### 899 Master's Thesis Research

Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to master's students in Crop and Soil Sciences.

Master's thesis research.

# 921 Contemporary Statistical Models in Biology

Fall of odd years. 3(3-0) RB: (STT 465) or approval of department. Working knowledge of SAS software.

Estimating functions. Growth models, generalized linear models, linear and non-linear mixed models. Field experiments with spatial trends. Longitudinal data. Modeling in the presence of spatial and temporal correlations.

### 941 Quantitative Genetics in Plant Breeding

Spring of even years. 3(2-2) Interdepartmental with Forestry; Horticulture. RB: (CSS 819 and STT 464)

Theoretical and genetic basis of statistical analysis of

quantitative traits using genetic markers. Computational

tools for the study of quantitative traits.

### 999 Doctoral Dissertation Research

Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to doctoral students in Crop and Soil Sciences.

Doctoral dissertation research.

# EARTH SCIENCE ES

### Department of Geological Sciences College of Natural Science

### 800 Special Problems in Earth Science

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department.

Individual faculty directed study on topics in earth science.

# ECONOMICS EC

# Department of Economics College of Social Science

### 201 Introduction to Microeconomics

Fall, Spring, Summer. 3(3-0) Not open to students with credit in EC 251H.

Economic institutions, reasoning and analysis. Consumption, production, determination of price and quantity in different markets. Income distribution, market structure and normative analysis.

### 202 Introduction to Macroeconomics

Fall, Spring, Summer. 3(3-0) Not open to students with credit in EC 252H.

Determinants of Gross National Product, unemployment, inflation and economic growth. National income accounting and fiscal policy. Aggregate demand, supply management and monetary policy.

### 210 Economics Principles Using Calculus

Fall. 3(3-0) P: (MTH 133 or MTH 153H or MTH 126) Not open to students with credit in EC 201 or EC 202.

A combined microeconomics and macroeconomics course. Emphasis on topics of interest in engineering and management, such as discounting, cost-benefit analysis, innovation, externalities, and the role of government regulation.

### 251H Microeconomics and Public Policy

Fall, Spring. 4(4-0) Not open to students with credit in EC 301.

Theories of consumer behavior, production and cost. Output and price determination in competition and monopolies. Welfare economics, general equilibrium, externalities, and public goods.

# 252H Macroeconomics and Public Policy

Fall, Spring. 3(3-0) P: (EC 201 and ÉC 301) or (EC 251H) Not open to students with credit in EC 302.

Theory of national income, unemployment, inflation and economic growth and its application to economic analysis and policy.

# 293 Cooperative Education for Business Students

Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. Interdepartmental with Marketing and Supply Chain Management; Accounting; Finance; Management; Hospitality Business. Administered by Department of Marketing and Supply Chain Management. R: By permission of the Department only.

Integration of pre-professional educational employment experiences in industry and government with knowledge and processes taught in the student's academic program. Educational employment assignment approved by the Department of Marketing and Supply Chain Management.

### 301 Intermediate Microeconomics

Fall, Spring, Summer. 3(3-0) P: (EC 201) RB: (EC 202) Not open to students with credit in EC 251H.

Theories of consumer choice, production, cost, perfect competition, and monopoly. Welfare economics, general equilibrium, externalities and public goods.

## 302 Intermediate Macroeconomics

Fall, Spring, Summer. 3(3-0) P: (EC 201 and EC 202) Not open to students with credit in EC 252H.

National income accounting. Determination of aggregate output, employment, price level, and inflation rate. Policy implications.

### 306 Comparative Economic Systems

Fall. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H)

Characteristics and functions of economic systems. Alternative patterns of economic control, planning, and market structure. Theories, philosophies, and experiences associated with capitalism, socialism, and mixed economies.

### 310 Economics of Developing Countries

Spring. 3(3-0) P: (EC 201 or EC 251H)

Overview of economic patterns and policy issues of developing countries such as modern economic growth and structural transformation, state controls versus markets, poverty and human welfare, investments in human resources, and trade and industrialization.

### 320 Analysis of Economic Data

Fall, Spring. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H) R: Not open to students in the Department of Accounting or Department of Finance or School of Hospitality Business or Department of Management or Department of Marketing and Supply Chain Management.

Sources of economic data. Techniques for presenting and summarizing economic data. Testing theories of economic behavior. Methods for forecasting in uncertain economic environments. Evaluation of current quantitative work in economics.

# 330 Money, Banking, and Financial Markets

Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H)

Money markets and financial intermediation. Money, the Federal Reserve System, and monetary policy. Regulation of money markets.

# 335 Taxes, Government Spending and Public Policy

Fall, Spring, Summer. 3(3-0) Interdepartmental with Environmental Economics and Policy. P: (EC 201 or EC 251H) SA: PRM 335 Not open to students with credit in EC 435 or EC 436.

Economics of the public sector. Public goods, externalities, design and incidence of the tax system. Equity and efficiency effects of government programs.

### 340 Survey of International Economics

Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H) and (EC 202 or EC 252H) Not open to students with credit in EC 440 or EC 441

Comparative advantage. Costs and benefits of trade. International economic policies. Balance of payments. Foreign exchange markets. The international monetary system. Contemporary trade and international currency issues.

### 360 Private Enterprise and Public Policy

Fall, Spring, Summer. 3(3-0) P: (EC 201 or EC 251H)

Effects of antitrust, economic regulation, and other public policies on competition, monopoly, and other market problems in the United States economy.

### 380 Labor Relations and Labor Market Policy Fall, Spring, Summer. 3(3-0) P: (EC 201 or

Fall, Spring, Summer. 3(3-0) P: (EC 201 c EC 251H)

Development, functions, legal framework, and economic effects of unions and collective bargaining. Institutions and economic impacts of government programs. Minimum wages, workers' compensation, unemployment insurance, and antidiscrimination policies.

### 391 Special Topics in Economics

Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: (EC 201 or EC 251H) and (EC 202 or EC 252H) R: Approval of department.

Special topics supplementing regular course offerings.

### 401 Advanced Microeconomics

Fall, Spring. 3(3-0) P: (EC 301 or EC 251H) Economics of uncertainty and incomplete information. Game theory and theories of oligopoly. Transaction costs. Advanced topics in welfare economics, general equilibrium, externalities, and public goods.