AGRICULTURE (AG)

AG 1110. Careers in Agriculture.
This course is an introduction to careers available in the broad field of agriculture including an overview of personal and career qualifications needed for workplace success
1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Grade Mode: Standard Letter
TCCN: AGRI 1131

AG 1445. Basic Animal Science.
An introductory course designed to acquaint students with the importance of the livestock industry. A study of the types and breeds; market classes and grades of beef cattle, swine, sheep, goats, horses, and poultry; attention will be given to breeding, judging, care, and management
4 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 1419

This course prepares students for professional leadership and service, with emphasis on application of leadership principles. The course will focus on guiding students in developing enhanced leadership skills through group and individual leadership enhancement projects and topic research. Prerequisite: AG 1110
3 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 2317

AG 2373. Introduction to Agricultural Engineering.
An introductory course designed to acquaint students with a wide range of concepts, principles and applied technologies in agricultural engineering. A problem solving course
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 2303

AG 2379. General Horticulture.
A survey of the general field of horticulture including general areas of employment
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 1315

AG 2383. Introduction to Agricultural Economics.
The role of agriculture in the general economy; the study of basic economic concepts with their application to the agricultural firm; the structure and operation of the marketing system; the functional and institutional aspects of agricultural finance; international trade; and government farm programs
3 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 2319

AG 2390. Computer Applications in Agriculture.
Introduction to computers and computer technology; operation and application of the computer in production agriculture and agricultural business, services and industries. Includes characteristics of computer hardware and software, accessing and using the computer in agriculture
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter
TCCN: AGRI 1309

AG 3301. Genetics of Livestock and Plant Improvement.
Fundamental principles of genetics and their application to higher plants and animals. The physical basis of Mendelian inheritance, expression and interaction of genes, gene frequency, linkage, sex linkage, inbreeding, line breeding, and crossbreeding as applied to selection indices for livestock and plants. Prerequisites: AG 1445; BIO 1330 and BIO 1130. (WI)
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter
AG 3302. Herbaceous Plant Materials. 
This course will include the identification, selection, use, and management of annuals, perennials, herbs, and ornamental grasses in the landscape. Each student will learn irrigation, fertilization, pruning, and other cultural needs of such plants. The laboratory will complement lecture 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter

AG 3304. Propagation of Horticultural Plants. 
Principles and practices of propagating ornamental plants, vegetables, and fruits by sexual and asexual methods including germination of seed, layerage, graftage, division, cuttage, bulbs, corms, and other vegetative plant structures. Study of physical, physiological and environmental factors affecting propagation of ornamental plants 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter

AG 3305. Woody Plant Materials for Outdoor Landscapes. 
Study of woody plant material including fruit and ornamental trees, shrubs, and ground covers and their identification, nomenclature, and use in the planting and development of home landscapes 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter

AG 3306. Flowers and Plants for Interior Design. 
Study of flowers, cut flowers, foliage and blooming pot plants to enhance the interior design of homes and businesses including their identification, cultural requirements, uses, diagnoses and corrective measures of disorders. Basic principles of flower arrangement and the preparation of floral and plant decoration as used in interior design. (WI) 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required | Writing Intensive 
Grade Mode: Standard Letter

AG 3308. Organic Gardening. 
Study of principles and practices that involve the production of vegetables by organic methods. Fertility and irrigation; as well as weed, insect and disease control by practices will be covered 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Grade Mode: Standard Letter

AG 3310. Agriculture Power and Machinery Technology. 
This course covers the principles of 2 stroke and 4-stroke cycle engines, ignition, and combustion types including injection systems. Components including power and power transmissions and hydraulic systems will also be addressed. Prerequisites: AG 2373, and MATH 1315, MATH 1319, MATH 2321, or MATH 2471 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter

