
2040 Techniques of Judging and Evaluating Dairy Cattle (2) F Development of live animal evaluation techniques in a clinical setting; emphasis on visual evaluation, decision making, oral communication.

2049 Dairy Cattle Production Practices (3) S Prereq.: DARY 1048, 2 hrs. lecture; 2 hrs. lab. Dairy cattle production practices; care, fitting, showing dairy cattle.

2072 Introductory Agricultural Genetics (3) S Prereq.: BIOL 1002 or equivalent. Introduction to classical and modern genetic methodology used in agriculture including Mendelian principles, successful breeding techniques, assisted reproductive technology, genetic engineering and other biotechnological methods.

2075 Milk and Dairy Foods (3) F Product processing techniques and related principles involved in market preparation of milk and dairy foods; emphasis on consumer and processor viewpoints relative to product composition, processing, marketing, sanitation, and related environmental aspects.

2085 Milk Quality Control Laboratory (2) S Prereq.: Permission of department. 4 hrs. lab. Public Health Service laboratory and inspection procedures for quality control on dairy farms and in milk plants.

2093 Dairy Products Judging (2) S Development of sensory evaluation techniques in a clinical setting; emphasis on sensory evaluation, decision making, oral communication.

3010 Applied Animal Feed Formulation (3) S Prereq.: ANSC 1011 or DARY 1045 or PLSC 1049 and MATH 1021 or equivalent. Formulation of feed for agricultural animals, including feed laws, feed stuffs, and requirements.

3049 Topics in Dairy Science (1-3) F,S,Su Prereq.: consent of department head. May be taken for a max. of 6 hrs. credit. Topics from dairy production or dairy food manufacturing areas.

3050 Dairy Science Internship (3) Su Prereq.: junior standing with an overall GPA of 2.20 and consent of department head. May be taken for a max. of 6 hrs. of credit. Fifty hours of supervised work in the dairy industry.

4020 Dairy Foods Technology: Frozen and Cultured Dairy Products (4) F-O 3 hrs. lecture; 3 hrs. lab. Principles and processes in the manufacture of ice cream and other frozen dairy products; concentrated milk products; cheese and fermented milk products.

4040 Quality Assurance in the Food Industry (4) S-E Prereq.: BIOL 2051, 3 hrs. lecture; 2 hrs. lab. Also offered as ANSC 4040, FDSC 4040, and PLSC 4040. Laboratory functions, manufacturing processes, and microbiological, chemical, and statistical techniques used to provide complete quality assurance for the modern dairy food plant.

4043 Dairy Cattle Endocrinology (3) F Relation of endocrine system to reproduction, growth, and function of domestic animals and physiology of milk secretion.

4045 Reproductive Physiology of Farm Animals (3) F Also offered as ANSC 4045. Reproductive anatomy and physiology of farm animals; factors affecting reproductive performance.

4046 Physiology of Lactation (2) S,E Prereq.: BIOL 1002 and 1005; or equivalent. Anatomy and development of the mammary gland; physiological and biochemical regulation of mammary growth and milk secretion; emphasis on farm animals.

4047 Reproductive Management and Artificial Insemination (1) F Prereq.: credit or registration in ANSC/DARY 4045. 3 hrs. lab. Management techniques and principles necessary for artificial insemination in cattle.

4051 Dairy Seminar (1) F May be taken for a max. of 2 hrs. of credit. Required for all seniors in the Department of Dairy Science. Reports on current scientific investigations.

4054 Dairy Farm Management (3) S-O Prereq.: DARY 2049 or consent of instructor. 2 hrs. lecture; 2 hrs. lab. Principles of managing dairy cattle; recommended farm practices for economical milk production.

4071 Tropical Livestock Husbandry (3) F Also offered as ANSC 4071. Breeding, feeding, and management of livestock in the tropics; human, environmental, and economics factors influencing livestock production in tropical areas; role of livestock in the total agricultural development.

4081 Dairy Microbiology (3) F Prereq.: BIOL 2051. 3 hrs. lecture; 4 hrs. lab. Application of specific bacteriological procedures used in quality control and processing of dairy products.

4118 Applied Animal Breeding and Genetics (3) F-E Prereq.: DARY 2072 or BIOL 2153 and EXST 2201. Matings systems and methods of breeding for genetic improvement in farm livestock.

4161 Advanced Dairy Physiology (3) S Prereq.: DARY 1043, VETS 4041, and consent of instructor. 3 hrs. lecture; 2 hrs. lab. Introduction to physiology and nutrition of dairy cattle.

4180 Rumen Physiology and Metabolism (3) O 3 hrs. lecture; 3 hrs. lab. Comparison of ruminants to other herbivora and nonruminant animals; factors associated with obtaining and utilizing feeds; fermentation products; symbiotic relationship between microflora and the host animal; host animal metabolism.

4191 Laboratory Techniques in Feed Evaluation (2) F Prereq.: consent of instructor. 6 hrs. lab. Laboratory techniques in nutritive evaluation of feedstuffs for livestock.

4192 Andrology (3) S-E Prereq.: DARY/ANSC 4045 or equivalent. Male reproductive physiology and anatomy of avian, aquatic, and mammalian species.

7001 Advanced Dairy Physiology (3) S Prereq.: DARY 1043, VETS 4041, and consent of instructor. Organ systems of metabolism; emphasis on dairy cattle.

7002 Minerals in Nutrition (2) F Prereq.: ANSC 4009 or equivalent. History, function, evaluation of nutritional status, requirements for various species, assay methods, and interrelationships.

7003 Advanced Dairy Nutrition (3) F Prereq.: consent of instructor. Nutrition principles and recent research.

7004 Population Genetics in Animal and Plant Breeding (4) S Prereq.: DARY 4118 and EXST 7004; or equivalent. 3 hrs. lecture; 2 hrs. lab. Genetic concepts concerning characteristics of populations.

7018 Rumen Physiology and Metabolism (3) F-O Comparison of ruminants to other herbivora and nonruminant animals; factors associated with obtaining and utilizing feeds; fermentation products; symbiotic relationship between microflora and the host animal; host animal metabolism.

7019 Laboratory Techniques in Feed Evaluation (2) F Prereq.: consent of instructor. 6 hrs. lab. Laboratory techniques in nutritive evaluation of feedstuffs for livestock.

7020 Andrology (3) S-E Prereq.: DARY/ANSC 4045 or equivalent. Male reproductive physiology and anatomy of avian, aquatic, and mammalian species.

7091 Advanced Dairy Seminar (1) S,F,S May be taken 4 times for credit.

7094 Seminar in Nutrition (1) S Same as ANSC 7094, FDSC 7094, HUEC 7094, PLSC 7094. May be taken for a max. of 2 hrs. of credit. Prereq.: ANSC 7093, FDSC 7071, HUEC 7010, PLSC 7091 or equivalent or previous slide (not poster) presentation at a professional meeting.

8000 Thesis Research (1-12 per sem.) “S”/“U” grading.

8900 Research Procedure in Dairy Science (1-6) Prereq.: consent of department. May be taken for a max. of 9 sem. hrs. credit. Research in dairy breeding and genetics, management, nutrition, and physiology, dairy manufacturing.

9000 Dissertation Research (1-12 per sem.) “S”/“U” grading.