

Economics

Department Chair

Jeff Milyo
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Undergraduate Academic Advisors

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The Department of Economics takes a global view of economics, with an emphasis on applied problems. An economics major prepares students for careers in business and government and for graduate work in areas such as economics, business and law. A basic understanding of economics develops insight into the many issues facing contemporary society, such as corporate downsizing, environmental pollution, urban decay, poverty, international trade, health care, educational reform, politics and sports deals.

The department also offers MA and PhD degrees in Economics as well as a minor.

Faculty

Professors C. Gu**, J. Haslag**, C. Koedel**, O. Loginova**, J. I. Miller**, J. Milyo**, S. Ni**, M. Pesko**, X. Wang**

Associate Professors S. Aura**, D. Kaplan**

Assistant Professors A. Carlson**, L. Laine*, S. Lee*, B. Street**, Y. Wang*

Associate Teaching Professors G. Chikhladze, E. Parsons*

Assistant Teaching Professors T. Chikhladze, K. Mayes-Denker

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.

** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

- BA in Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/ba-economics/>)
- BS in Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/bs-economics/>)
- Minor in Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/minor-economics/>)

Before a graduation plan in economics will be approved, students must have a cumulative GPA of 2.0 or a 2.0 GPA in economics coursework.

Departmental Honors

Candidates for Economics departmental honors must be Economics majors with at least a cumulative GPA of 3.30 and, in Economics courses taken at the University of Missouri-Columbia, at least a GPA of 3.50 for BA majors or a 3.25 for BS majors. Candidates must complete ECONOM 4371 Introductory Econometrics and ECONOM 4995 Honors Thesis during their junior or senior year and must receive a grade of B or higher in order to be awarded Department Honors.

Double Majors, Dual Degrees and Five-Year Program

For double majors and dual degrees, students must satisfy all requirements of both degree programs. Some courses may be allowed to count toward both degrees. Carefully chosen elective courses in addition to required courses can facilitate double majors and dual degrees.

Common double majors in the College of Arts and Science are:

- BA with majors in Economics and Political Science, Psychology, History, English or Communication
- BS with majors in Economics and Statistics or Mathematics

Common dual degrees with other schools and colleges are:

- BA with majors in Economics and Journalism or Education
- BS with majors in Economics and Engineering, Accountancy, Finance, or Marketing

By planning their courses carefully, Economics majors can earn a bachelor's and a master's degree in economics in five years. Students who are in the BA or BS programs are good candidates for this program. Students must be accepted to this program by the beginning of their senior year.

Students interested in pursuing any of these options should contact an Undergraduate Academic Advisor in economics for further advising.

Graduate

- MA in Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/ma-economics/>)
 - with emphasis in Econometrics and Quantitative Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/ma-economics-emphasis-econometrics-quantitative-economics/>)
- PhD in Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/phd-economics/>)
 - with emphasis in Econometrics and Quantitative Economics (<http://catalog.missouri.edu/collegeofartsandscience/economics/phd-economics-emphasis-econometrics-quantitative-economics/>)

College of Arts and Science
(573) 882-4776
(573) 882-2697 (fax)
<https://economics.missouri.edu/>

Director of Graduate Studies: Saku Aura (MA Program), David Kaplan (PhD Program)

About the Program

The Department of Economics offers graduate work leading to the master of arts and the doctor of philosophy degrees. The program prepares students for careers in government and private enterprises, colleges, universities and research institutions through training in the techniques

and applications of economic analysis, interpretation of data and the formulation and appraisal of public policy. Admission may be granted at any time to qualified students.

Degrees Offered

- MA and PhD in Economics
- Cooperative Dual Degrees: MS in Applied Mathematics and MA in Economics, MA in Economics and MA in Statistics, MA in Economics and JD in law

Specializations

The department offers fields of specialization in monetary economics, international economics, econometrics, public economics, industrial organization, labor economics, and quantitative microeconomic policy analysis.

Dual Degrees

The Departments of Mathematics and Economics offer selected students the option of obtaining dual degrees: an MS degree in Applied Mathematics and an MA degree in Economics. The Departments of Economics and Statistics offer selected students the option of obtaining dual degrees: an MA degree in Statistics and an MA degree in Economics within an integrated program. Whereas obtaining separate master's degrees would nominally require a minimum of 60 credit hours of course work, students enrolled in the dual master's degree program may obtain degrees based on 48 credit hours of course work. Students may be able to complete degree requirements within 2½ years.

Financial Support

Student financial support is available to graduate students as teaching and research assistantships, allocated based on promise and performance in the program. In addition, direct fellowship support may also be available to selected candidates. Tuition is waived for students who receive assistantship or fellowship support. February 1 is the deadline for applications for assistantships for the school year beginning in August, but earlier submissions are desirable. Late applications will be accepted subject to the availability of openings and funds.

ECONOM 1000: General Economics

Designed for non-majors. One semester course covering principles of microeconomics and macroeconomics. Topics include opportunity costs, gains from trade, efficiency and markets, non-competitive markets, game theory, government spending and taxation, economic growth, monetary and fiscal policy, unemployment and inflation, exchange rates. Graded on A-F basis only.

Credit Hour: 3-5

ECONOM 1014: Principles of Microeconomics

A broad survey of microeconomics, from the basic market model and its many applications to market failures and policy responses. Topics include potential trade offs between efficiency and equity in competition and trade policy; determinants of wage differentials, poverty and inequality; and evaluation of the benefits and costs of government interventions in markets.