AG 3314. Animal Health and Disease Control. 
A course designed to enable the animal science student to understand basic veterinary principles as applied to prevention of disease in domestic livestock. Common diseases of livestock are considered, with emphasis on sanitation and modern preventative methods concerned with keeping livestock healthy. Prerequisite: AG 1445 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Grade Mode: Standard Letter

AG 3317. Farm Management. 
Tools and techniques which are basic to the study of farm organization and decision making, the wise allocation of factors of production, the keeping of records, and income tax management. Prerequisites: AG 2383, AG 2390; MATH 1315 or MATH 1319 
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter

AG 3318. Agricultural Business Management. 
This course introduces institutions and functions of agribusiness. The institutional structure of agribusiness such as feed, farm machinery and equipment, farm chemicals, financial institutions and private and public agri-services will be delineated. Various agribusiness functions such as organizational behavior and financial, market and human resource management will be discussed. Prerequisites: AG 2383, AG 2390; MATH 1315, MATH 1319, MATH 2321, or MATH 2471 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Grade Mode: Standard Letter

This course presents the food and fiber system from an international perspective. Analysis of food production and consumption patterns under different world economic systems, causes of surpluses and shortages throughout the world; the role of trade in solving food and agricultural problems. Global outlook and situation for food and fiber. (MULT) 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Course Attribute(s): Multicultural Content 
Grade Mode: Standard Letter

AG 3321. Range Management. 
Practical problems met in managing native pastures and rangelands. Attention to determining range condition and proper stocking rates, methods of handling livestock on the range, range reseeding, brush control, and poisonous plants. The ecological and physiological response of range vegetation to grazing. Prerequisite: AG 1445 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Grade Mode: Standard Letter

Principles of animal nutrition with emphasis on digestion, absorption, metabolism, and function of nutrients; estimation of feedstuff nutritive value; and requirements of animals. Prerequisites: CHEM 1341, CHEM 1141 and BIO 1330 BIO 1130. (WI) 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Course Attribute(s): Writing Intensive 
Grade Mode: Standard Letter

AG 3329. Economic Entomology. 
A study of the most common insects of field crops, fruits, and vegetables; life history, methods of attack, damage, and means of preventing and controlling. Collection and mounts of insects will be made 
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. 
Course Attribute(s): Lab Required 
Grade Mode: Standard Letter
Basic and fundamental principles of nutrition for ruminant and non-ruminant wildlife with emphasis in North American and African wildlife. Attention will be given to digestive physiology and anatomy, feed sources, forage resources, and nutrient requirements. Prerequisite: AG 1445 or BIO 1330 and BIO 1130

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing|Lab Required
Grade Mode: Standard Letter

AG 3331. Reproduction in Farm Animals.
An examination of the anatomy and physiology of reproductive systems of livestock of economic importance. Attention is given to reproductive failure and disease. The laboratory includes pregnancy testing, semen collection and evaluation, artificial insemination techniques, and evaluation of breeding records. Prerequisites: AG 1445 and 3301, or BIO 2450

3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3334. Livestock Selection and Evaluation.
Detailed consideration of the factors involved in the selection and evaluation of beef cattle, sheep, swine, rabbits, goats, and chickens. Emphasis will be placed on the care, grooming and exhibition of livestock projects. Prerequisite: AG 1445; junior classification

3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3335. Agricultural Marketing and Sales.
A study of the food marketing system and farm input sales; includes the functional systems approach that integrates the agricultural input industries into a discussion of food marketing; takes a micro approach to the development of marketing management skills needed in agribusiness; and provides a critical outlook on issues ranging from inputs to final food products. Prerequisites: AG 2383; MATH 1315 or MATH 1319. (WI)

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter

AG 3332. Quantitative Methods in Agricultural Economics.
Principles involved in collection, tabulating and analyzing agricultural data. Topics include sampling procedures, questionnaire development, descriptive analysis of data, correlation, prediction and forecasting and tests of significance. Simple computer programs will be stressed for class exercises during the course. Prerequisite: MATH 1315, MATH 1319, MATH 2321, or MATH 2471

