

**Descriptions — Criminal Justice  
of  
Courses**

**825. Criminal Justice Educational  
Programming**

Spring. 4(4-0) Majors or approval  
of school.

Designed for students preparing for careers  
as criminal justice educators. Discussion of  
issues, administrative problems, and curricula  
for criminal justice programs.

**826. Teaching Internship**

Fall, Winter. 4(4-0) Majors or ap-  
proval of school.

Assumption of complete responsibility for teach-  
ing a course in a criminal justice program.  
Guidance in planning lesson content and evalu-  
ating instruction provided. Attendance at a  
series of associated seminars required.

**830. Research for Planning**

Fall, Winter. 4(4-0) Majors or ap-  
proval of school.

Techniques of applied research specially asso-  
ciated with the planning of operational and  
managerial criminal justice systems. Emphasis  
upon empirical basis for organizational plan-  
ning programs.

**831. Criminal Justice Systems  
Development**

Fall, Winter. 4(4-0) Majors or ap-  
proval of school.

Systems analysis approach to the development  
of criminal justice goals, priorities and strat-  
egies. Emphasis upon total systemic resource  
allocation, output and consonance.

**832. Criminal Justice Information  
Systems**

Fall, Spring. 4(4-0) 812.

New management requirements of the criminal  
justice complex in transition. Problems and  
innovative concepts of criminal justice system  
development, decision theory, information  
needs, planning, budgeting, and new managerial  
perspectives.

**833. Project Planning and Evaluation**

Winter, Spring. 4(4-0) 492; 830  
recommended.

Process of managing new projects from incep-  
tion through implementation and evaluation.  
Establishing priorities, securing funding, ad-  
ministering projects and designing and imple-  
menting useful evaluative research. Individual  
exercises in designing projects.

**835. Police Policy Development**

Fall, Winter, Spring. 4(4-0) 812.

Public policy issues affecting the definition of  
police goals and strategies. Facts and values  
which influence policy decision; the processes  
of policy development and linkage with delivery  
systems.

**836. Police Systems Development and  
Management**

Fall, Winter, Spring. 4(4-0) 812.

Analytic techniques of defining goals, and de-  
signing, testing and evaluating police opera-  
tional strategies. Managerial support require-  
ments and goals of specific police systems.

**840. Highway Traffic Administration**

Winter. 4(4-0) Approval of instruc-  
tor.

The Federal-state-local partnership in highway  
traffic administration. Laws, standards and  
policies regulating the accident prevention and  
loss reduction countermeasures of governmental  
agencies and private industry. Problems and  
needs.

**855. Case Studies in Delinquency  
Control**

Fall. 4(4-0) 355, 455.

Evaluation of primary and secondary delin-  
quency prevention, control and treatment  
programs. Current hypotheses, recent develop-  
ments in the field. Use of cases to evaluate past  
and current practices and future needs.

**856. Juvenile Corrections**

Spring. 4(4-0) 855.

A more theoretical extension of 355 and 455.  
Review and analysis of entire treatment and  
rehabilitation process for juvenile offenders.

**865. Correctional Programming**

Fall. 4(4-0) Majors or approval of  
school.

Changing criminal behavior. Traditional and  
institutional methods and theories. Reintegra-  
tion: high stress on offenders and community.  
Motivating the offender. Developing commu-  
nity resources and alternatives. Examining the  
change agent.

**866. Correctional Management**

Spring. 4(4-0) Majors or approval of  
school.

Planning, organizing, controlling and evaluat-  
ing in relation to measurable correctional  
objectives. Establishing objectives from well  
defined alternatives. Change capable adminis-  
tration styles and decision making as functions  
of objectives.

**871. Law of Corrections**

Spring. 4(4-0) Majors or approval of  
school.

Constitutional limitations and impact of law  
on correctional practice. Due process, judicial  
sentencing, probation, prisoners' rights, parole  
grant, revocation of probation and parole.

**872. Law of Criminal Procedure**

Fall, Winter, Spring. 4(4-0) A law  
course.

Constitutional limitations on police activity. Due  
process, bill of rights, right to counsel, arrest,  
search and seizure, electronic eavesdropping,  
entrapment, confessions, lineups, scope of ex-  
clusionary rules.

**874. Law of Administrative Procedure**

Fall. 4(4-0) Majors or approval of  
school.

General principles of administrative law, labor  
law. Application of principles. Law enforce-  
ment policy making. Implementation of con-  
stitutional safeguards. Police unions and politi-  
cal activity.

**885. Security Management**

Fall. 4(4-0) 485 or concurrently, or  
approval of instructor.

The organization and management of security  
units, in industry, businesses, governments, in-  
stitutions, etc. The protection of manpower,  
facilities, and other assets. Administrative, legal  
and technical problems. Loss prevention and  
control.