Credit Hours: 3

ECONOM 1014H: Principles of Microeconomics-Honors

A broad introduction to microeconomics that is similar in coverage to ECONOM 1014, but with a more rigorous and quantitative approach. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: Honors eligibility required and a grade of "C" or higher in MATH 1050, MATH 1100, MATH 1400, MATH 1500 or earn sufficient MyMathTest College Algebra score of 70% or higher

ECONOM 1015: Principles of Macroeconomics

An introduction to the study of how macroeconomic forces and public policy affect the welfare of a nation. Topics include understanding the business cycle, economic growth, inflation, interest rates, and unemployment, as well as the effects of fiscal and monetary policy. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 1014 or ABM 1041

ECONOM 1015H: Principles of Macroeconomics - Honors

A broad introduction to macroeconomics that is similar in coverage to ECONOM 1015, but with a more rigorous approach. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 1014 or ABM 1041 or equivalent; Honors eligibility required

ECONOM 1051H: General Economics - Honors

One semester course covering principles of microeconomics and macroeconomics. Topics include opportunity costs, gains from trade, efficiency and markets, non-competitive markets, game theory, government spending and taxation, economic growth, monetary and fiscal policy, unemployment and inflation, exchange rates. Math Reasoning Proficiency Course.

Credit Hours: 5

Prerequisites: Honors eligibility required and C- or higher in MATH 1050 or MATH 1100

ECONOM 2004: Undergraduate Topics in Economics - Social Science

Organized study of selected topics in Economics; applied or theoretical economics; covers subjects not included in regularly offered courses.

Credit Hour: 1-3

ECONOM 2004H: Undergraduate Topics in Economics - Social Science - Honors

Organized study of selected topics in Economics; applied or theoretical economics; covers subjects not included in regularly offered courses.

Credit Hour: 1-3

Prerequisites: Honors eligibility required

ECONOM 2004W: Undergraduate Topics in Economics - Social Science - Writing Intensive

Organized study of selected topics in Economics; applied or theoretical economics; covers subjects not included in regularly offered courses.

Credit Hour: 1-3

ECONOM 2887: Pre-Internship in Economics

Pre-Internship experience for students interested in economics. Supervised pre-internship work with approval of Director of Undergraduate Studies and academic adviser. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 2888: Research in Economics

Development of a research project under supervision of a faculty member. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 3224: Introduction to International Economics

A topical course which emphasizes the application of basic economic analysis to real and current international economic issues. Topics include free trade, protectionism, free trade areas, multilateral trade negotiations, trade and development, exchange rates, the International Monetary System, and economic integration.

Credit Hours: 3

Prerequisites: ECONOM 1014 or ABM 1041

ECONOM 3229: Money, Banking and Financial Markets

Operation of the U.S. financial and economic system. Covers interest rates, banking regulation, the money supply process and the conduct of the Federal Reserve, inflation and the macroeconomy, exchange rates and the international financial system, rational expectations, and efficient markets.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (ECONOM 1015 or ABM 1042)

ECONOM 3229H: Money, Banking and Financial Markets - Honors

Operation of the U.S. financial and economic system. Covers interest rates, banking regulation, the money supply process and the conduct of the Federal Reserve, inflation and the macroeconomy, exchange rates and the international financial system, rational expectations, and efficient markets.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (ECONOM 1015 or ABM 1042). Honors eligibility required

ECONOM 3251: Managerial Economics

Starting with basic economic concepts, such as price elasticity, price discrimination, and scale effects, students will gain insight into modern business strategy and be able to apply it in the real world. Questions that are explored include: Why are some firms and industries more profitable than others? What economic tools do managers use to help them increase market power and create barriers to entry? How do leading firms in the new information economy differ from successful firms of the past? What are the reasons for and consequences of increasing concentration in many industries? Has antitrust law been effective? Students who have already completed ECONOM 4351 are not eligible to earn credit for ECONOM 3251.

Credit Hours: 3

Prerequisites: (MATH 1400 or MATH 1500 or equivalent) and (ECONOM 1000 or ECONOM 1014 or ABM 1041)

ECONOM 3251H: Managerial Economics - Honors

Starting with basic economic concepts, such as price elasticity, price discrimination, and scale effects, students will gain insight into modern business strategy and be able to apply it in the real world. Questions that are explored include: Why are some firms and industries more profitable than others? What economic tools do managers use to help them increase market power and create barriers to entry? How do leading firms in the new information economy differ from successful firms of the past? What are the reasons for and consequences of increasing concentration in many industries? Has antitrust law been effective? Students who have already completed ECONOM 4351 are not eligible to earn credit for ECONOM 3251.

Credit Hours: 3

Prerequisites: (MATH 1400 or MATH 1500 or equivalent) and (ECONOM 1000 or ECONOM 1014 or ABM 1041); Honors eligibility required

ECONOM 3271: Introduction to Applied Econometric Practice

Introduction to the use of regression analysis of economic data, including simple and multiple regression, dummy variables. Econometric problems

considered include heteroscedasticity, autocorrelation, multicollinearity and simultaneous equation issues.

