241. Endocrine and Reproductive Physiology (3)
Prerequisite: Chem 8. Physiology which deals with neural and hormonal integration and control of the animal body, including scientific aspects of the processes of reproduction and application of current knowledge in improving reproductive efficiency.

242. Environmental Physiology of Domestic Animals (3)
Prerequisite: A Sci 110, 155; Chem 2A; permission of instructor. A study of environmental factors affecting domestic animals under field and controlled conditions.

243. Metabolism and Energy Physiology (3)
Prerequisite: Chem 8. Current aspects of the integral processes involved in metabolism and energy physiology of laboratory and farm animals. Application of the principles concerned in intermediary metabolism. Selected readings in the current literature within the field.

244. Vitamin and Mineral Nutrition (3)
Prerequisite: A Sci 70. A survey of the biochemical and physiological importance of vitamins and minerals in the nutrition of man and his animals. Included is the diagnosis, prevention and treatment of both vitamin and mineral deficiencies.

245. Advanced Animal Breeding (3)
Prerequisite: A Sci 110, 155; Chem 2A; permission of instructor. The application of genetic principles to the breeding of livestock and poultry. The study of applied selection and measurements of the results.

250T. Topics in Plant Science (3; max total 12)
Prerequisite: upper division plant science appropriate to study topic, permission of instructor. Advanced studies in a given area: crop physiology, plant breeding, plant pathology, plant nutrition, or economics.

251. Pesticides (3)
Prerequisite: Bot 10, Chem 8. Modes of action of pesticides. Absorption and translocation of pesticides. Mechanisms of pesticide specificity. Interaction with soil and soil microbes. Methods of pesticide investigations (biological assay, instrumental detection, chemical assay, chemical and microbial degradation). (2 lecture, 3 lab hours)

252. Plant Nutrition (3)
Prerequisite: Bot 104. Mineral requirements of plants; the acquisition and translocation of nutrients by higher plants and the role of nutrient elements in plant development. (2 lecture, 3 lab hours)

255. Advanced Plant Breeding (3)
Prerequisite: Plant 140. Principles and techniques of plant improvement, breeding methods, combining ability, sterility systems, quantitative genetic analysis, heritability estimates, experimental designs for plant breeding.

256. Plant-Water Relationships (3)
Prerequisite: Bot 104. Physicochemical properties of water and solutions; movement of water, solutes, and growth regulators in plants; study of moisture-sensitive periods of various crops; factors affecting water absorption and retention.

257. Physiology of Cultivated Crops (3) (Former Ag 250.7)
Plant cell structure and function. Response of cultivated plants to the environment. Physiology and hormonal control of flower induction, fruit set, and development. Review of pertinent current publications.

258. Plant Disease Control (3)
Prerequisite: Plant 171. Principles of plant disease control; agricultural chemicals used in plant disease control. Methods and theory used in application of chemicals, biological control, and breeding for resistance. Insight into industrial research and development of control measures. (2 lecture, 3 lab hours)