge of the national and world livestock industry, purpose and products of livestock, nutrition, genetics, selection, reproduction, animal health, animal husbandry, marketing, and management.

AG150 Principles of Animal Science Laboratory 1.0 UNIT

Prerequisite or Corequisite: AG149/Principles of Animal Science. Students are encouraged to enroll in the lab section while taking the lecture part of Animal Science as topics in lecture are discussed in a practical sense. Hands-on experience and learning in Animal Science is the emphasis of the laboratory. The CCC Animal Science Unit is utilized to learn feeding, basic care, animal handling, selection, and evaluation. In addition, you will gain knowledge of breeds of livestock, meat science, reproduction, and animal agriculture sustainability in a changing world.

AG151 Beef Cattle Science I 3.0 UNITS

You will learn to incorporate best practices in beef production; emphasizing breeding herd management for purebred and commercial phases of the beef cattle industry. Included is a study of selection, breeding, reproduction, nutrition, marketing and other management practices.

AG152 Introduction to Animal Health 1.0 UNIT

Prerequisite: AG149/Principles of Animal Science. Basic knowledge of good animal health is important for any livestock producer. You will learn anatomy and physiology as it relates to animal health. Also, time will be spent on immunology, quality assurance plans, common animal diseases, vaccines, and vaccinations, along with different types of therapeutic drugs and treatments.

AG153 Reproduction of Farm Animals 3.0 UNITS

Prerequisite: AG149/Principles of Animal Science. An in-depth study of reproduction for the various livestock species is the focus of this course along with an emphasis of all phases of the reproductive stages and efficiency of cattle, horses, sheep/goats, and swine. You will have the opportunity to learn male and female anatomy, disease and infertility, artificial insemination, endocrinology, fertilization, gestation, parturition, lactation, and growth.

AG154 Ultrasounding-Pregnancy Detection 2.0 UNITS

This course will enable the student to successfully pregnancy diagnose their own cattle or at an operation for whom they work in a beef production setting utilizing an ultrasonography machine. Students will learn the female reproductive structures and have the ability and confidence to be able to identify if the female is pregnant or non-pregnant, locate the fetus if present, and age the fetus.

AG157 Fundamentals of Hunt Seat Disciplines 1.0 UNIT

You will learn the fundamentals of the riding disciplines and apply these fundamentals to the skills on horseback.

AG158 Fundamentals of Western Disciplines 1.0 UNIT

You will learn the fundamentals of the riding disciplines and apply these fundamentals to the skills used on horseback.

AG162 Horsemanship for Horse Training III 1.0 UNIT

You will ride college and privately-owned horses at the college farm to attain the skills necessary to properly exercise and train horses to prepare for competition. Repetitive practice occurs to achieve the horsemanship skills covered in class. Instructor permission is required and the course fulfills a PE credit requirement. MANDATORY FOR EQUESTRIAN TEAM MEMBERS.

AG163 Horsemanship for Horse Training I 1.0 UNIT

You will ride college and privately-owned horses at the college farm to attain the skills necessary to properly exercise and train horses to prepare for competition. Repetitive practice occurs to achieve the horsemanship skills covered in class. Instructor permission is required and the course fulfills a PE credit requirement. MANDATORY FOR EQUESTRIAN TEAM MEMBERS.

AG165 Horsemanship for Horse Training 1.0 UNIT

You will ride college and privately-owned horses at the college farm to attain the skills necessary to properly exercise and train horses to prepare for competition. Repetitive practice occurs to achieve the horsemanship skills covered in class. Instructor permission is required and the course fulfills a PE credit requirement. MANDATORY FOR EQUESTRIAN TEAM MEMBERS.

AG167 Horsemanship for Horse Training IV 1.0 UNIT

You will ride college and privately-owned horses at the college farm to attain the skills necessary to properly exercise and train horses to prepare for competition. Repetitive practice occurs to achieve the horsemanship skills covered in class. Instructor permission is required and the course fulfills a PE credit requirement. MANDATORY FOR EQUESTRIAN TEAM MEMBERS.

AG168 Equine Management Technology I 4.0 UNITS

You will be involved in the daily management operations of the CCC Equine Unit in addition to acquiring specific management skills for the equine industry. You will learn health management, first aid, nutrition, and equine behavior in Tech I.