Credit Hours: 3

ECONOM 3367: Law and Economics

This course is a survey of economic analyses of American legal institutions. Students will apply basic microeconomics, game theoretic and statistical concepts to the study of property, contracts, torts, the legal process, crime, and the judiciary.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (ECONOM 3271 or ABM 2225 or (STAT 1200 or higher)). May be restricted to Economics majors only during early registration

ECONOM 3367W: Law and Economics - Writing Intensive

This course is a survey of economic analyses of American legal institutions. Students will apply basic microeconomics, game theoretic and statistical concepts to the study of property, contracts, torts, the legal process, crime, and the judiciary.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (ECONOM 3271 or ABM 2225 or (STAT 1200 or higher)). May be restricted to Economics majors only during early registration

ECONOM 3385: Readings in Economics

Directed readings in intermediate economics. Students develop and complete a directed readings program covering content appropriate for an intermediate undergraduate economics course under the guidance of a faculty mentor. Credit arranged by the instructor.

Credit Hour: 1-3

Prerequisites: Instructor's consent

ECONOM 3724: Economic Development and Politics in Latin America

Latin America is a social, economic, and political kaleidoscope searching for development and prosperity for many decades. These objectives have eluded most of the region's countries due to their institutional weaknesses, economic structures, social polarization, and self-serving political classes. This course questions how a well-endowed land, diverse society, and growing economies fail to improve most of its population's quality of life. It begins with a brief historical overview of Latin America and looks at the region's economic growth, development patterns, and leading social and political challenges and opportunities. The course analyzes the policy options and management exercised over time and promotes their discussion from an economic and political point of view. Through class discussions, reading, and researching, the course attempts to identify policy options and recommendations that could give the region an opportunity for sustainable growth. Thus, the course aims to introduce the students to the intricacies of Latin American politics and

social and economic development while exposing them to policy-making and assessment.

Credit Hours: 3

Prerequisites: ECONOM 1014 or ABM 1041 or equivalent

ECONOM 3887: Internship in Economics

Internship experience for students interested in economics. Supervised internship work with approval of Director of Undergraduate Studies and academic adviser. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 3888: Research in Economics

Development of a research project under supervision of a faculty member. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 3940: Internship

Internship experience for students interested in economics. Supervised internship work with approval of Director of Undergraduate Studies and academic adviser. Graded on S/U basis only.

Credit Hour: 1-3

Prerequisites: Instructor's consent

ECONOM 3950: Practicum in Economics

Practical experience in consulting, teaching or research guided by faculty advisor. Graded on S/U basis only.

Credit Hour: 1-3

Prerequisites: Instructor's consent

ECONOM 4004: Topics in Economics- Social Science

Study in applied or theoretical economics; covers subjects not included in regularly offered courses.

Credit Hour: 1-3

Prerequisites: May be restricted to Economics majors only during early registration

ECONOM 4004W: Topics in Economics- Social Science - Writing Intensive

Study in applied or theoretical economics; covers subjects not included in regularly offered courses.

Credit Hour: 1-3

Prerequisites: May be restricted to Economics majors only during early registration

ECONOM 4311: Labor Economics

(cross-leveled with ECONOM 7311). Surveys theoretical explanations of wage and employment determination in contemporary labor markets.

Credit Hours: 3

Prerequisites: ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4311W: Labor Economics - Writing Intensive

Surveys theoretical explanations of wage and employment determination in contemporary labor markets.

Credit Hours: 3

Prerequisites: ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4315: Public Economics

(cross-leveled with ECONOM 7315). Analyzes economic effects of government expenditures, taxes and debt. Expenditure and taxation principles, tax reform, cost-benefit analysis, fiscal policy.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4315HW: Public Economics - Honors/Writing Intensive

(cross-leveled with ECONOM 7315). Analyzes the role of government in a market economy. Topics include market failure and redistribution, taxation, expenditure programs, cost-benefit analysis, and political economy.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351; Honors eligibility required. May be restricted to Economics majors only during early registration

ECONOM 4315W: Public Economics - Writing Intensive

Analyzes the role of government in a market economy. Topics include market failure and redistribution, taxation, expenditure programs, cost-benefit analysis, and political economy.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4316: State and Local Finance

State and local tax and expenditure problems, intergovernmental fiscal relations, problems of metropolitan areas.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351 or instructor's consent

ECONOM 4317: Urban Economics

(cross-leveled with ECONOM 7317). This is a class in urban economics. Topics covered include: formation of cities, land markets, housing markets, economics of transportation and commuting, cities as engines of growth and issues affecting cities such as crime, poverty and migration. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4317W: Urban Economics - Writing Intensive

(cross-leveled with ECONOM 7317). This is a class in urban economics. Topics covered include: formation of cities, land markets, housing markets, economics of transportation and commuting, cities as engines of growth and issues affecting cities such as crime, poverty and migration. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4318: Environmental Economics

(cross-leveled with ECONOM 7318). This course provides an introduction to the field of environmental economics for students with a background in economic theory and statistics/econometrics. It is designed to give students an overview of how economic principles can be applied to design and evaluate environmental policies. Topic areas and applications include: Market failure (e.g., climate change) and its remedies, evaluation of environmental policies, measurement of benefits and costs of environmental conditions and policies, and the frontiers of environmental economics - climate change, environmental justice, IRA, etc.

