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

DAIRY SCIENCE

College of Agriculture and Natural Resources

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

323. Dairy Cattle Judging Spring. 3(0-6)
Desired type in dairy cattle. Judging and showing procedures. Competitive judging. Teams selected to represent Michigan in national competition.

371. Dairy Seminar (471) Fall, Winter, 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 of 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.
Application 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.

ECONOMICS

College of Business

Courses are classified as follows:
Labor Economics and Industrial Relations—305, 455, 456, 457.
Money and Banking—318, 322, 330.
International Economics—427.
Public Finance—406, 407, 408.
Price and Value Theory—324, 325, 426.
History of Economic Thought—421, 422.
Industrial Organization and Control—444, 445, 446, 448.

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 315 or 226; or concurrently. Students may 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.

251H. Households, Firms and Markets Fall. 5(5-0) Honors College students.
Microeconomic theory and its applications to analysis and policy. Substitutes for 201, 324 and 325.

252H. Aggregative Economics and Public Policy Winter. 5(5-0) Honors College students.

305. Industrial Relations and Trade Unionism Fall, Winter, Spring, Summer. 5(5-0)
Development, aims, structure, and functions of labor and employer organizations. Their relation 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.

320. Macroeconomics I Fall, Winter, Spring. Summer. 3(3-0) 200 and 201 or 210.

321. Macroeconomics II Fall, Winter, Spring. Summer. 3(3-0) 200.
Expansion of role of monetary factors in macroeconomic theory. Theories of economic growth and cycles. Study of macroeconomic problems of inflation, unemployment, and other current policy problems.

324. Microeconomics I Fall, Winter, Spring. Summer. 3(3-0) 200 and 201, or 210.
Theory of production and cost. Theory of the firm under varying market structures.

325. Microeconomics II Fall, Winter, Spring. Summer. 3(3-0) 200 and 201, or 210, and 324.
Theory of demand and factor rewards. Welfare economics and general equilibrium theory.

330. Investments and Security Markets Fall, Spring. 3(3-0) 200 or 210.
Juniors. The stock market; principles of investment; analysis of selected industries and corporations; regulation by the Securities and Exchange Commission.

337. American Social and Economic History: Foundations Winter. 4(4-0) Juniors. Interdepartmental with and administered by the History Department.
Multiple sources of economic growth in economic, social and political change, education, science and technology, political action, and other factors, mid-19th century.

338. American Social and Economic History: Modern Trends Spring. 4(4-0) Juniors. Interdepartmental with and administered by the History Department.
Urbanization, origins and implications of large-scale organizations in business and other sectors of society, and sources of economic growth since mid-19th century.
361. Economic Development of Asia
Fall. 3(3-0) 200 and 201 or 210.
Population and resources; comparison of three economic systems: Communism in China, free enterprise in Japan and socialism in India; the role of Japan in regional trade and development.

362. Economic Development of Latin America
Winter. 3(3-0) 200 and 201 or 210.
Concentration of political and economic power as related to income distribution, tax structures, agrarian reform; inflation; trade, exchange rates, integration; population and employment policy.

363. Economic Development of Tropical Africa
Spring. 3(3-0) 200 and 201 or 210.
Interdepartmental with Public Affairs Management.

371A. European Economic History to 1800
Fall. 4(4-0) 200.
Location theory and urban development. Economics of city size and urban-suburban conflict. Economics of certain community problems like housing, transportation, welfare and poverty. Strategies for urban development.

380. Urban Economics
Fall. 4(4-0) 200, 201.

390. The Economics of Poverty
Winter. 3(3-0) 200, 201.

400. Independent Study
Fall, Winter, Spring, Summer. 1 to 4 credits. Students in economics, business, and management.
Research and reading course for students interested in doing independent work in economics.

405. Public Expenditure: Theory and Policy
Fall, Spring. 4(4-0) 201 or 210. Interdepartmental with Public Affairs Management.
Expenditure theory; objectives and rationale of government activity in the market system; control over government activity in the market system; efficiency criteria in government decision-making; planning-programming-budgeting systems and cost-benefit analysis.

410. Medical Economics
Fall. 3(3-0) 200, 201, or approval of department.
Demand, supply and economic efficiency in the medical care market for health services. Demand for medical care, organization forms, methods of payment, utilization and cost, and public policy for health care.

417. Land Economics
Fall, Spring, 4(4-0) 200 and 201 or 210.
Forerunners of classical economics. Development of classical economic thought from Adam Smith to J. S. Mill. The Socialist reaction.

421. Economic Thought I
Fall, Summer. 4(4-0) 200 and 201, or 210.
Forerunners of classical economics. Development of classical economic thought from Adam Smith to J. S. Mill. The Socialist reaction.