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3333. Agricultural Structures and Environment.
Principles and practices associated with structural components, selection, materials of construction, heat and moisture control, and the environmental issues of waste management systems; a problem solving course. Prerequisites: MATH 1315, AG 2373 and AG 2390

3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3375. Management of Agricultural Machinery and Equipment.
This course addresses the optimization of the equipment phases of agricultural production and processing. Emphasis will be placed on management and decision making principles concerned with the efficient selection, operation, repair, maintenance, and replacement of machinery and equipment. Prerequisites: AG 2373, AG 2390, CHEM 1341, CHEM 1141, and MATH 1315, MATH 1319, MATH 2321, or MATH 2471

3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3426. Soil Science I.
This course introduces fundamental principles of soil science to acquaint the student with some physical, chemical, and biological properties of the soil. Prerequisites: CHEM 1341 and CHEM 1141; and AG 2313 or AG 2379 or BIO 1330

4 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

AG 3427. Soil Science II.
Management of soils as pertaining to their place in the environment. Special emphasis will be given to the role of soil in conventional agricultural systems, natural resource systems, waste management systems, and reclaimed and artificial soil systems. Prerequisite: AG 3426. (WI)

4 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required|Writing Intensive
Grade Mode: Standard Letter

AG 3455. Land Surveying.
Engineering practices used in plane and geodetic surveying including differential and profile leveling, topographic, land, boundary and cadastral, and construction surveys. Laboratory exercises include use of dummy levels, transits and total stations, and GPS (Global Positioning System) total station with RTK (real time kinematic). Planimeters and stereoscopes are used in analyzing aerial maps. Prerequisites: MATH 1315 or MATH 1317 or MATH 1319; AG 2373 and AG 2390

4 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required|Time Conflicts Permitted
Grade Mode: Standard Letter

A course for advanced undergraduates to study subject matter of special interest in agriculture. Problems in agronomy, economics, animal science, plant science, and farm mechanics may be selected. Prerequisite: Approval by department chair. May be repeated for up to three semester hours credit. Course may not be taken for graduate credit. (WI)

1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing|Dual Enrollment Permitted|Writing Intensive
Grade Mode: Standard Letter

AG 4212. Program Building.
This course focuses on program and curriculum development in agricultural education settings. Primary course elements will include determining program and curriculum goals and objectives, implementing the program, and curriculum evaluation. Corequisite: AG 4343

2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter
AG 4300. Greenhouse and Nursery Management.  
Planning greenhouses for commercial and home use; plant-nursery layouts. Study of the physical and economic factors affecting the production of plants in the greenhouse and other forcing structures, and in the field; management techniques used in the production and marketing of greenhouse and nursery plants. (WI)  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required|Writing Intensive  
Grade Mode: Standard Letter  

AG 4302. Fruit and Vegetable Crop Production.  
Factors influencing small-fruit and tree-fruit and vegetable crop production in the field including root stocks, varieties, soil, planting, transplanting, irrigating, fertilizing, pruning, insects, diseases, nematodes, weeds, chemicals, harvesting, storing, and marketing; greenhouse production of certain vegetables. Prerequisite: AG 2313 or AG 2379. (WI)  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required|Writing Intensive  
Grade Mode: Standard Letter  

AG 4304. Landscape Management.  
To acquaint students with the practices and techniques used in professional landscape construction and management, and with the scientific and technical basis for such practices  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required  
Grade Mode: Standard Letter  

AG 4305. Landscape Design.  
Landscaping combines elements of art and science to create functional, aesthetically pleasing outdoor space. This class helps students develop knowledge of design elements and principles. Students learn site and client analysis techniques for critiquing landscapes. Students learn to communicate ideas through the planning and drawing of landscape plans  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required  
Grade Mode: Standard Letter  