Credit Hours: 3

Prerequisites: (ECONOM 3251 or ECONOM 4351) and (ECONOM 3271 or STAT 2200 or ABM 2225)

ECONOM 4318W: Environmental Economics - Writing Intensive

(cross-leveled with ECONOM 7318). This course provides an introduction to the field of environmental economics for students with a background

in economic theory and statistics/econometrics. It is designed to give students an overview of how economic principles can be applied to design and evaluate environmental policies. Topic areas and applications include: Market failure (e.g., climate change) and its remedies, evaluation of environmental policies, measurement of benefits and costs of environmental conditions and policies, and the frontiers of environmental economics - climate change, environmental justice, IRA, etc.

Credit Hours: 3

Prerequisites: (ECONOM 3251 or ECONOM 4351) and (ECONOM 3271 or STAT 2200 or ABM 2225)

ECONOM 4320: History of Economic Thought

(cross-leveled with ECONOM 7320). Origins of modern economic thought in the context of social and intellectual environment of the time in which they originated, their contribution to their period and to modern thought.

Credit Hours: 3

Prerequisites: ECONOM 1014 and ECONOM 1015; or ECONOM 1000 or ECONOM 1051H. May be restricted to Economics majors only during early registration

ECONOM 4320W: History of Economic Thought - Writing Intensive

Origins of modern economic thought in the context of social and intellectual environment of the time in which they originated, their contribution to their period and to modern thought.

Credit Hours: 3

Prerequisites: ECONOM 1014 and ECONOM 1015; or ECONOM 1000 or ECONOM 1051H. May be restricted to Economics majors only during early registration

ECONOM 4326: Economics of International Trade

(cross-leveled with ECONOM 7326). The microeconomic theory of international trade. Topics include comparative advantage, the theory of commercial policy, economic integration, trade with less developed countries and the trade effects of economic growth.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4326W: Economics of International Trade - Writing Intensive

(cross-leveled with ECONOM 7326). The microeconomic theory of international trade. Topics include comparative advantage, the theory of commercial policy, economic integration, trade with less developed countries and the trade effects of economic growth.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4328: Financial Economics

(cross-leveled with ECONOM 7328). Financial economics is economics applied to tradeable financial assets, such as stocks and bonds. The main topics covered are the valuation of stocks, bonds, and other financial assets; portfolio theory; the capital asset pricing model; the efficient market hypothesis; capital structure theories; options and other derivatives; principal/agent issues; and behavioral finance. The course uses simple math and current examples to understand and apply the theories.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (MATH 1400 or MATH 1500) and (ECONOM 3271 or STAT 2200 or STAT 2500 or STAT 4710 or STAT 4750 or ABM 2225). May be restricted to Economics majors only during early registration

ECONOM 4329: The Banking System and the Money Market

(cross-leveled with ECONOM 7329). Organization of the money market; credit control procedures and aims, effect of bank expansion and contraction on money market and national income deregulation.

Credit Hours: 3

Prerequisites: (ECONOM 1015 or ABM 1042) and (ECONOM 3251 or ECONOM 4351). May be restricted to Economics majors only during early registration

ECONOM 4329W: The Banking System and the Money Market - Writing Intensive

Organization of the money market; credit control procedures and aims, effect of bank expansion and contraction on money market and national income deregulation.

Credit Hours: 3

Prerequisites: (ECONOM 1015 or ABM 1042) and (ECONOM 3251 or ECONOM 4351). May be restricted to Economics majors only during early registration

ECONOM 4340: Introduction to Game Theory

(cross-leveled with ECONOM 7340). An introduction to the theory of games, viewed as a set of tools used widely in economics to study situations in which decision-makers (consumers, firms, governments, etc.) interact. The course introduces the basic theory, emphasizing the concepts and their economic applications.

Credit Hours: 3

Prerequisites: ECONOM 4351

ECONOM 4345: Economics of Education

(cross-leveled with ECONOM 7345). Economic theory is used to analyze the market for educational services and education policy. Topics include:

human capital theory, cost and performance measures for public and private schools, market based approaches to school reform, school finance, higher education cost and access.

Credit Hours: 3

Prerequisites: ECONOM 4351 and (ECONOM 3271 or STAT 2200 or STAT 2500 or STAT 4710 or STAT 4750 or ABM 2225). May be restricted to Economics majors only during early registration

ECONOM 4345W: Economics of Education - Writing Intensive

Economic theory is used to analyze the market for educational services and education policy. Topics include: human capital theory, cost and performance measures for public and private schools, market based approaches to school reform, school finance, higher education cost and access.

Credit Hours: 3

Prerequisites: ECONOM 4351 and (ECONOM 3271 or STAT 2200 or STAT 2500 or STAT 4710 or STAT 4750 or ABM 2225). May be restricted to Economics majors only during early registration

ECONOM 4351: Intermediate Microeconomics

(cross-leveled with ECONOM 7351). Theory of rational behavior in consumption, production, and pricing decisions of households and firms. Partial equilibria in product and factor markets under competition, monopoly, oligopoly, and monopolistic competition. A brief introduction to general equilibrium and welfare economics is provided. Calculus is employed. Students who have already completed ECONOM 4351 are not eligible to earn credit for ECONOM 3251.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (MATH 1400 or MATH 1500)

ECONOM 4351H: Intermediate Microeconomics - Honors

(cross-leveled with ECONOM 7351). Theory of rational behavior in consumption, production, and pricing decisions of households and firms. Partial equilibria in product and factor markets under competition, monopoly, oligopoly, and monopolistic competition. A brief introduction to general equilibrium and welfare economics is provided. Calculus is employed.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (MATH 1400 or MATH 1500). Honors eligibility required

ECONOM 4353: Intermediate Macroeconomics

(cross-leveled with ECONOM 7353). The study of the structure and performance of national economics. Topics include: long-term economic growth; aggregate economic fluctuations, unemployment, and inflation; government policies and macroeconomic performance.

