AGRICULTURAL SCIENCES (AGRI)

AGRI 5064. Agricultural Internship. 1-6 Hours.
A directed study utilizing industry to develop an understanding of agricultural production and management principles. Course Equivalents: AGRI 5364 .

AGRI 5096. Independent Study. 1-3 Hours.
Students engage in arranged, advanced experiential learning and professional activities through the practical application of agricultural skills and knowledge specific to their individual needs and goals. The topic of study is mutually selected and approved by the student and Agricultural Sciences faculty. Variable Credit (1 to 3).
Prerequisite: Departmental Approval.

AGRI 5300. Advanced Fusing Metals & Non-Metals. 3 Hours.
Students explore principles and techniques of bonding and fusing metallic materials by the electric and oxyacetylene processes. Students study fluxes, chemicals, and oxidants used in joining metal as well as the joining of non-metallic materials by mechanical and chemical means.

AGRI 5310. Mechanized Harvesting & Handling Agricultural Products. 3 Hours.
Students study the fundamentals of selection, service, and operation of agricultural harvesting machines as well as the analysis and development of mechanical systems to feed and care for livestock. In addition, storage and handling facilities for agricultural products are discussed.

AGRI 5330. Advanced Rural Utilities. 3 Hours.
Student study the selection and use of electrical equipment as related to efficiency and economy in agricultural production, processing and storage of feeds, forage crops and grain in connection with livestock enterprises.

AGRI 5337. Behavior & Management of Domestic Animals. 3 Hours.
Students study behavior associated with domesticated animals. The effects of selective breeding, physical and social environments, and the developmental stage on social organization are studied. Additionally, aggressive behavior, sexual behavior, productivity, and the training of domestic animals are examined. Note: Students who have taken ANSC 4337 may not take AGRI 5337.
Prerequisite: Graduate Standing.

AGRI 5340. Advanced Animal Growth & Performance. 3 Hours.
This course is an advanced study of physiological and endocrine factors affecting growth and performance of domestic animals. The course may include the study of meat animal growth and developmental processes as they affect body and carcass composition, carcass quality and retail value. NOTE: Student who have taken ANSC 4310 may not take AGRI 5340.
Prerequisite: Graduate standing.

AGRI 5341. Contemporary Animal Agriculture Issues. 3 Hours.
Students investigate contemporary issues in animal agriculture and the food/meat industry. Primarily using in-depth discussion and debates, students analyze issues from the standpoint of producers, consumers, processors, and societal forces. This course allows students to explore differing viewpoints on an issue and prepare them to encounter these issues in their professional career.

AGRI 5350. Advanced Principles of Livestock Management. 3 Hours.
Students engage in a survey of current knowledge and concepts of beef production with emphasis on the stocker/feedlot segment. Includes feeding, management, marketing and disease control of stocker and feedlot cattle.

AGRI 5351. Agricultural Biosecurity. 3 Hours.
Students study the potential spread and prevalence of contagious organisms, reproductive diseases and contaminants in the agriculture, food, fiber, and natural resource industries. Concepts dealing with isolation, resistance, sanitation, containment, transportation, and food safety issues and potential economic impact to the agricultural industry and others are major topics. Note: Students who have taken AGRI 4350 may not take AGRI 5351.
Prerequisite: Graduate Standing.

AGRI 5360. Contemporary Agricultural Business Issues. 3 Hours.
Students analyze and discus current issues in agricultural business with appropriate principles and theories. Issues may include marketing, management, finance, policy, international, legal and ethical topics. Student participation is expected via reports throughout the semester or term reports.

AGRI 5361. Agricultural Policy. 3 Hours.
Students engage in an advanced analysis of government policies and programs important to agriculture. Topics may include: the policy making process and leaders, interest groups, organization and functions of federal and state agencies, policies relevant to production agriculture and natural resources, rural development, consumer and food safety, international marketing and food distribution.

AGRI 5362. Principles of Crop Protection. 3 Hours.
Students study the diagnosis, epidemiology, and control of plant pests. Causative and limiting factors are stressed. Designed for prospective or practicing teachers and technicians in the agro-chemical industry or in federal or state plant pest control agencies.