422. Economic Thought II
Winter, Spring. 4(4-0) 200 and 201, or 210.
The decline of classical economics and the rise of marginalist value and distribution theory. Marxism and institutionalism.

426. Introductory Mathematical Economics
Spring. 3(3-0) 200, 201; MTH 211.
Mathematical analysis of production, cost, and consumer choice. Mathematical models of aggregate and general-equilibrium economic systems.

427. International Trade and Finance
Fall, Winter, Spring. 5(5-0) 200 and 201, or 210.

430. Stagnation and Development in Emerging Societies
Winter, Summer. 4(4-0) 200 and 201, or 210.
Obstacles to economic growth, theories of economic development, reorganizing agriculture and industry; problems in mobilizing the economy to accommodate new productive techniques; population problems.

431. Principal Issues in Promoting Economic Development
Spring. 4(4-0) 200 and 201, or 210.
Structural change and growth, capital formation and investment criteria; financing development; foreign trade and finance in development; government and planning.

433. Comparative Economic Systems
Fall, Winter, Summer. 4(4-0) 200 and 201, or 210.
Characteristics and functions of an economic system. Analysis of alternative patterns of economic control, planning and market structure. Experiences under capitalism, socialism and mixed economies. Consideration of their theories and philosophies.

444. Private Enterprise and Public Policy
Fall, Winter, Spring. 3(3-0) 200, 201, or 210.
Competition and monopoly in the American economy. Problems of antitrust.

445. Economics of Regulated Industries
Winter. 4(4-0) 444.
Government policy and role of competition in the public utility and transportation industries.

446. Structure of American Industry
Spring. 3(3-0) 444.
Analysis and critique of industry structure, behavior, and performance. The functions of public control.

451. Methods of Economic Research and Forecasting
Spring. 4(4-0) 320 and 324; STT 222 or 317.
Research design, testing of economic hypotheses, elementary methods of projection, forecasting, estimation, and introduction to econometrics.

455. Public Policy and Labor Relations
Fall, Winter, Spring, Summer. 5(5-0) 305.
Evolution of public policy concerning trade unions and collective bargaining and effects of labor-management disputes; public and private methods and agencies for dispute settlement.

456. Economics of Social Security
Spring. 3(3-0) 305 or 317.

457. Manpower Economics
Fall, Winter, Summer. 5(5-0) 200 and 201, or 210.

460. Location Analysis
Winter. 4(4-0) 417 or 324 or FSM 401. Interdepartmental with the Resource Development Department, Public Affairs Management and Food Systems Economics and Management and administered by the Resource Development Department.
Forces affecting location decisions of firms, households and governments. Applications to agricultural, industrial, and regional development.

470. Monetary Theory
Spring. 3(3-0) 312.
Relationship between money and interest rates, prices and output.

490. Mathematics for Economists
Fall. 3(3-0) 113, graduate status in either economics, agricultural economics or College of Business, or approval of department. Interdepartmental with and administered by the Mathematics Department.

499H. Honors and Senior Seminar
Fall, Spring. 4(4-0) May re-enroll for a maximum of 5 credits. Honors College students or economics seniors with 3.20 grade point average; 352H and 322H recommended. Directed reading and student research in contemporary economic problems.

800. Economic Analysis I
Fall. Winter. 3(3-0) 244 or 255.
501. Economic Analysis II

Winter, Spring. 4 credits. 800. Students may not receive credit in both 801 and 812.

Monopolistic and oligopolistic competition. General equilibrium analysis. Aggregate income and employment theory.

502. Economic Analysis III

Spring, Summer. 4 credits. 801 or 812. Students may not receive credit in both 802 and 813.

Aggregate income and employment theory. Study of money and credit as related to income, employment, and prices.

503. Seminar in Industrial Relations

For course description, see Interdisciplinary Courses.

506A. Fiscal Policy

Fall. 3 credits. Approval of department.

Economics of government surpluses, deficits, and debt. Examination of fiscal theories and programs to maintain economic stability, high level employment, and income, economic growth, and other goals.

506B. Public Revenues

Winter. 3 credits. Approval of department.

Theory and development of revenue systems. Incidence and public effects of taxes. Studies of selected national, state and local revenue structures for comparative analysis.

506C. Government Finance

Spring. 3 credits. Approval of department.

Revenue adequacy, fiscal controls, intergovernmental fiscal relations, tax burdens, subsidies, government costs and benefits.

510. Economics of Public Choice

Winter. 3(3-0) Approval of department. Interdepartmental with the Agricultural Economics and Resource Development Departments and administered by the Agricultural Economics Department.

Economics of alternative institutions for collective action. Emphasis on property rights and natural resources. Public goods, externality, non-rivalry, private, public, or common ownership of resources, income and power distribution, grants, welfare criteria, and market failure.

