ANIMAL SCIENCE (ANSC)

ANSC 7140 Animal Science Seminar 3 cr
Reports and discussions on current problems and investigational work with mammals and poultry. This course is graded pass/fail.

ANSC 7220 Genetic Principles of Animal Improvement 3 cr
Designed for the development of a framework of theory for the study of the genetics of populations. Changing gene frequency. Genetic and environmental subdivision of the phenotypic variance. Principles of selection.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: ANSC 3500 or equivalent.

ANSC 7360 Advanced Reproductive Physiology, Male 3 cr
A lecture-seminar course on sexual function and testicular physiology in males of livestock species; environmental factors influencing reproductive efficiency: recent developments in semen preservation and artificial insemination.

ANSC 7370 Advanced Reproductive Physiology, Female 3 cr
A lecture-seminar on current topics related to female reproduction in the livestock species.

ANSC 7380 Endocrine Control of Animal Metabolism 3 cr
A lecture-seminar course on current topics concerning the control of physiological processes of -importance in domestic animal species.

ANSC 7390 Advanced Animal Science Seminar 3 cr
Ph.D. Candidates are expected to complete a grant application form, review and critique current literature, and present a seminar on current research topics. This course is graded pass/fail.

ANSC 7400 Quantitative Genetics in Animal Science 3 cr
A study of advanced techniques used in animal breeding research, their theoretical basis, analysis and interpretation. Case studies in the student's area of interest will be examined. Prerequisite ANSC 7220 or its equivalent.

ANSC 7440 Protein Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the fields of protein nutrition and metabolism, pertinent to mammalian physiology. Also offered as HNSC 7440 by the Department of Human Nutritional Sciences.
Equiv To: HNSC 7440

ANSC 7450 Energy and Carbohydrate Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the field of energy/carbohydrate nutrition and metabolism, pertinent to mammalian physiology. Also offered as HNSC 7450 by the Department of Human Nutritional Sciences.

ANSC 7460 Lipid Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the field of lipid nutrition and metabolism, pertinent to mammalian physiology. Also offered as HNSC 7460 by the Department of Human Nutritional Sciences.
Equiv To: HNSC 7460

ANSC 7470 Vitamin Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the field of vitamin nutrition and metabolism, pertinent to mammalian physiology. Also offered as HNSC 7470 by the Department of Human Nutritional Sciences.
Equiv To: HNSC 7470

ANSC 7480 Mineral and Trace Element Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the field of mineral nutrition and metabolism, pertinent to mammalian physiology Also offered as HNSC 7480 by the Department of Human Nutritional Sciences.
Equiv To: HNSC 7480

ANSC 7490 Phytochemical Nutrition and Metabolism 1.5 cr
Lectures and critical reviews will be used to discuss recent/significant research advances in the field of phytochemical nutrition and metabolism, pertinent to mammalian physiology. Also offered as HNSC 7490 by the Department of Human Nutritional Sciences.
Equiv To: HNSC 7490

ANSC 7500 Methodology in Agricultural and Food Sciences 3 cr
The application of experimental techniques and procedures to agricultural and food sciences research. Recording, processing, interpretation, and critical appraisal of experimental data.

ANSC 7510 Special Topics in Animal Nutrition 3 cr
Students will be required to investigate and report on a nutrition problem in a species other than that of their thesis research. Projects may be avian, bovine, ovine, swine or laboratory animal species.

ANSC 7520 Special Topics in Animal Improvement 3 cr
Assigned readings, papers and discussions specific problems in animal genetics. Analysis of original data may be required.

ANSC 7530 Special Topics in Animal Physiology 3 cr
Students will investigate a minor research problem in an area of physiology other than that in which the major is being taken. Problems areas may include: digestion, environment, renal function or reproduction.

ANSC 7540 Advanced Applied Animal Nutrition 3 cr
An advanced study of the theoretical and applied aspects of monogastric and ruminant nutrition. A laboratory component will provide training in current techniques in feed analyses and computer modeling.

ANSC 7550 Special Topics in Animal Behaviour and Welfare 3 cr
Assigned readings, papers and discussions on specific issues in animal behaviour. A short behavioural experiment may be required.

ANSC 7560 Mathematical Modeling of Agricultural Systems 3 cr
Lectures and computer based laboratory exercises will be used to discuss various aspects of model development focusing on mechanistic (compartmental analysis), growth functions and an introduction to linear programming. Construction of a simulation model may be required. Not to be held with ANSC 4240 Mathematical Modeling of Biological Systems.
PR/CR: A minimum grade of C is required unless otherwise indicated.
Prerequisite: MATH 1500 or MATH 1520