AGRI 5369. Special Topics in Advanced Agriculture. 3 Hours.
Students examine advanced special topics/issues and (or) subject matter in the field of Agricultural Science. The sub-divisional fields offered are: Agriculture, Animal Science, Agricultural Business, Horticulture and Crop Science, and Agricultural Mechanization. This course may be repeated as topics and subject matter change.

AGRI 5370. Food and Fiber Crops. 3 Hours.
Students study traditional plant breeding techniques and an overview of contemporary crop improvement methods. The physiology, adaptation, classification, taxonomy, and utilization of major crop species used for production of food and fiber are covered. Genetic and environmental influences on crop quality are discussed.

AGRI 5371. Agricultural Safety & Health. 3 Hours.
Students examine the hazards and necessary safety precautions associated with the food, fiber, natural resources and agricultural industry. Control strategies are explored, and prevention methods identified. Hazards examined include machinery, livestock, controlled spaces, pesticides, and other issues common to the food, fiber, natural resources, and agricultural industry. Note: Students who have taken AGRI 4371 may not take AGRI 5371.
Prerequisite: Graduate Standing.

AGRI 5374. Agricultural Statistics. 3 Hours.
This course explores applications of statistical methods for making interpretations of qualitative and quantitative data in agricultural research. Topics include sampling and randomization, correlation and regression, methods of inference for means and proportions, and design of experiments. Course Equivalent: STAT 5375.

AGRI 5379. Advanced Equine Nutrition. 3 Hours.
This course is an advanced review of the equine digestive system regarding anatomy, physiology, digestive processes, nutrient requirements, feedstuffs, management, and health care. NOTE: Students who have taken EQSC 4379 may not take AGRI 5379.

AGRI 5386. Capital Management in Agricultural Business. 3 Hours.
Students are provided an in-depth understanding of capital marketing, capital budgeting, financial planning, and appraisal principles important in the field of agribusiness.

AGRI 5394. Applied Horticultural Science. 3 Hours.
Students explore the identification, selection, and use of plants to improve the human environment as well as evaluate problems and create solutions to environments where plants and human interact. In addition, students focus on the soil-water-plant relationship of ornamental plants.

AGRI 5397. Animal Diseases & Public Health. 3 Hours.
Students study diseases shared in nature between animals and man. Emphasis is placed on how these diseases exist in natural environments, modes of transmission, and methods of control and prevention. Students explore infectious agents and the clinical signs that they cause in both humans and animals. Note: Students who have taken ANSC 4398 may not take AGRI 5397.
Prerequisite: Graduate Standing.

AGRI 5398. Economics Of Agricultural Production. 3 Hours.
Students explore agricultural production principles applied to the use of resources; cost analyses of production enterprises; linear programming of enterprises for maximizing returns; elements of depreciation schedules; evaluation for income tax purposes.

AGRI 6099. Thesis. 1-3 Hours.
In addition to the preliminary study of the techniques of research, this course involves completion of a bibliography, organization of material, selection of a suitable problem, a digest of related literature, selection of appropriate procedures, formulation of a plan of investigating and reporting, collection and organization of data, and the writing of the thesis. Variable Credit (3 hrs first semester; 1 hour subsequent semesters). Grade is either Credit or No Credit. Course Equivalents: AGRI 6399 .

AGRI 6140. Graduate Seminar. 1 Hour.
This course is designed to provide students a forum for presentation of their graduate project and to provide an opportunity for faculty to present seminars relative to contemporary issues in agriculture. The project is an agreement between student and his/her committee. Course cannot be repeated. Grade is either Credit or No Credit.
Prerequisite: AGRI 5375 or STAT 5360.

AGRI 6350. Techniques & Interpretation of Agricultural Research. 3 Hours.
A course designed to develop the competencies needed to interpret and utilize agricultural research. Topics will include: the philosophy of the scientific method, formats for agricultural research data, interpretation of data, and application of information to specific situations.
Prerequisite: STAT 5360.

AGRI 6398. Thesis. 3 Hours.
In addition to the preliminary study of the techniques of research, these courses involve completion of a bibliography, organization of material, selection of a suitable problem, a digest of related literature, selection of appropriate procedures, formulation of a plan of investigating and reporting, collection and organization of data, and the writing of the thesis. Grade is either Credit or No Credit.