511. Public Program Analysis

Spring. Summer of odd-numbered years. 3(3-0) FSM 401 or EC 324 or approval of department. Interdepartmental with the Resource Development and Agricultural Economics Departments and administered by the Agricultural Economics Department.

Application of benefit-cost analysis to public programs of resource development. Issues and case studies in budgeting, investment criteria, pricing, externalities, and coordination.

512A. Microeconomics I: Choice and Exchange

(812) Fall. 3(3-0) 324, 325, 480 or MTH 215 or concurrently.

Consumption and exchange, the axiomatics of choice, involving time, introduction to welfare.

512B. Microeconomics II: Production and Distribution

Winter. 3(3-0) 812A.

Production—variable proportions, the multiproduct firm, programming analysis. Distribution—the micro theory.

512C. Microeconomics III: The Firm and Market

Spring. 3(3-0) 812B.

Theories of the firm. Market behavior—perfect and imperfect markets. Game theory.

513A. Macroeconomics I: Comparative Statics

(813) Fall. 3(3-0) 320, 321, 490 or MTH 215 or concurrently.

Macroe models and macro function; the interaction of macro markets.

513B. Macroeconomics II: Dynamics

Winter. 3(3-0) 813A.

Stochastic and dynamic models. Growth and technical change. The macro theory of distribution.

513C. General Equilibrium and Welfare

Spring. 3(3-0) 813B; 813C or concurrently.

The disaggregated general equilibrium system. Input-output economics. Welfare.

515. Labor Force Behavior

Spring. 4(4-0) 457. Interdepartmental with and administered by the School of Labor and Industrial Relations.

Theoretical and empirical analysis of factors affecting labor force participation rates, unemployment levels, employment distribution, hours of work, and labor mobility. Concepts and measurement methods.

518A. Monetary Theory

(818) Fall. 4 credits. 316, 320.

Money, the financial system, and interest theory as related to the determination of aggregate output, employment, and prices.

518B. Monetary Policy

(818) Winter. 4 credits. 818A.

Goals, techniques and effectiveness of monetary and financial policy.

521A. Competition and Monopoly in American Industry

Fall. 3 credits. Approval of department.

Examination of structure, behavior, and performance in industries.

521B. Government Policy Toward Private Enterprise

Winter. 3 credits. Approval of department.

Evolutions of government policy with respect to such problems as monopoly, mergers, unfair practices, and discrimination. Economic and legal appraisal of policy alternatives.

521C. Problems Related to Regulated Industries

Spring. 3 credits. Approval of department.

Departures from market competition as a policy norm, as in public utilities and transportation.

522A. Theory of International Trade

Fall. 3 credits. 427 or approval of department.

Classical and modern theories of international trade. Application of modern techniques of economic analysis to international trade theory.

522B. Theory of International Trade Policy

Winter. 3 credits. 822A.

Various means by which a government may influence the volume, character, and direction of its foreign commerce. In this connection an analysis is made of the theory of the tariff, the subsidy, exchange control, and quotas. Emphasis on the economic impact of trade controls upon a nation and the world.

522C. International Exchanges and Capital Flows

Spring. 3 credits. 822B.

Theory of exchange rates and international money markets especially with reference to other than current account items in balances of payments. Analysis of sources, causes, effects of capital flows with developing economies considered as a special case.

531. Mathematical Economics I

Fall. 3(3-0) 812, MTH 214, 334.


532. Mathematical Economics II

Winter. 3(3-0) 813; MTH 215, 334.

Mathematical models of growth and fluctuations dealing with macroeconomics, monetary theory, fiscal policy. The cobweb, static and dynamic multipliers, multiplier-accelerator models, trade cycle models. Relations among stocks, flows and time lags.

533. Mathematical Programming

Spring. 3(3-0) 800, or 812A, MTH 334. Interdepartmental with the Agricultural Economics, and Statistics and Probability Departments and administered by the Agricultural Economics Department.

Linear programming. Theory of linear economic models. Topics in nonlinear programming.

535. Econometrics and Price Analysis

(ARC 821.) Fall, Spring, Summer. 3(3-0) 325, STT 432. Interdepartmental with the Agricultural Economics Department.


538. Interdisciplinary Seminar on African Trade

For course description, see Interdisciplinary Courses.

541A. History of Economic Thought: Classical

Early thought, mercantilism, physiocracy, and classical economics.

541B. History of Economic Thought: Heterodox

Historicism, socialism, and institutionalism.

541C. History of Economic Thought: Modern

Development of marginalism, general equilibrium theory, employment theory, and mathematical economics.

550. The Development of Economic Institutions

Fall. 3(3-0) 430 or approval of department.


551. The Economics of Secular Change

Winter. 3(3-0) 320, 324, or approval of department.