Credit Hours: 3

Prerequisites: (ECONOM 1015 or ABM 1042) and ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4353W: Intermediate Macroeconomics - Writing Intensive

(cross-leveled with ECONOM 7353). The study of the structure and performance of national economics. Topics include: long-term economic growth; aggregate economic fluctuations, unemployment, and inflation; government policies and macroeconomic performance.

Credit Hours: 3

Prerequisites: (ECONOM 1015 or ABM 1042) and ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4355: Industrial Organization and Competitive Strategy

(cross-leveled with ECONOM 7355). Analyzes the structure of industry, its impact on the operations of the firm and significance for public policy. The focus is on strategic interaction among firms with market power. Topics include oligopoly, competition, collusion, price discrimination, product differentiation, advertising, entry and exit.

Credit Hours: 3

Prerequisites: ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4355W: Industrial Organization and Competitive Strategy - Writing Intensive

Analyzes the structure of industry, its impact on the operations of the firm and significance for public policy. The focus is on strategic interaction among firms with market power. Topics include oligopoly, competition, collusion, price discrimination, product differentiation, advertising, entry and exit.

Credit Hours: 3

Prerequisites: ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4356: Economics in the Digital Era

(cross-leveled with ECONOM 7356). From what we watch, to whom we meet, to how we find out next job, platforms such as Facebook, Amazon, Google, and LinkedIn have come to play a role in almost every decision we make. Along the way, these platforms have become the most valuable companies in the world. This course compares the economics of the digital era with that of the "old economy." How do information goods differ from physical goods? How do digital markets compare with traditional markets? How are property rights created and maintained in the digital economy? How does competition differ? What is the role of personal data and privacy?

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351. May be restricted to Economics majors only during early registration

ECONOM 4357: Health Economics

(cross-leveled with ECONOM 7357, PUB_AF 7357). Analyzes the economics of health care in the United States with particular attention paid to the role of government. It examines the demand for health care and the structure and consequences of public and private health insurance; the supply of health care, including professional training, licensure, specialization and compensation, hospital competition and finance, and the determinants and consequences of technical change in medicine and health care reform.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351 and (STAT 2200 or STAT 2500 or ECONOM 3271) or equivalent. May be restricted to Economics majors only during early registration

ECONOM 4357W: Health Economics - Writing Intensive

Analyzes the economics of health care in the United States with particular attention paid to the role of government. It examines the demand for health care and the structure and consequences of public and private health insurance; the supply of health care, including professional training, licensure, specialization and compensation, hospital competition and finance, and the determinants and consequences of technical change in medicine and health care reform.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351 and (STAT 2200 or STAT 2500 or ECONOM 3271) or equivalent. May be restricted to Economics majors only during early registration

ECONOM 4370: Quantitative Economics

(cross-leveled with ECONOM 7370). The aim of this course is to provide an introduction to the mathematical language of economic theory. Topics include linear models, matrix algebra, rules of differentiation and comparative static analysis, optimization.

Credit Hours: 3

Prerequisites: ECONOM 4351

ECONOM 4371: Introductory Econometrics

(cross-leveled with ECONOM 7371). Study methods for quantitative analysis of economic data. Estimation techniques, tests of significance, prediction and forecasting reviewed with respect to problems presented by economic data and information demands of economic decision models.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041) and (ECONOM 3271 or STAT 2200 or STAT 2500 or STAT 4710 or STAT 4750 or ABM 2225)

ECONOM 4385: Problems in Economics

Directed readings in advanced economics. Students develop and complete a directed readings program on a focused economics topic that covers content appropriate for an advanced undergraduate economics course under the guidance of a faculty mentor. Credit arranged by the instructor.

Credit Hour: 1-3

Prerequisites: ECONOM 4351, ECONOM 4371, and instructor's consent. Not open to non-majors

ECONOM 4846: Economics of Discrimination

This course surveys economic research on the causes and consequences of race and sex disparities in economic and social indicators, with a particular emphasis on recent empirical studies and current domestic policy debates.

Credit Hours: 3

Prerequisites: ECONOM 3271 or STAT 2500

Corequisites: ECONOM 4371 or STAT 3500

ECONOM 4846W: Economics of Discrimination - Writing Intensive

This course surveys economic research on the causes and consequences of race and sex disparities in economic and social indicators, with a particular emphasis on recent empirical studies and current domestic policy debates.

Credit Hours: 3

Prerequisites: ECONOM 3271 or STAT 2500

Corequisites: ECONOM 4371 or STAT 3500

ECONOM 4887: Internship in Economics

Internship experience for students interested in economics. Supervised internship work with approval of Director of Undergraduate Studies and academic adviser. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 4888: Research in Economics

Development of a research project under supervision of a faculty member. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0

Prerequisites: instructor's consent

ECONOM 4940: Internship in Economics

Internship experience for Economics majors. 40 hours of supervised internship work with approval of Director of Undergraduate Studies and academic advisor. Graded on S/U basis only.

Credit Hour: 1-3

Prerequisites: Instructor's consent

ECONOM 4965: Independent Research in Economics

Development of a carefully considered research project under close supervision of a faculty member. Credit arranged by instructor.

