

990. Readings in Criminal Justice and Criminology
Fall. 3 to 5 credits. Graduate students.

Topical reading of major research contributions to criminology and criminal justice. Consideration of applicability of criminological research to functioning of the criminal justice system.

CROP SCIENCE CSC
College of Agriculture and Natural Resources

101. Crop Science
Fall. 3(3-0)

Principles of identification, adaptation, management, and utilization of field crops for food and fiber. Fundamentals of crop management, breeding, weed control, crop quality, and tropical crops in world agriculture.

250. Plant and Animal Genetics
Spring. 4(4-0) B S 211.

Fundamental genetic principles with particular reference to problems in plant and animal biology.

251. Plant and Animal Genetics Laboratory
Spring. 1(0-2) 250 concurrently.

301. Forage Crops
Fall. 3(2-2) Sophomores.

Distribution, morphology, identification, physiology, management and utilization of forage crops for hay silage, and pasture for livestock and for soil improvement and conservation.

380. Ecology and Physiology of Agricultural Plants
Spring. 3(3-0) FOR 220 or BOT 301.

Interrelationships of physiological processes and environmental manipulation for higher yield of agricultural plants.

402. Principles of Weed Control
Fall. 3(2-2) Juniors. Interdepartmental and administered jointly with the Horticulture Department.

Comprehensive study of principles underlying weed control practices, and factors involved in both mechanical and chemical control.

406. Crop Improvement and Seed Production
Winter. 4(3-2)

Practical methods of crop improvement, seed production, storing, cleaning, packing, and distribution, seed certification of small grains, legumes, corn, beans, potatoes, visits to seed agencies and seed farms.

407. Special Crop Problems
Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 9 credits. Approval of department.

Independent study in any of the following specialties: special crop problems, production, physiology, ecology, weed control, turfgrass management, crop storage and preservation, and seed studies.

408. Principles of Plant Breeding
Spring. 4(3-2) 250. Interdepartmental and administered jointly with the Horticulture Department

Application of genetics and other sciences to breeding and improvement of agronomic and horticultural crops.

415. Turfgrass Management
Spring. 3(2-2)

Adaptation characteristics and utilization of turf grasses, management principles and physiological bases for the establishment and maintenance of turf for lawns, athletic fields, golf courses, cemeteries, parks, highways and air-fields.

420. Seminar
Winter. 1(1-0) May re-enroll for a maximum of 4 credits. Interdepartmental and administered jointly with Soil Science.

485. Seed Science
(912.) Spring. 3(3-2) Approval of department.

Morphological and physiological changes during seed formation, development, maturation and germination. Practical and biological aspects of seed drying, storage, deterioration, dormancy and quality. Current problems and research in seed science.

488. The Impact of Animal Resource Management Upon the World's Developing Nations
Winter. 3(4-0)

For course description, see Interdisciplinary Courses.

801. Crop Ecology
Fall of even-numbered years. 3(3-0) Approval of department.

Environment within the crop community and the environmental stresses limiting crop survival. Temperature, light, water and atmospheric stresses and variations in the crop canopy will be discussed.

803. Crop Physiology
Spring. 3(3-0) Approval of department.

Role of physiological factors determining maximum crop yields and quality.

805. Herbicidal Action and Metabolism
Spring. 3(3-0) 402; BOT 415 or concurrently.

A study of the properties and characteristics of herbicides, the fundamental processes involved in the physiological action, behavior, and metabolism of herbicides.

814. Advanced Field Crop Studies
(914.) Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 6 credits. Approval of department.

Advanced work in any of the following specialties: advanced field crop studies, management, physiology, ecology, breeding, turfgrass culture, weed control, nutritional quality, tropical crops, crop extension, and seed studies.

820. Seminar
Fall, Winter, Spring. 1(1-0) May re-enroll for a maximum of 3 credits. Interdepartmental with and jointly administered with Soil Science.

Studies and presentation of research in crop and soil sciences.

830. Physiological Genetics
Winter. 3(3-0) Approval of department. Interdepartmental with and administered by the Forestry Department.

Physiological bases for genetic variation in higher plants including adaptive physiology, quantitative genetics, growth correlations, biochemical genetics, hybrid physiology, and geneology.

831. World Crop Adaptation
Spring. 3(3-0)

Distribution, adaptation, and importance of crops in world agriculture and their production as influenced by climate, soil, people and markets.

851. Quantitative Genetics in Plant Breeding
Fall of odd-numbered years. 4(3-1)

One course in genetics or breeding, and one course in biometry, or approval of department. Genetic systems and quantitative inheritance in relation to the establishment of superior populations.

899. Research
Fall, Winter, Spring, Summer. Variable credit.

920. Design and Analysis of Agronomic Experiments
Spring. 3(3-0) STT 423 or approval of department.

Constructing and analyzing designs for experimental investigations in the biological sciences.

951. Cytogenetics in Plant Breeding
Winter of odd-numbered years. 3(3-0) BOT 427, 828, or approval of department. Interdepartmental with the Horticulture Department.

Application of cytogenetic principles to plant breeding. Significance of recombination, role of induced mutations, polyploid, chromosome substitution, and aneuploid analyses as they apply to the field of plant breeding.

952. Plant Breeding Biometrics
Winter of even-numbered years. 4(3-2) Approval of department.

Biometrical genetics as it applies to plant breeding. Includes studies of path coefficients, partitioning of variance, and the principles of selection in a changing environment.

999. Research
Fall, Winter, Spring, Summer. Variable credit.

DAIRY SCIENCE DRY
College of Agriculture and Natural Resources

214. Dairy Production
Fall, Spring. 4(3-2)

Dairy cattle in modern agriculture. Normal cow behavior. Feeding, breeding and management of herd. Commercial milk production and marketing milk.

323. Dairy Cattle Judging
Spring. 3(0-6)

Desired type in dairy cattle. Judging and show ring procedures. Competitive judging. Teams selected to represent Michigan State University in national competition.

371. Dairy Seminar
(471.) Spring. 1(1-0) Juniors.

Major issues pertinent to the dairy industry are described by authorities from MSU and the dairy industry of Michigan. Students are provided an opportunity for an exchange in ideas.