AG 4307. Professional Development in Agriculture.  
This course requires students to select a topic of current interest appropriate to the major. Critical analysis of the situation including both positive and negative aspects will be encouraged. Findings will be presented in both oral and written form. (Capstone Course). Senior Classification required to enroll  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Course Attribute(s): Writing Intensive  
Grade Mode: Standard Letter  

AG 4310. Agricultural Internship.  
This course integrates professional and academic experience through internship with an external employer. The internship is designed to provide actual work experience, observation and analysis in the student’s chosen career field. Prerequisites: Junior or Senior standing and a GPA of 2.75 or higher  
3 Credit Hours. 0 Lecture Contact Hours. 6 Lab Contact Hours.  
Course Attribute(s): Exclude from 3-peat Processing  
Grade Mode: Standard Letter  

AG 4311. Instructional Methods for Career and Technology Educators.  
An analysis of the instructional techniques, strategies and methods appropriate to the effective teaching of career and technology subjects. Teaching special populations and teaching in multicultural environments will be addressed. To be taken the Fall semester before student teaching  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required|Writing Intensive  
Grade Mode: Standard Letter  

AG 4325. Feeds and Feeding.  
Study of feedstuffs used in livestock enterprises. Application of basic nutrients to the needs of different species of livestock. Formulating rations, methods of feeding, feed control laws, and feed investigation. Prerequisites: AG 1445; CHEM 1341, CHEM 1141; BIO 1330, BIO 1130  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required  
Grade Mode: Standard Letter  

AG 4326. Advanced Animal Science-Ruminants.  
The application of scientific and technological advances to production and management in ruminant animal production and management. Prerequisite: AG 1445. (WI)  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Course Attribute(s): Lab Required|Writing Intensive  
Grade Mode: Standard Letter  

Application of basic principles in the production and management of nonruminant animals. Scientific and technological advances with emphasis on overall management, health care, nutrition, genetics, physiology, and marketing of nonruminant animals. Prerequisite: AG 1445. (WI)  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Course Attribute(s): Writing Intensive  
Grade Mode: Standard Letter  

AG 4330. Food Technology: Processing Meats.  
Evaluation and grading of carcasses; wholesale and retail cuts of beef, pork, lamb, and poultry. Emphasis on quality controls, testing of finished products that have been frozen, cured, fried, pickled, and canned. Prerequisites: AG 1445, BIO 1330, 1130 and CHEM 1341, 1141; or consent of instructor  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required  
Grade Mode: Standard Letter  

AG 4343. Organization and Management for Laboratory Programs.  
This course examines instructional programs involving laboratory equipment and facilities. Curriculum, teaching methods, equipment and facility management practices including various aspects of safety, tool management, inventory and security are emphasized along with facilities layout planning. Must be taken in last semester of program. Co-requisites: AG 4212  
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.  
Course Attribute(s): Lab Required  
Grade Mode: Standard Letter
**AG 4361. Agriculture Electric and Mechanical Systems.**
Electrical fundamentals applied to agricultural production and processing. Circuits, power, energy, wiring design, and motor fundamentals; selection, installation and operational characteristics. Sensors and control devices including switches, relays, timers, and circuit breakers will be studied. Prerequisite: AG 2373

3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Course Attribute(s): Lab Required
Grade Mode: Standard Letter

**AG 4362. Animal Nutrition.**
This course is an advanced study of the utilization and requirements of minerals and vitamins in farm and ranch animals. It emphasizes ruminant and non-ruminant mineral and vitamin metabolism and utilization. The utilization of specific minerals and vitamins by different species will be used to explain and predict subsequent performance

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4363. Agricultural Resource Economics.**
This course introduces economic concepts and institutional factors relating to the use of agricultural resources such as land, air, water, energy, space, etc. Emphasis is on the conservation of resources and the environmental interactions resulting from the use of natural resources for agricultural production. (WI) Prerequisite: AG 2383, MATH 1315 or MATH 1319 or MATH 2321 or MATH 2471