Credit Hour: 1-3

Prerequisites: instructor's consent

ECONOM 4970: Senior Seminar

Seminar for seniors who are majoring in economics. Multiple writing assignments will emphasize synthesis of theoretical, empirical, and institutional economics. Not open to non-majors.

Credit Hours: 3

Prerequisites: ECONOM 4351

ECONOM 4995: Honors Thesis

Not open to non-majors. Capstone course required for Economics honors students.

Credit Hours: 3

Prerequisites: ECONOM 4351

ECONOM 7001: Topics in Economics - General

Study in applied or theoretical economics. Subjects and earnable credit may vary from semester to semester.

Credit Hour: 1-99

Prerequisites: instructor's consent

ECONOM 7311: Labor Economics

(cross-leveled with ECONOM 4311). Surveys theoretical explanations of wage and employment determination in contemporary labor markets.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 7351

ECONOM 7315: Public Economics

(cross-leveled with ECONOM 4315). Analyzes economic effects of government expenditures, taxes and debt. Expenditure and taxation principles, tax reform, cost-benefit analysis, fiscal policy.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351

ECONOM 7316: State and Local Finance

State and local tax and expenditure problems, intergovernmental fiscal relations, problems of metropolitan areas.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 7351 or instructor's consent

ECONOM 7317: Urban Economics

(cross-leveled with ECONOM 4317). This is a class in urban economics. Topics covered include: formation of cities, land markets, housing markets, economics of transportation and commuting, cities as engines of growth and issues affecting cities such as crime, poverty and migration. Graded on A-F basis only.

Credit Hours: 3

ECONOM 7318: Environmental Economics

(cross-leveled with ECONOM 4318). This course provides an introduction to the field of environmental economics. It is designed to give students an overview of how economic principles can be applied to design and evaluate environmental policies. Topic areas and applications include: Market failure (e.g., climate change) and its remedies, evaluation of environmental policies, measurement of benefits and costs of environmental conditions and policies, and the frontiers of environmental economics- climate change, environmental justice, IRA, etc.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351

ECONOM 7320: History of Economic Thought

(cross-leveled with ECONOM 4320). Origins of modern economic thought in the context of social and intellectual environment of the time in which they originated, their contribution to their period and to modern thought.

Credit Hours: 3

Prerequisites: ECONOM 1014 and ECONOM 1000 or ECONOM 1051H

ECONOM 7326: Economics of International Trade

(cross-leveled with ECONOM 4326). The microeconomic theory of international trade. Topics include comparative advantage, the theory of commercial policy, economic integration, trade with LDC's and the trade effects of economic growth.

Credit Hours: 3

Prerequisites: ECONOM 7351 or instructor's consent

ECONOM 7328: Financial Economics

(cross-leveled with ECONOM 4328). Financial economics is economics applied to tradeable financial assets, such as stocks and bonds. The main topics covered are the valuation of stocks, bonds, and other financial assets; portfolio theory; the capital asset pricing model; the efficient market hypothesis; capital structure theories; options and other derivatives; principal/agent issues; and behavioral finance. The course uses simple math and current examples to understand and apply the theories.

Credit Hours: 3

Prerequisites: ECONOM 1014; (MATH 1400 or MATH 1500); and (STAT 2200 or STAT 2500 or ECONOM 3271 or ABM 2225)

ECONOM 7329: The Banking System and the Money Market

(cross-leveled with ECONOM 4329) Organization of the money market; credit control procedures and aims, effect of bank expansion and contraction on money market and national income deregulation.

Credit Hours: 3

Prerequisites: ECONOM 1015 or ABM 1042 or ECONOM 1000 or ECONOM 1051H

ECONOM 7340: Introduction to Game Theory

(cross-leveled with ECONOM 4340). An introduction to the theory of games, viewed as a set of tools used widely in economics to study situations in which decision-makers (consumers, firms, governments, etc.) interact. The course introduces the basic theory, emphasizing the concepts and their economic applications.

Credit Hours: 3

Prerequisites: ECONOM 7351 or instructor's consent

ECONOM 7345: Economics of Education

(cross-leveled with ECONOM 4345). Economic theory is used to analyze the market for educational services and education policy. Topics include: human capital theory, cost and performance measures for public and private schools, market based approaches to school reform, school finance, higher education cost and access.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041 or ECONOM 1000) and (STAT 2200 or STAT 2500 or ECONOM 3271) or equivalent

ECONOM 7351: Intermediate Microeconomics

(cross-leveled with ECONOM 4351). Theory of rational behavior in consumption, production, and pricing decisions of households and firms. Partial equilibria in product and factor markets under competition, monopoly, oligopoly, and monopolistic competition. A brief introduction to general equilibrium and welfare economics is provided. Calculus is employed.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ABM 1041 or ECONOM 1000 or ECONOM 1051H) and (MATH 1400 or MATH 1500) or equivalent

ECONOM 7353: Intermediate Macroeconomics

(cross-leveled with ECONOM 4353). The study of the structure and performance of national economics. Topics include: long-term economic growth, aggregate economic fluctuations, unemployment, and inflation; consequences for national economies of being part of the global economic system; government policies and macroeconomic performance.

