Economics (ECO)

The Department of Economics offers two majors, one in Economics and one in Business Economics. For either major, students have a choice of earning the Bachelor of Art (BA) degree or the Bachelor of Science (BS) degree. The BA in both majors provides students with the flexibility to tailor the major to their specific interests, whether qualitative or quantitative. The BA option is appropriate for students wishing to apply to law school, MBA programs, or entering the workforce in the private or public sectors. The BS in both majors requires significant quantitative work both within and outside the Economics Department.

Students planning to attend graduate school in economics or other quantitative disciplines or those interested in working in quantitative fields will be well-served by the BS.

Students may major in Economics and Accounting or Finance. However, they may NOT major in both Business Economics and any one of the following: Accounting, Economics, or Finance. The minor in Business is NOT available to students majoring in Business Economics.

Honors Courses and In-Course Honors

The Department of Economics encourages its students to undertake honors work. Additional information can be found in the Honors Courses and In-Course Honors (http://catalogwoffordedu/academics/academic-honors/honors-courses/) in the Catalog.

Chair

Timothy A. Bersak

Professors

Katerina Andrews
Smriti Bhargava
John K. Fort
John R. McArthur
Timothy D. Terrell
Zhe Yang

Requirements for the Bachelor of Art with a Major in Economics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 140</td>
<td>Statistics</td>
<td></td>
<td>1</td>
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<tr>
<td>or MATH 221</td>
<td>Statistical Methods I</td>
<td></td>
<td></td>
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<tr>
<td>or ECO 380</td>
<td>Quantitative Critical Thinking</td>
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<tr>
<td>MATH 160</td>
<td>Calculus for the Social Sciences</td>
<td></td>
<td>2</td>
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<tr>
<td>or MATH 181</td>
<td>Calculus I</td>
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</tbody>
</table>

Required Major Courses

- ECO 201 Principles of Microeconomics
- ECO 202 Principles of Macroeconomics
- ECO 301 Intermediate Microeconomic Theory
- ECO 302 Intermediate Macroeconomic Theory
- ECO 450 Senior Seminar

Writing Intensive Electives

Select two courses from the following:

Upper-Level Electives

Select 9 additional credit hours in Economics (ECO) at the 300- or 400-level

Total Hours

Requirements for the Bachelor of Science with a Major in Economics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Pre-requisites</td>
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<tr>
<td>MATH 140</td>
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<td></td>
</tr>
<tr>
<td>MATH 181</td>
<td>Calculus I</td>
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</tbody>
</table>

Co-requisites

Select 2 courses from the following:

- MATH 182
- MATH 200-level course or higher
- COSC 200-level course or higher

Required Major Courses

- ECO 201 Principles of Microeconomics
- ECO 202 Principles of Macroeconomics
- ECO 301 Intermediate Microeconomic Theory
- ECO 302 Intermediate Macroeconomic Theory
- ECO 435 Econometrics
- ECO 450 Senior Seminar

Writing Intensive Electives

Select two courses from the following:

Economics (ECO)
### Requirements for Bachelor of Art with a Major in Business Economics