AG169 Equine Management Technology II 4.0 UNITS

Equine reproduction is the focus of Tech II. You will actively participate in foaling broodmares, breeding mares, collecting stallions, and processing the collection in the breedign lab at the CCC Equine Unit.

AG176 Horse Production 3.0 UNITS

You will gain an overview of the U.S. horse industry by covering equine technology and up-to-date management practices. You will explore and study breeds of horses along with a general overview of the following: genetics, anatomy and physiology, nutrition, reproduction, selection, marketing, business management, facilities and equipment, and health care.

- AG180 Feedlot Management Tech I 4.0 UNITS**
This course will enable the student to identify sick cattle and administrate appropriate treatment. In addition, the student will also be able to incorporate the use of horses and low stress handling techniques of livestock in a feedlot setting at the college farm. An introduction to the latest in feedlot technology will also be covered.
- AG205 Agricultural Finance 3.0 UNITS**
You will study, in-depth, financial analysis and the financial institutions which serve agricultural businesses. For each particular type of financial institution, the course will study its sources of capital, its general loan criteria used to evaluate loan requests, and its financial performance. For agriculture borrowers, this course will also examine their financial condition, their projected cash flow, and the importance of risk management. In addition, you will explore property appraisal and valuation, machinery cost management, financial and commodity markets, personal and business insurance, private and corporate farm ownership, and estate planning.
- AG208 Agri-Business Management Techniques 4.0 UNITS**
You will gain work experience and exposure to management responsibilities related to decision-making in business.
- AG209 Agricultural law 2.0 UNITS**
You will study the laws that govern agriculture in a practical sense to include estate planning, contracts, leasing, water rights, fencing rights, tortes, and personal liability for the producer and agribusiness. As part of the course, there will be guest lectures from regional attorneys; this is an informative-type course.
- AG226 Applied Livestock Nutrition 3.0 UNITS**
Prerequisite: AG126/Principles of Livestock Nutrition. The application of livestock feeding is explored in this course. Knowledge gained in AG126 is built upon so that you are able to be familiar with formulating and calculating diets for the various classes and species of farm livestock. Special emphasis is given to anatomical and physiological differences as they affect the use of particular feedstuffs for each species. Equal class time is devoted to ruminant and monogastric species.
- AG232 Beef Management Technology I 4.0 UNITS**
This course enables the student to identify sick cattle and administration of appropriate treatment. In addition, the student will also be able to incorporate low stress handling techniques of livestock in a feedlot setting at the college farm. Students will also formulate feed rations and operate large equipment needed for feeding cattle.
- AG233 Beef Management Technology II 4.0 UNITS**
This course enables the student to identify signs of calving and assist with difficult situations. In addition, the student will also be able to identify and manage different cattle production seasons such as calving, breeding, and weaning in a production setting. Students will also be able to formulate feed rations and operate large equipment needed for feeding cattle in a dry lot situation.
- AG236 Farm Welding 2.0 UNITS**
This course will enable students to apply welding processes including Arc, Oxy-Acetylene, TIG and MIG are taught in this course. Students learn to weld and cut the common metals used in agriculture. No previous welding experience is required. Students will also learn basic maintenance and repair large equipment typically used in the ranch and feedlot industries.
- AG240 Market Beef Production 3.0 UNITS**
This course enables the student to gain a better understanding of all the market beef production platforms. Student gains knowledge in management and marketing strategies from birth to consumption.
- AG245 Advanced Livestock Judging 2.0 UNITS**
Prerequisite: AG124/Techniques of Livestock Selection. Sophomore members of the livestock judging team are encouraged to take this course. An in-depth study of the principles of livestock selection and judging, analysis of animals, terminology, and procedures for giving reasons are the focus to become competitive in the livestock judging arena.
- AG246 Advanced Livestock Judging II 2.0 UNITS**
Prerequisite: AG245/Advanced Livestock Judging. Sophomore members of the livestock judging team are encouraged to take this course. An in-depth study of the principles of livestock selection and judging, analysis of animals, terminology, and procedures for giving reasons are the focus to become competitive in the livestock judging arena.
- AG247 Animal Breeding 1.0 UNIT**
Equine breeding is learned through hands-on practice at the CCC Equine Unit. This course emphasizes collecting a stallion and processing the collection in the breeding lab. You will learn mare anatomy and sterile artificial insemination of the mare using current breeding techniques.
- AG249 Artificial Insemination 2.0 UNITS**
This short course will enable the student to successfully incorporate estrous synchronization and artificial insemination methods into a beef production setting. The course also emphasizes the anatomy of the cow and artificial insemination procedures. Emphasis is placed on semen handling, breeding management and techniques.
- AG251 Applied Beef Practices 3.0 UNITS**
This course provides on-the-job training concerning various aspects of beef production. Students become involved with basic management techniques and practices. This course enables students a structured learning experience and is offered as an extension of the regular curriculum. This course requires a minimum of six (6) hours work experience at the college beef cattle unit.
- AG252 Beef Management Technology III 4.0 UNITS**
This course enables the student to apply hands-on training concerned with various phases of beef management. The student gets involved in specific management operations and decisions in addition to acquiring certain skills. Along with the instructor, students organize and host a production bull sale.

