2. Students must request specific information concerning the program from the department office.
3. Upon admission, students should see the graduate coordinator for assistance in program planning, selection of graduate adviser, and selection of a thesis committee.
4. To progress through the graduate program, the student must do the following:
   a. Maintain a minimum 3.0 GPA
   b. Complete all prerequisite coursework
   c. Attain classified standing
   d. Meet university graduate writing requirement by passing the writing component of AGRI 220 (contact the department office or the graduate coordinator for more information)
   e. File for advancement to candidacy
   f. Complete the program requirements
   g. File a master's thesis committee assignment form
   h. Formally present and defend the thesis research results or pass a comprehensive examination
5. Advancement to candidacy requires the completion of 9 program units in residence (minimum GPA of 3.0), meeting the university graduate writing skills requirement, departmental requirements, and filing a petition of advancement to candidacy no later than one semester prior to enrollment in thesis and by the deadline.
6. Thesis students may apply a maximum of 2 units of independent study to the master's program.
7. A maximum of 9 units of 100-level courses may be used to meet degree requirements.
8. See *Division of Graduate Studies* in this catalog for university requirements.

COURSES

Note: Active immunization against tetanus (available through Student Health Services) is a prerequisite for registration in any laboratory course in agriculture and for any student employment within the University Agricultural Laboratory.

Note: Cost to the student of extended field trips varies each semester depending upon itinerary. The student should ask the course instructor.

Animal Science Principles (ASCI)

ASCI 1. Introduction to Animal Science (3)
Overview of the livestock and poultry industry; types and breeds, world distributions, foods and products from farm animals, reproduction, genetics, nutrition, and marketing. (2 lecture, 2 lab hours)

ASCI 35. Feeds and Feeding (3)
Prerequisite: ASCI 1 (may be taken concurrently). Principles of nutrition; nutrients and their metabolism; comparison of qualitative nutrient requirements of non-ruminant and ruminant animals and formulating diets to meet these requirements. (2 lecture, 3 lab hours)

ASCI 65. Introduction to Animal Health (3)
The stockman's approach to animal health and disease control in domestic animals. Classification of animal diseases, their causes and appropriate treatments with emphasis on preventative medicine. (2 lecture, 3 lab hours)

ASCI 67. Animals and Society (3)
Philosophical, ethical, and scientific investigation of the human/animal bond and the significance of animals in our society. Importance of animals in wellness, rehabilitation/convalescence, and stress management. Interdisciplinary investigation of controversies in animal research and human disease. G.E. Breadth E1.

ASCI 101. Environmental Management of Farm Animals (3)
Prerequisite: ASCI 1. Basic principles of environmental management as applied to domestic farm animals. Special emphasis given to animal behavior, animal welfare, and animal performance. The optimal animal environment will be studied in detail.

ASCI 125. Animal Genetics (3)
Prerequisite: ASCI 1. Genetic principles and application to livestock production; basic inheritance, qualitative genetics, variation in economic traits of livestock, quantitative inheritance, selection progress; current methods of genetic livestock improvement.

ASCI 135. Animal Nutrition (3)
Prerequisite: ASCI 35, CHEM 3A. Principles of nutrition and metabolism; digestive physiology of farm animals.

ASCI 145. Anatomy and Physiology of Farm Animals (4)
Prerequisite: BIOL 10 or 12. General structures of farm animals and physiological functions of organs in the animal body. (3 lecture, 3 lab hours)

ASCI 146. Physiology of Lactation (3)
Prerequisites: ASCI 61, CHEM 3A. Fundamentals of anatomy, physiology, and endocrinology of milk synthesis and secretion; milking machine systems and management; pathological and environmental factors affecting lactation.

ASCI 155. Animal Reproduction (3)
Principles of reproductive physiology, associated endocrine hormones, and their application to domestic animals.

ASCI 156. Artificial Insemination — Embryo Transfer (1)
Prerequisite: ASCI 155 (may be taken concurrently). Basic principles of artificial insemination and embryo transfer with emphasis on application to cattle. (3 lab hours)

ASCI 163. Dairy Cattle Nutrition (3)
Prerequisite: ASCI 35. Principles of dairy cattle nutrition. Nutritional requirements of the dairy calf through the mature cow. Special emphasis on computerized diet formulation and feed inventory control.

ASCI 165. Infectious Diseases of Domestic Animals (3)
Prerequisites: ASCI 65; BIOL 20 or 120. Microbiological concepts related to bacterial, viral, and fungal diseases in domestic animals with emphasis on specific diseases of veterinary importance.

Production and Management (ASCI)

ASCI 11. Meat Animal Selection and Evaluation (3)
Prerequisite: ASCI 1 (may be taken concurrently). Basic factors involved in selection and evaluation of market animals; relationships of live market animal traits to carcass cutability and quality. (2 lecture, 3 lab hours)

ASCI 21. Beef Cattle Production (3)
Prerequisite: ASCI 1 (may be taken concurrently). Overview of world and United States beef production. Evaluation of the structure of the beef industry (consumer, packer, retailer, feedlot, seedstock, commercial cow-calf, stocker). Discussion of genetics, nutrition, reproduction, and meat science as applied to beef cattle. (2 lecture, 3 lab hours) **F even**

ASCI 31. Swine Production (3)
Prerequisite: ASCI 1 (may be taken concurrently). Management principles and practices of purebred and commercial pork production. Nutrition, reproduction, environmental management, health, marketing, selection, and records are studied. (2 lecture, 3 lab hours; field trips)

ASCI 41. Sheep Production (3)
Prerequisite: ASCI 1 (may be taken concurrently). Management of purebred, commercial, and small farm flocks; principles and practices in breeding, feeding, care of ewes and lambs, and marketing of lamb and wool. (2 lecture, 3 lab hours)

ASCI 51. Horse Production (3)
Prerequisite: ASCI 1 (may be taken concurrently). Breeds, selection, and care and feeding of light horses. (2 lecture, 3 lab hours)

ASCI 52. Beginning English Equitation (2)
Basic horsemanship skills including haltering, grooming, saddling, and bridling; beginning English riding skills including