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Pre-requisites</strong></td>
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<td>MATH 140</td>
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<tr>
<td>or MATH 221</td>
<td>Statistical Methods I</td>
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<tr>
<td>or ECO 380</td>
<td>Quantitative Critical Thinking</td>
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<tr>
<td>MATH 160</td>
<td>Calculus for the Social Sciences</td>
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<td><strong>Required Major Courses</strong></td>
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<td>ECO 201</td>
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<td>ECO 202</td>
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<td>ECO 301</td>
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<td>ECO 302</td>
<td>Intermediate Macroeconomic Theory</td>
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<tr>
<td>or ECO 322</td>
<td>Money and Banking</td>
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<tr>
<td>ECO 372</td>
<td>Business Law</td>
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<tr>
<td>ECO 450</td>
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<tr>
<td>ACCT 211</td>
<td>Accounting Principles</td>
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<td>ACCT 341</td>
<td>Cost Accounting I</td>
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<td>FIN 321</td>
<td>Business Finance</td>
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<td><strong>Writing Intensive Elective</strong></td>
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<tr>
<td>Select one course from the following:</td>
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<tr>
<td>ECO 310</td>
<td>Economics of Immigration</td>
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<tr>
<td>ECO 311</td>
<td>Economic History of the United States</td>
<td></td>
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<tr>
<td>ECO 332</td>
<td>Law and Economics</td>
<td></td>
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<tr>
<td>ECO 334</td>
<td>Economics of Property Rights</td>
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<tr>
<td>ECO 338</td>
<td>Water: Law, Economics and Policy</td>
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<tr>
<td>ECO 340</td>
<td>Economics of Medical Care</td>
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<tr>
<td>ECO 344</td>
<td>Education &amp; Inequality: A Socio-Economic Perspective</td>
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<td>ECO 374</td>
<td>Due Process</td>
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<td>ECO 412</td>
<td>Public Finance</td>
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<tr>
<td>ECO 421</td>
<td>Economics of Regulation</td>
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<td>ECO 441</td>
<td>Comparative Economic Systems</td>
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<td>ECO 460</td>
<td>Labor Economics</td>
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<tr>
<td><strong>Business Elective</strong></td>
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<tr>
<td>Select one Business (BUS) course at the 300-level</td>
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<tr>
<td><strong>Economics Elective</strong></td>
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<tr>
<td>Select one additional Economics (ECO) course at the 300- or 400-level</td>
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<tr>
<td><strong>Total Hours</strong></td>
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</table>
Students who twice fail a pre-requisite (Math 140, MATH 160 or 181), may appeal for exemption from that pre-requisite. The request must be submitted before the end of the add/drop period of the subsequent semester in which the course was completed. The faculty of the Economics Department will review the appeal. The faculty’s decision is final.

Students must earn a grade of 'C-' or higher in ECO 201 and 202 for both the Economics and Business Economics majors.

Requirements for the Minor in Economics

The minor in Economics is not available to students majoring in Business Economics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Introductory Courses</td>
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</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Microeconomics 1</td>
<td>1</td>
</tr>
<tr>
<td>ECO 202</td>
<td>Principles of Macroeconomics 1</td>
<td>1</td>
</tr>
<tr>
<td>Intermediate Course</td>
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<tr>
<td>ECO 301</td>
<td>Intermediate Microeconomic Theory</td>
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<tr>
<td>ECO 302</td>
<td>Intermediate Macroeconomic Theory</td>
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<tr>
<td>ECO 322</td>
<td>Money and Banking</td>
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<tr>
<td>Electives</td>
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<tr>
<td>Two additional Economics (ECO) courses at the 300- or 400- level or MATH 424</td>
<td></td>
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</table>

Total Hours 15

1 ECO 201 and 202 must be completed with a grade of 'C-' or higher.

ECO 201. Principles of Microeconomics. 3 Hours.
An introduction to the economic way of thinking and a study of market processes.

ECO 202. Principles of Macroeconomics. 3 Hours.
An introductory course in the economic analysis of the determination of income, employment and inflation. It is recommended that Economics 201 be completed with a grade of C-minus or higher before attempting 202.

ECO 280. Selected Topics in Economics. 1 to 4 Hours.
Selected topics in Economics at the introductory or intermediate level.

ECO 301. Intermediate Microeconomic Theory. 3 Hours.
An intermediate-level course in the economic analysis of market processes.
Prerequisite: ECO 201 with a minimum grade of C- and (MATH 160 with a minimum grade of D or MATH 181 with a minimum grade of D).

ECO 302. Intermediate Macroeconomic Theory. 3 Hours.
An intermediate-level course in the economic analysis of the determination of income, employment, and inflation.
Prerequisite: ECO 201 with a minimum grade of C- and ECO 202 with a minimum grade of C-.