- AG253 Beef Management Technology IV 4.0 UNITS**
This course enables the student to gain on-the-job training related to specific areas of beef management. Students are assigned certain tasks associated with management of the cow herd and cattle marketing aspects of the Farm and Ranch Program. Along with the instructor, students will organize and host a production bull sale.
- AG259 Equine Reproduction 1.0 UNIT**
Prerequisite: AG153/Reproduction of Farm Animals or instructor's permission. You will study reproductive processes and management techniques in the horse including semen collection and evaluation, artificial insemination, management of mares and stallions, and current research.
- AG260 Equine Nutrition 1.0 UNIT**
An understanding of nutrition is key for any horse owner. You will learn the basic nutrients, digestion and absorption, anatomy of equine, evaluation of feedstuffs, procedures in ration formulation, feed processing, factors affecting feed intake, and feeding horses.
- AG261 Equine Anatomy 1.0 UNIT**
Prerequisite: AG176/Horse Production or instructor's permission. You will learn the functional anatomy of the horse. You will also gain an understanding of the structural basis for locomotion and you will be able to properly communicate in regards to organs of locomotion, digestion, respiration, and reproduction.
- AG263 Beginning Equine Training 3.0 UNITS**
Prerequisite: Instructor permission required. You will learn the basic training of yearling and two-year-old horses. You are assigned one or more horses to train from groundwork including first saddling and riding through basic maneuvers such as stops, backing, circles, and side passes.
- AG265 Advanced Equine Training 3.0 UNITS**
Prerequisite: AG263/Beginning Equine Training or instructor's permission. You will train two-year-old and older horses from basic maneuvers through advanced maneuvers such as rollbacks, spins and lead changes. English horses may be started over fences and western horses may be started on cattle.
- AG268 Equine Management Technology III 4.0 UNITS**
You will gain on-the-job training at the CCC Equine Unit related to specific areas of horse production. You are assigned certain tasks associated with management operations and decisions of a working equine facility. You will be introduced to judging stock-type horses.
- AG269 Equine Management Technology IV 4.0 UNITS**
You will gain on-the-job training at the CCC Equine Unit related to specific areas of horse production. You are assigned certain tasks associated with management operations and decisions of a working equine facility. You will have an opportunity to complete riding instruction certification through the Certified Horsemanship Association. Discussion related to barn management and risk management of facilities takes place in this course.
- AG270 Equine Massage and Alternative Therapies 3.0 UNITS**
This course will enable the student to learn the basics of equine massage and be introduced to alternative therapies used in prevention of injury or rehabilitation of horses. This course emphasizes massage techniques to aid recovery of muscle, tendon, and ligament strains or injuries.
- AG290 Agriculture Equipment Safety 1.0 UNIT**
This course enables the student to apply safe operation techniques for all equipment used on the college farm on a daily basis and in an agricultural career.
- AG293 Agriculture Entomology 3.0 UNITS**
This course enables the student to gain an insight into insect identification and control. The morphology, physiology and ecology of insects are essential aspects that are covered in this course. It also includes the insect's life cycle, anatomy, classification and behavior in relationship to plant and animal control.
- AG299 Directed/Independent Study: Agriculture 4.0 UNITS**
Prerequisite: Approval of instructor. You will have a structured learning experience as an extension of the regular curriculum. It is intended to allow you to broaden your comprehension of the principles of, and grasp of, competencies associated with selected programs. Its purpose is to supplement extant courses with individualized, in-depth learning experiences.