**886. Advanced Security Management**

Winter. 4(4-0) 885.

Salient problems and issues of concern to pro-  
fessional security administrators. "Growing  
edge" technologies. Specialized programs—  
e.g., government internal security controls; em-  
ployee dishonesty; shoplifting.

**890. Practicum**

Fall, Winter, Spring, Summer. 1(0-4)  
to 6(0-24) Majors or approval of school.

Planned program of research observation, study  
and work in selected criminal justice agencies.  
Designed to supplement classroom study with  
participation in domestic and foreign criminal  
justice systems.

**892. Quantitative Methods in Criminal  
Justice**

Spring. 4(4-0) 492.

Views the relationship and application of sta-  
tistical techniques to theory building and con-  
cept construction. Gives an overview of sta-  
tistical methods with an emphasis on those  
most useful for research in criminal justice.

**898. Comprehensive Readings**

Fall, Winter, Spring, Summer. 1 to 4  
credits. May re-enroll for a maximum of 4  
credits. Majors or approval of school.

Individualized reading program for students who  
elect not to complete a thesis. Means of ex-  
tending breadth and depth of course work to  
achieve mastery of criminal justice areas of  
interest.

**899. Thesis Research**

Fall, Winter, Spring, Summer. 1 to  
6 credits. May re-enroll for a maximum of  
6 credits. Majors or approval of school.

Planned research and writing directed by stu-  
dent's thesis committee.

**930. Seminar on Criminal Justice  
Systems**

Winter. 3(3-0) Graduate students.

Topical issues on the development, functioning,  
and interrelationships of components of crim-  
inal justice systems and how systemic coherence  
can be achieved within a democratic society.

**990. Readings in Criminal Justice and  
Criminology**

Fall. 3 to 5 credits. Graduate stu-  
dents.

Topical reading of major research contribu-  
tions to criminology and criminal justice. Considera-  
tion of applicability of criminological research  
to functioning of the criminal justice system.

**992. Research Utilization and  
Application in Criminal Justice**

Spring. 3(3-0) Majors or approval of  
school.

Substantive and administrative problems of  
conducting research and existing attempts to  
solve these. Utilization of research in bringing  
about change in the criminal justice system.  
Methods of maximizing research utility.

**CROP SCIENCE**

**CSC**

**College of Agriculture and  
Natural Resources**

**101. Crop Science**

Fall. 3(3-0)

Principles of identification, adaptation, manage-  
ment, and utilization of field crops for food  
and fiber. Fundamentals of crop management,  
breeding, weed control, crop quality, and tropi-  
cal 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**

Winter. 4(3-2) 250. Interdepartmental 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**

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.

**IDC. The Impact of Animal Resource Management Upon the World's Developing Nations**

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 of even-numbered years. 3(3-0) Approval of department.

Role of physiological factors determining maximum crop yields and quality.

**805: Herbicidal Action and Metabolism**

Spring of odd-numbered years. 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**

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**

Winter, Spring. 1(1-0) May re-enroll for a maximum of 3 credits. Interdepartmental 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 Food Crops**

Spring of odd-numbered years. 3(3-0)

World food crop production and related systems of agriculture which provide this resource. The impact of modern discoveries and opportunities for change.

**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.

**314. Dairy Herdsman Techniques**

Winter. 2(0-4) 214, majors only.

Herd health and management procedures, disease prevention and detection, equipment maintenance and record systems for dairy herds.

**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.

**413. Dairy Farm Management**

Spring. 3(2-2)

Analysis of dairy farm organization and operations. Dairy herd management practices. Dairy cattle housing with emphasis on economical and efficient usage. Use of dairy records in the farm operation.

**424. Dairy Cattle Breeding**

Spring. 4(2-4) ANS 461.

Applications of population genetics to improving dairy cattle. Use of selection, aids to selection, and systems of mating to formulate breeding plans. Inheritance of economic traits. Breed improvement programs.

**433. Dairy Cattle Nutrition**

Winter. 4(3-2) ANS 325.

Principles of ruminant nutrition and application to actual feeding practices in commercial dairy herds. Rumen fermentation as related to feed utilization, milk production and milk composition.

**444. Milk Secretion**

Winter. 4(3-2) Interdepartmental and administered jointly with the Physiology Department.

Anatomy of mammary gland. Hormonal and nervous control of mammary growth, initiation and maintenance of lactation. Biochemistry of milk secretion. Physiology of milking; physiological, pathological and management factors affecting lactation.

**445. Endocrinology and Reproduction of Farm Animals**

Fall. 4(5-0) PSL 240. Interdepartmental and administered jointly with the Physiology Department.

Endocrine and reproductive systems are presented with emphasis upon characteristics which can be altered for economic benefit and upon causes, prevention, and treatment of endocrine abnormalities.