ECO 310. Economics of Immigration. 3 Hours.
The study the recent patterns of migration to Europe from Middle Eastern and North African countries. Economic theory and tools will be used to assess the economic, demographic, fiscal and labor market effects immigrants and refugees are having on the receiving countries. Theory and evidence on immigrants’ and refugees’ economic and social adaptation to their host countries will be analyzed. Successful completion of this course satisfies the Cultures & Peoples requirement for graduation. Writing intensive.

ECO 311. Economic History of the United States. 3 Hours.
A historical treatment of the economic development of America from colonial times to the present. Writing intensive.
Prerequisite: ECO 201 with a minimum grade of C- and ECO 202 with a minimum grade of C-.

ECO 322. Money and Banking. 3 Hours.
A study of the relationship between money and the level of economic activity, commercial and central banking, credit control under the Federal Reserve System, and the theory and objectives of monetary policy.
Prerequisite: ECO 201 with a minimum grade of C- and ECO 202 with a minimum grade of C-.

ECO 332. Law and Economics. 3 Hours.
An economic analysis of Anglo-American legal institutions with emphasis on the economic function of the law of property, contract, and torts. Writing Intensive.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 333. Environmental Economics. 3 Hours.
The application of economic principles to explain the existence of environmental problems and to evaluate proposals for improving environmental amenities.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 334. Economics of Property Rights. 3 Hours.
A study of private property rights, communal property, and open access resources from both an economic and legal perspective. Writing intensive.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 336. Economics of Native Americans. 3 Hours.
A study of how American Indian institutions were shaped by their culture, traditions, environment, and changes in technology. Successful completion of this course satisfies the Cultures and Peoples requirement for graduation.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 338. Water: Law, Economics and Policy. 3 Hours.
A study of the various political, legal and social institutions involved in mediating conflicting desires for water resources. Writing Intensive.

ECO 340. Economics of Medical Care. 3 Hours.
The application of economic theory to study the delivery of medical services in a managed care environment. Transactions between patients, medical care providers and third party payers will be examined to show how profits are made, costs are covered, and contracts are written. Writing intensive.
Prerequisite: ECO 201 with a minimum grade of C-.
ECO 341. Economics of Uncertainty & Information. 3 Hours.
This course applies mathematical tools to microeconomic settings with uncertainty over outcomes or strategic interactions with asymmetric information. Specific applications will include, but are not limited to, insurance, financial markets, and the markets for health care and insurance.
Prerequisite: ECO 201 with a minimum grade of C- and (MATH 140 with a minimum grade of D or ECO 380 with a minimum grade of D) and (MATH 160 with a minimum grade of D or MATH 181 with a minimum grade of D).

ECO 342. Economics of Public Policy. 3 Hours.
Application of economic principles to determine the trade-offs, the direct and indirect effects, and the consequences-both intended and unintended-of public policies.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 344. Education & Inequality: A Socio-Economic Perspective. 3 Hours.
A study of income inequality in the United States, the economics of education, and the relationship between education and income distributions. Writing intensive.
Prerequisite: ECO 201 with a minimum grade of D.

ECO 345. Economics of Crime. 3 Hours.
An overview of how economic theory can be applied to analyze the dynamics of criminal activities. Students will learn how to use economics to examine the costs of crime, the behavior of criminals and potential criminals, the markets for criminal behavior and the goods and services that are produced in them, organized crime v. disorganized crime, and the public policies aimed at dealing with crime. Current issues that will be discussed include: the death penalty, gun control, and the legalization of criminal activities such as drug use, prostitution and gambling.
Prerequisite: ECO 201 with a minimum grade of D.

ECO 350. Behavioral Economics. 3 Hours.
A theoretical and empirical analysis of the connection between economics and other behavioral sciences, usually with the use of laboratory and field experiments. The course is divided into two parts: 1) Individual Decision- Making, and 2) Behavioral Game Theory. Applications range from analysis of self-control problems to the consequences of social preferences and cognitive limitations.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 362. Sports Economics. 3 Hours.
This course offers an introduction to the application of economic theory and statistics to issues that arise in both professional and amateur sports. Some of the topics that will be covered in class are: competitive balance, the organization of teams, cooperative and competitive behavior, doping, statistical and psychological biases in sports, the market for franchises, sale and resale of tickets, and strategic behavior.
Prerequisite: ECO 201 with a minimum grade of D.