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Standard Letter

**AG 4370. Special Problems in Technical Agriculture.**
Special problems will be selected to meet the needs of the individual student. May be repeated (once) for additional credit when the problem differs

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4371. International Horticulture.**
The purpose of this program is to introduce students to the English culture and way of life, as well as England's historic role in Horticulture, past and present. Students will intensely study from the following four horticultural fields: Ornamental Horticulture, Landscape Design, Vegetables/Fruit Crops, and Vineyards and Hops. The program includes basic instruction in English history, as well as lectures and field trips

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing|Topics
Grade Mode: Standard Letter

**AG 4371U. Anatomy & Physiology of livestock.**
A course examining the external and internal systems of livestock. Skeletal anatomy, cell physiology and biological systems will be explored, with emphasis on livestock. Prerequisite: AG 1445

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing|Topics
Grade Mode: Standard Letter

**AG 4372. Animal Science 1.**
Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4373. Agriculture Irrigation Technology.**
This course teaches the principles associated with water management practices in maintaining soil productivity and the influence of water management on environmental quality. Emphasis will be placed on the selection and layout of irrigation and drainage systems, waste management systems, and the impact on the environment. Prerequisite: AG 2373

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4374. Animal Science 1.**
Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4375. Agriculture Irrigation Technology.**
This course teaches the principles associated with water management practices in maintaining soil productivity and the influence of water management on environmental quality. Emphasis will be placed on the selection and layout of irrigation and drainage systems, waste management systems, and the impact on the environment. Prerequisite: AG 2373

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4376. Animal Science 1.**
Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4377. Agriculture Irrigation Technology.**
This course teaches the principles associated with water management practices in maintaining soil productivity and the influence of water management on environmental quality. Emphasis will be placed on the selection and layout of irrigation and drainage systems, waste management systems, and the impact on the environment. Prerequisite: AG 2373

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4378. Animal Science 1.**
Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4379. Agriculture Irrigation Technology.**
This course teaches the principles associated with water management practices in maintaining soil productivity and the influence of water management on environmental quality. Emphasis will be placed on the selection and layout of irrigation and drainage systems, waste management systems, and the impact on the environment. Prerequisite: AG 2373

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4380. Agricultural Finance.**
This course introduces finance and financial problems faced by agribusiness managers. The subject matter includes financial analysis, planning, and control; capital budgeting; capital structure, liquidity, and risk management; and financial markets. Prerequisite: AG 2383; MATH 1315 or MATH 1319 or MATH 2321 or MATH 2471; ACC 2361

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 4381. Student Teaching in Agricultural Science and Technology.**
Planning for teaching agricultural science in selected schools in Texas. Course to be taken in final semester. Senior classification required to enroll

6 Credit Hours. 0 Lecture Contact Hours. 6 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Credit/No Credit

**AG 4681. Student Teaching in Agricultural Science and Technology.**
Planning for teaching agricultural science in selected schools in Texas. Course to be taken in final semester. Senior classification required to enroll

6 Credit Hours. 0 Lecture Contact Hours. 6 Lab Contact Hours.
Course Attribute(s): Writing Intensive
Grade Mode: Credit/No Credit

**AG 5360. Advancements in Animal Science.**
Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 5361. Advanced Animal Science: Minerals and Vitamins in Animal Nutrition.**
This course is an advanced study of the utilization and requirements of minerals and vitamins in farm and ranch animals. It emphasizes ruminant and non-ruminant mineral and vitamin metabolism and utilization. The utilization of specific minerals and vitamins by different species will be used to explain and predict subsequent performance

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 5370. Special Problems in Technical Agriculture.**
Special problems will be selected to meet the needs of the individual student. May be repeated (once) for additional credit when the problem differs

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

**AG 5426. Soil Health and Development.**
This course focuses on the fundamental topics of soil health and development. These fundamentals include pedogenesis, mineral composition, tillage practices, soil ecosystem and sustainability, soil biology and soil physics

4 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Grade Mode: Standard Letter