Credit Hours: 3

Prerequisites: (ECONOM 1000 or ECONOM 1015 or ABM 1042) and (MATH 1400 or MATH 1500) or equivalent

ECONOM 7355: Industrial Organization and Competitive Strategy

(cross-leveled with ECONOM 4355). Analyzes the structure of industry, its impact on the operations of the firm and significance for public policy. The focus is on strategic interaction among firms with market power. Topics include oligopoly, competition, collusion, price discrimination, product differentiation, advertising, entry and exit.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 7351

ECONOM 7356: Economics in the Digital Era

(cross-leveled with ECONOM 4356). From what we watch, to whom we meet, to how we find out next job, platforms such as Facebook, Amazon, Google, and LinkedIn have come to play a role in almost every decision we make. Along the way, these platforms have become the most valuable companies in the world. This course compares the economics of the digital era with that of the "old economy." How do information goods differ from physical goods? How do digital markets compare with traditional markets? How are property rights created and maintained in the digital economy? How does competition differ? What is the role of personal data and privacy?

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351

ECONOM 7357: Health Economics

(same as PUB_AF 7357; cross-leveled with ECONOM 4357). Analyzes the economics of health care in the United States with particular attention paid to the role of government. It examines the demand for health care and the structure and consequences of public and private health insurance; the supply of health care, including professional training, licensure, specialization and compensation, hospital competition and finance, and the determinants and consequences of technical change in medicine; and examination of recent proposals and initiatives for health care reform.

Credit Hours: 3

Prerequisites: ECONOM 3251 or ECONOM 4351 and (STAT 2200 or STAT 2500 or ECONOM 3271) or equivalent

ECONOM 7361: Comparative Economic Systems

(cross-leveled with ECONOM 4361). Study of capitalism, market socialism, and central planning.

Credit Hours: 3

Prerequisites: ECONOM 3229 and ECONOM 3251 or ECONOM 4351

ECONOM 7370: Quantitative Economics

(cross-leveled with ECONOM 4370). The aim of this course is to provide an introduction to the mathematical language of economic theory. Topics include linear models, matrix algebra, rules of differentiation and comparative static analysis, optimization. Prerequisites: ECONOM: 7351.

Credit Hours: 3

ECONOM 7371: Introductory Econometrics

(cross-leveled with ECONOM 4371). Study methods for quantitative analysis of economic data. Estimating techniques, tests of significance, prediction and forecasting reviewed with respect to problems presented by economic data and information demands of economic decision models.

Credit Hours: 3

Prerequisites: (ECONOM 1014 or ECONOM 1000 or ABM 1041 or equivalent) and (ECONOM 3271 or STAT 2200 or STAT 2500 or STAT 4710 or ABM 2225 or equivalent)

ECONOM 7775: Dynamic Optimization and its Applications to the Natural Sciences and Economics

(cross-leveled with ECONOM 4775). Development of Calculus of Variations and Optimal Control Theory. Applications. Extensions to stochastic and robust control.

Credit Hour: 1-3

Prerequisites: ECONOM 7370 or instructor's consent

ECONOM 7846: Economics of Discrimination

(cross-leveled with ECONOM 4846). This course surveys economic research on the causes and consequences of race and sex disparities in economic and social indicators, with a particular emphasis on recent empirical studies and current domestic policy debates. Topics include discrimination in employment and compensation; educational attainment; housing and lending; crime, policing and sentencing; health and health care; and political participation and representation. Disparities and discrimination based on ethnicity, sexual preference, physical appearance and disability are also discussed. Graded on A-F basis only.

Credit Hours: 3

ECONOM 8001: Topics in Economics- General

Organized study of selected topics. Subjects and earnable credit may vary from semester to semester.

Credit Hours: 3

Prerequisites: instructor's consent

ECONOM 8085: Problems in Economics

Graduate students may select topics for study and investigation subject to approval by supervising faculty.

Credit Hour: 1-99

ECONOM 8340: Game Theory

Game theory is the study of strategic behavior by agents who perceive themselves as "large" relative to the market and who therefore consider the effect of their behavior on others. This course examines the rigorous theory of strategic interaction of rational agents. May be repeated for credit. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 4351 or equivalent; MATH 1320 or equivalent

ECONOM 8370: Mathematics for Economics

The aim of this course is to cover essential mathematics used in economics. Topics include introductory linear algebra, multivariate calculus, comparative statics analysis, unconstrained optimization, and equality constrained optimization. May be repeated for credit. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 4351 or equivalent

ECONOM 8413: Research Workshop I

Required course for economics MA students. Combines instruction, student presentations, and seminar participation to introduce research methods and practice. A major research paper are required.

Credit Hours: 3

Prerequisites: ECONOM 8451, ECONOM 8453, and ECONOM 8473 or instructor's consent

ECONOM 8451: Microeconomic Theory

MA-level course in microeconomic theory. The course relies extensively on calculus to survey theories of: rational behavior in consumption, production, and pricing decisions of households and firms; partial equilibria in product and factor markets under competition, monopoly, oligopoly and monopolistic competition; and general equilibrium and welfare.

Credit Hours: 3

ECONOM 8453: Macroeconomic Theory

The purpose of this course is to develop one's understanding of the core theories in modern macroeconomics. Models commonly used to study aggregate economic behavior will be discussed. This course intensively uses algebra and calculus.

Credit Hours: 3

Prerequisites: ECONOM 4353 or equivalent; at least concurrent enrollment in ECONOM 8451. Instructor's consent required for non graduate level students

ECONOM 8472: Econometric Methods I

Familiarizes students with fundamental techniques found and used in applied economic research. Topics include: ordinary least squares, generalized least square, instrumental variables, maximum likelihood estimation, and generalized methods of moments.