ECO 372. Business Law. 3 Hours.
A study of the contracts, uniform commercial code, and the legal environment of business.

ECO 374. Due Process. 3 Hours.
This course is designed to give the student an understanding of the legal concept of due process and how it has changed views of fairness in everyday life. Using the historical/legal background of due process, the student will apply those concepts to other situations and systems. Writing Intensive.
Prerequisite: ECO 372 with a minimum grade of D.

ECO 380. Quantitative Critical Thinking. 3 Hours.
This course discusses concepts from mathematics, statistics, economics, and psychology that are fundamental to the practice of quantitative critical thinking. The class focuses on the development of skills that contribute to the correct interpretation of quantitative arguments and facts that are frequently observed in our daily lives, and on quantitative results that tend to be counterintuitive to most people. Some of the topics discussed in this course are: measures of central tendency, probability theory, empirical methods in science, statistical significance and its limitations, and psychological biases associated with quantitative reasoning.

ECO 390. Global Business. 3 Hours.
Employing the theory of the firm as the unifying theme, we discuss theories and concepts relevant to managing multinational corporations (MNCs). The nature of the global economy, more integrated, more prone to financial/economic crises, and more favorable for international business, is an integral part of the discussion. Through extensive review of case studies, MNCs emerge as driving forces of globalization.
Prerequisite: ECO 201 with a minimum grade of C and ECO 202 with a minimum grade of C.

ECO 402. International Macroeconomics. 3 Hours.
Survey of the forces that shape the U.S. international balance of payments. Impact of U.S. growth and U.S. inflation on domestic and foreign interest rates, imports, exports, the dollar’s value in relation to foreign currencies, and the net flow of capital between the U.S. and other countries. Offered in the spring of even-numbered years.
Prerequisite: ECO 302 with a minimum grade of D.

ECO 410. International Economics. 3 Hours.
Studies the impact of specialization and exchange on human well-being; evaluates the winners and losers when the U.S. raises or reduces its tariffs; examines the broader sociopolitical debate over globalization, especially the conflicting perspectives on the effects of international trade on child labor and the fabric of so-called 'Third-World' cultures. Offered in the spring of odd-numbered years.
Prerequisite: ECO 301 with a minimum grade of D.

ECO 412. Public Finance. 3 Hours.
A theoretical and institutional analysis of government expenditure, taxation, and debt, including economic analysis of government decision making and the distributional effects of alternative tax and subsidy techniques. Writing Intensive.
Prerequisite: ECO 301 with a minimum grade of D.

ECO 421. Economics of Regulation. 3 Hours.
Economic tools are used to study the formation and impact of federal, state, and local regulations, including rules on industrial structure, prices, labor, consumer products, health, and the environment. Writing Intensive.
Prerequisite: ECO 301 with a minimum grade of D.
ECO 422. Game Theory. 3 Hours.
This course is an analytical tool to model strategic interactions that is widely used in economics, political science, biology, sociology, and psychology. The course is intended to provide an introduction to the main concepts and techniques of the field, and use them to investigate relevant economic phenomena, such as bargaining, auctions, the "prisoner’s dilemma", the "tragedy of the commons", tacit collusion, competition among firms, and strategic interactions in labor, credit, and product markets.
Prerequisite: MATH 160 with a minimum grade of D or MATH 181 with a minimum grade of D.