Empirical studies of long-run economic trends and a consideration of alternative hypotheses explaining these trends including classical, Marxism, Harrod-Domar, and other general theories of economic development. Population growth, technological change, capital formation, occupational distribution, urbanization, and international trade.

A-37
Economics

Economic Problems of Underdeveloped Areas
Spring. 3(3-0) 320, 324, or approval of department.

854. The Emergence of Commercial Capitalism
Winter of odd-numbered years. 3 credits. 318, 324. Interdepartmental with the History Department.
The rise of the mercantilist economies of Europe with stress on the growth of internal and international trade and finance during the 18th and 17th centuries.

855. The Industrial Revolution in Europe
Winter of even-numbered years. 3 credits. 318, 324. Interdepartmental with the History Department.
The preconditions that led to the momentous changes in agriculture and industry in Europe from 1700-1914.

856. Wage Theory
Fall. 3 credits. 320. 324, or approval of department. Interdepartmental with the School of Labor and Industrial Relations.

857. Industrial Relations
Winter. 3 credits. 305 and approval of department. Open to graduate students in economics and graduate studies such as labor and industrial relations, psychology, sociology, anthropology, political science, business, and history. Interdepartmental and administered jointly with the School of Labor and Industrial Relations.

858. Labor Legislation and Public Policy
Spring. 3 credits. 305 or approval of department.
Criteria for public policy concerning unions and collective bargaining; current problems in labor legislation; role of federal and state governments in industrial relations; decision-making process in labor legislation.

859. Economics of the Firm
Fall, Winter, Summer. 4 credits. Graduate students in Business Administration. Not open to Economics majors.
Analysis of the firm. Problems facing management; economizing in use of resources, optimal combinations of products, pricing, competitive forces in markets affecting the firm.

860. American Economy
Fall, Winter, Spring. 4 credits. Thirteen credits in MBA core program. Not open to Economics and Agricultural Economics majors.

861. Business and Public Policy
Winter, Spring. 4 credits. 360 or with approval of department. Not open to majors.
Problem of government regulation of business.

862. American Economy
Fall, Winter, Spring. 4 credits. Thirteen credits in MBA core program. Not open to Economics and Agricultural Economics majors.

863. Business and Public Policy
Winter, Spring. 4 credits. 360 or with approval of department. Not open to majors.
Problem of government regulation of business.

Econometric models which relate to regulation. Regulatory legislation, regulatory bodies, and alternatives available.

853. Economic Problems of Underdeveloped Areas
Spring. 3(3-0) 320, 324, or approval of department.

857. Wage Theory
Fall. 3 credits. 320, 324, or approval of department. Interdepartmental with the School of Labor and Industrial Relations.

858. Industrial Relations
Winter. 3 credits. 305 and approval of department. Open to graduate students in economics and graduate studies such as labor and industrial relations, psychology, sociology, anthropology, political science, business, and history. Interdepartmental and administered jointly with the School of Labor and Industrial Relations.

859. Labor Legislation and Public Policy
Spring. 3 credits. 305 or approval of department.
Criteria for public policy concerning unions and collective bargaining; current problems in labor legislation; role of federal and state governments in industrial relations; decision-making process in labor legislation.

860. Economics of the Firm
Fall, Winter, Summer. 4 credits. Graduate students in Business Administration. Not open to Economics majors.
Analysis of the firm. Problems facing management; economizing in use of resources, optimal combinations of products, pricing, competitive forces in markets affecting the firm.

861. American Economy
Fall, Winter, Spring. 4 credits. Thirteen credits in MBA core program. Not open to Economics and Agricultural Economics majors.

862. Business and Public Policy
Winter, Spring. 4 credits. 360 or with approval of department. Not open to majors.
Problem of government regulation of business.

Econometric models which relate to regulation. Regulatory legislation, regulatory bodies, and alternatives available.

853. Economic Problems of Underdeveloped Areas
Spring. 3(3-0) 320, 324, or approval of department.

857. Wage Theory
Fall. 3 credits. 320, 324, or approval of department. Interdepartmental with the School of Labor and Industrial Relations.

858. Industrial Relations
Winter. 3 credits. 305 and approval of department. Open to graduate students in economics and graduate studies such as labor and industrial relations, psychology, sociology, anthropology, political science, business, and history. Interdepartmental and administered jointly with the School of Labor and Industrial Relations.

859. Labor Legislation and Public Policy
Spring. 3 credits. 305 or approval of department.
Criteria for public policy concerning unions and collective bargaining; current problems in labor legislation; role of federal and state governments in industrial relations; decision-making process in labor legislation.

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Fall, Winter, Summer. 4 credits. Graduate students in Business Administration. Not open to Economics majors.
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Winter, Spring. 4 credits. 360 or with approval of department. Not open to majors.
Problem of government regulation of business.

Econometric models which relate to regulation. Regulatory legislation, regulatory bodies, and alternatives available.