951. Cytogenetics in Plant Breeding

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

BOT 427, 838, or approval of department. Interdepartmental with the Department of Horticulture.

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

952. Plant Breeding Biometrics

Winter of even-numbered years. 4(3-3)

Approval of department.

Biometric 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

College of Agriculture and Natural Resources

214. Dairy Production

Fall, Spring. 4(3-2)


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(0-3)

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

Spring. 1(0-9) 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(3-3)

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(3-4) ANS 481.

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. Ruminant Nutrition

Winter. 4(3-2) ANS 325. Interdepartmental with Animal Science.

Principles of ruminant nutrition and application to actual feeding practices in commercial dairy and beef operations. Rumens fermentation as related to feed utilization, growth, milk production and milk composition.

444. Mammary Physiology

Winter. 4(3-2) PSL 240, BCH 200. Interdepartmental and administered jointly with the Department of Physiology.


445. Endocrinology and Reproduction of Farm Animals

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

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.

460. Special Problems

Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 10 credits. Approval of department.

1DC. The Impact of Animal Resource Management Upon the World's Developing Nations

For course description, see Interdisciplinary Courses.

850. Topics in Dairy Science

Fall, Winter, Spring. Variable credit. May re-enroll for credit. Approval of department.

Topics from breeding, management, nutrition, or physiology, changing from term to term to include recent technical advances.

899. Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

925. Advanced Ruminant Nutrition

Fall of even-numbered years. 4(4-0) BCH 459, PSL 801 or approval of department.

Microbiology, physiology and biochemistry of ruminant digestion and the absorption and metabolism of ruminant feedstuffs.

945. Physiology of Mammalian Reproduction

Winter. 4(5-0) DRY or PSL 445 or approval of department. Interdepartmental with the Department of Physiology.


999. Research

Fall, Winter, Spring. Summer. Variable credit. Approval of department.

EARTH SCIENCE

See Geology.

ECONOMICS

College of Business

Courses are classified as follows:

Labor Economics and Industrial Relations—385, 455, 458, 457.

Money and Banking—318, 320, 470.
International Economics—427.
Public Finance—406, 407, 408.
Price and Value Theory—324, 325, 428.
History of Economic Thought—421, 422.
Industrial Organization and Control—444.

200. Introduction to Economics

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

Open to freshmen. Students may begin sequence with either 200 or 201.

Problem of unemployment; meaning and determination of national income; the multiplier; the accelerator; fiscal policy; deficit spending; monetary policy; banks creation of money; international aspects of the employment problems.

201. Introduction to Economics

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

Open to freshmen. Students may begin sequence with either 200 or 201.

Problem of resource allocation; price determination (demand, supply), applications to agricultural policy; diminishing returns; behavior of the firm (determination of quantity of output, hiring of factors); aspects of international trade.

210. Fundamentals of Economics

Fall, Winter. 4(4-0) MTH 215 or 223, or concurrently.

Students may not earn credit in 210 if they have credit in either 200 or 201.

Introductory course in economic theory, employing mathematics, when useful, as a tool analysis. Covers consumer and business behavior, markets and the price system, income distribution, and elements of employment theory.

1DC. Introduction to Latin America III

For course description, see Interdisciplinary Courses.

251H. Households, Firms and Markets

Fall. 5(5-0) Honors College students.

Microeconomic theory and its applications to analysis and policy. Substitutes for 261, 354 and 395.

253H. Aggregative Economics and Public Policy

Winter. 5(5-0) Honors College students.

Theory of national income and its application to analysis and policy. Substitutes for 200, 320, and 331.

305. Industrial Relations and Trade Unions

Fall, Winter, Spring, Summer. 5(5-0)

Development, aims, structure, and functions of labor and employer organizations. Their relations to economic, political, and legal institutions and their impact on society. Primary issues in collective bargaining.

318. Money, Credit and Banking

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

200 or 210.

Commercial banking and the money supply. The Federal Reserve System, the Treasury, and other financial institutions. Sources and uses of funds in the financial market.