Credit Hours: 3

ECONOM 8473: Applied Econometrics

Topics include: nonlinear least squares, numerical optimization, maximum likelihood and basic panel data and time series methods. Graded on A-F basis only.

Credit Hours: 3

Prerequisites: ECONOM 7371 or ECONOM 8472; and ECONOM 7370 or ECONOM 8370

ECONOM 9001: Topics in Economics

Selected current topics in economics.

Credit Hours: 3

ECONOM 9085: Problems in Economics

Graduate students may select topics for study and investigation subject to approval by supervising faculty.

Credit Hour: 1-99

ECONOM 9090: Research in Economics

Thesis research for Ph.D. degree. Graded on a S/U basis only.

Credit Hour: 1-99

ECONOM 9413: Research Workshop II

Introduces doctoral students to practices of preparing scholarly economic research by moving through the process of selecting a topic, identifying relevant literature, and communicating results. Graded on A-F basis only.

Credit Hour: 1-3

Prerequisites: ECONOM 9452, ECONOM 9454 and ECONOM 9474; PhD standing

ECONOM 9430: Advanced Money and Banking

The working and structure of institutional arrangements, welfare aspects of structural policies, operation of money and credit markets, and behavior of returns on assets.

Credit Hours: 3

Prerequisites: ECONOM 9452

ECONOM 9431: Central Banking Policies

Examines central banking procedures, policies and the role they play in maintaining economic stability. Special attention to connection of Federal Reserve System with money and capital markets.

Credit Hours: 3

Prerequisites: ECONOM 9452

ECONOM 9446: Advanced Empirical Methods

Empirical and modeling techniques for evaluation of microeconomic policy questions.

Credit Hours: 3

Prerequisites: ECONOM 8451, ECONOM 8473

Recommended: Concurrent enrollment in ECONOM 8473 or ECONOM 9473

ECONOM 9447: Advanced Empirical Methods II

Applies the methods and techniques of microeconomics and to specific timely policy questions. Taught by applied-microeconomics faculty and focuses on current topics in labor economics, public economics, crime economics, the economics of education, health economics, and other applied areas of microeconomics.

Credit Hours: 3

Prerequisites: ECONOM 9446

Recommended: Concurrent enrollment in ECONOM 8473 or ECONOM 9473

ECONOM 9451: Advanced Microeconomic Theory I

The theory of rational behavior and partial equilibrium in markets. Topics include consumer behavior, theory of the firm, decisions making under uncertainty, perfect competition, monopoly and monopsony, and imperfect competition. Graded on A/F basis only.

Credit Hours: 3
Prerequisites: PhD standing

ECONOM 9452: Advanced Microeconomic Theory II
Survey of equilibrium theory and market failures in economics. Topics include the structure and modeling of games, and cooperative and non-cooperative equilibrium concepts.

Credit Hours: 3
Prerequisites: ECONOM 9451

ECONOM 9453: Advanced Macroeconomic Theory I
The course is to further develop one's understanding of the modern theories in macroeconomics. Workhorse models that study aggregate economic behavior will be discussed. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: PhD standing

ECONOM 9454: Advanced Macroeconomic Theory II
Analyzes topics in income analysis, including capital theory and economic dynamics.

Credit Hours: 3
Prerequisites: ECONOM 9453

ECONOM 9455: Monopoly and Competition
A survey of the theoretical and empirical literature on the organization of industries. Includes study of monopolized markets, competitive markets, and strategic interaction among firms in imperfectly competitive markets. Both the rationale and practice of anti-trust policy are studied.

Credit Hours: 3
Prerequisites: ECONOM 9451

ECONOM 9457: Computational Economics
Covers numerical and computational methods to solve economic models at the research frontier. Emphasis is on practical applications to prepare students for independent research. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: ECONOM 8451 and ECONOM 8453 and ECONOM 8472

ECONOM 9471: Advanced Game Theory
Presents core concepts in game theory and illustrates their uses with a range of applications.

Credit Hours: 3
Prerequisites: ECONOM 9452

ECONOM 9472: Econometric Theory I
Analysis of linear regression models from an advanced statistical perspective.

Credit Hours: 3

ECONOM 9473: Econometric Theory II
Analysis of nonlinear regression models and other essential econometric tools not covered in ECONOM 9472 from an advanced statistical perspective.

Credit Hours: 3
Prerequisites: ECONOM 9472

ECONOM 9474: Advanced Topics in Econometrics I
Equips students with some essential tools for conducting publishable econometric research. Topics at the discretion of the instructor - typically time series analysis. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: ECONOM 9473

ECONOM 9476: Advanced Topics in Econometrics II
Equips students with some essential tools for conducting publishable econometric research. Topics at the discretion of the instructor - typically microeconometrics.

Credit Hours: 3
Prerequisites: ECONOM 9473

ECONOM 9477: Advanced Topics in Econometrics III
Equips students with some essential tools for conducting publishable econometric research. Topics at the discretion of the instructor - typically the second semester of a two-semester time series sequence beginning with ECONOM 9474 or a two-semester microeconometrics sequence beginning with ECONOM 9476.

Credit Hours: 3
Prerequisites: ECONOM 9473

ECONOM 9479: Mathematical Methods for Economics
Mathematical methods for doctoral students in economics.

Credit Hours: 3