ECO 424. Advanced Game Theory. 3 Hours.
Game Theory is an analytical tool that models strategic interactions. It is widely used in economics, political science, biology, sociology, and psychology. This advanced class is intended to provide a more rigorous introduction to the main concepts and techniques of the field. These techniques will be used to investigate relevant social phenomena, such as evolutionary games, auction theory, the "prisoner's dilemma," the "tragedy of the commons," tacit collusion, competition among firms, and strategic interactions in labor, credit, and product markets. The most important classes of games will be analyzed (zero-sum games, cooperation problems, coordination games, Bayesian games, signaling games, etc.), as well as the most important solution concepts (rationalizability, Nash equilibrium in pure and mixed strategies, Bayesian Nash equilibrium, and evolutionarily stable strategies); this course will also introduce students to the main techniques of game-theoretic mathematical modelling.
Prerequisite: MATH 210 with a minimum grade of D.

ECO 432. Managerial Economics. 3 Hours.
The application of economic analysis to the management problems of coordination, motivation, and incentives within organizations.
Prerequisite: ECO 301 with a minimum grade of D and (MATH 181 with a minimum grade of D or MATH 160 with a minimum grade of D).

ECO 435. Econometrics. 3 Hours.
An introduction to empirical methods based on linear regression models used in economics to investigate empirical questions. Students will utilize STATA, which is the most popular statistical software in the discipline.
Prerequisite: MATH 181 with a minimum grade of D and (MATH 140 with a minimum grade of D or ECO 380 with a minimum grade of D).

ECO 439. Mathematical Economics. 3 Hours.
A thoroughly interdisciplinary approach to mathematics and economics. Measures such as logarithms, derivatives, and integrals will be employed to interpret trends of phenomena such as consumer welfare, social costs, inflation, etc. The formulation of qualitative explanations (concise and simplified) of quantitative outcomes is the overarching objective of this course.
Prerequisite: MATH 160 with a minimum grade of C or MATH 181 with a minimum grade of C.

ECO 440. History of Economic Thought. 3 Hours.
A study of the evolution of economic analysis, including a brief survey of the economic ideas of Aristotle, the scholastics, mercantilists, and physiocrats, and a more detailed study of the economic analysis of the classicists, Marxists, marginalists, and Keynesians.
Prerequisite: ECO 201 with a minimum grade of C- and ECO 202 with a minimum grade of C-.

ECO 441. Comparative Economic Systems. 3 Hours.
Contrasts the nature and characteristics of a free-market economy against the centrally-orchestrated mechanisms of managed economies such as socialism/communism, fascism, and the so-called 'crony mercantilism' that prevails in most of modern-day Africa, Latin America, and the Middle East. Writing intensive. Successful completion of this course satisfies the Cultures and Peoples requirement for graduation.
Prerequisite: ECO 201 with a minimum grade of C-.

ECO 450. Senior Seminar. 4 Hours.
A capstone course required of all students in their last year of study completing the major in Business Economics or Economics. Microeconomic and macroeconomic case studies are used to reinforce and evaluate the student's understanding of the economic way of thinking.

ECO 460. Labor Economics. 3 Hours.
Students will learn to apply the tools of microeconomic analysis to labor markets and labor market outcomes. The course begins with a neo-classical overview covering labor supply, demand, and equilibrium determination of employment and wages. More advanced topics include wage differentials, investments in human capital, and incentive pay. The final section of the course covers frictions that impact the functioning of the labor market such as mobility, search costs, unions, and regulations. Writing Intensive.
Prerequisite: ECO 301 with a minimum grade of D.

ECO 470. Independent Study. 1 to 3 Hours.
Study of a specific topic in economics under the direction of a departmental faculty member. The readings, program of research, and written work to be undertaken by the student will be determined in consultation with the instructor.

ECO 480. Advanced Topics in Economics. 1 to 4 Hours.
Selected topics in Economics at the advanced level. Topics vary from year to year.
Prerequisite: ECO 201 with a minimum grade of C- and ECO 202 with a minimum grade of C-.

ECO 500. Honors Course. 3 Hours.
At the discretion of the faculty, students may undertake a six-hour independent course of study in the senior year in order to broaden their educational experience within their major area of study. Students must meet specific GPA standards and arrange a faculty sponsor. The honors course criteria are outlined in the Academic Honors portion of the catalog.