

# ECONOMICS

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The Department of Economics seeks to create a teaching and learning community that provides students with varied opportunities for acquiring the necessary knowledge, analytical skills, and judgment to prepare them for personal and professional growth and for confident and responsible leadership in a rapidly changing world.

The department encourages students:

1. To learn about the economic, commercial, and governmental institutions that serve the American and international communities
2. To be competent in economic and statistical analysis
3. To be cognizant of historical, global, and moral perspectives on economic and business issues.

## Overview of the Economics Major

Economics is the study of how people and organizations make decisions, how they interact with each other, and how institutions and policies can be designed to improve people's lives. The ambition of those who study economics is to understand the world around them both as it is and as it ought to be. The basic principles of economics are applied to a wide range of social and political challenges that confront us today. These include international trade, environmental protection, health care, international development, domestic taxes, Federal Reserve policies, labor outsourcing, and the regulation of business.

The economics curriculum at St. Olaf includes theory, applications, institutional studies, and quantitative analysis. Where appropriate, economics courses also pursue historical and ethical concerns.

The department offers areas of emphasis for its majors who desire more focused study in finance, international economics, management, and public policy. The department also supports several programs available to students regardless of major: an interdisciplinary concentration in management studies, international and off-campus courses, and internship opportunities.

The economics major serves as excellent preparation for careers in a wide variety of fields, including economic analysis, banking, accounting, consulting, health administration, finance, business management, teaching, and international affairs. The major also provides a solid foundation for students wishing to pursue graduate studies in economics, business, public policy, and law.

## Intended Learning Outcomes for the Major (<http://wp.stolaf.edu/curriculum-committee/economics-major-ilos>)

## Distinction

See Academic Honors (<http://catalog.stolaf.edu/academic-regulations-procedures/academic-honors/#distinction>).

The criteria and guidelines for Distinction in Economics can be found through the Economics Department web page (<http://wp.stolaf.edu/economics/distinction>).

## Special Programs Areas of Emphasis

Areas of emphasis provide the opportunity for economics majors to pursue a more extensive and focused program of study beyond the normal major requirements. Please see Requirements (p. 1) for more information.

## Concentrations and Interdepartmental Programs

The Economics Department participates in international studies programs and encourages its majors to take advantage of study in other countries. The department also participates in several interdisciplinary majors and concentrations, including American studies, Asian studies, management studies, Latin American studies, statistics, environmental studies, women's and gender studies, and the social studies education major.

## Recommendation for Graduate Study

Students considering graduate work in economics (either Ph.D. or M.A.) are advised to take additional courses in economic analysis, mathematics, and statistics beyond those required for the economics major, and to pursue a significant research experience in economics. Within the major, we recommend that students take additional level III economic analysis courses, one of which should be Econometrics (ECON 385). The following courses in mathematics, listed in order of importance, are recommended: Multivariable Calculus (MATH 226), Elementary Linear Algebra (MATH 220), Real Analysis I (MATH 244) and Differential Equations I (MATH 230). A concentration in Statistics (<http://catalog.stolaf.edu/academic-programs/statistics>) is helpful, but the most useful statistics courses for graduate study are Statistical Modeling (STAT 272) and Advanced Statistical Modeling (STAT 316). A significant research experience gained through participation in a Directed Undergraduate Research (ECON 396), the Center for Interdisciplinary Research (CIR) (<http://wp.stolaf.edu/cir>), a statistically related CURI (<http://wp.stolaf.edu/curi>) project, or the Mathematics Practicum (MATH 390) is also recommended. Finally, the American Economic Association provides additional information for undergraduate students interested in graduate work in economics here. (<https://www.aeaweb.org/gradstudents>)

## Requirements

### Requirements for the Economics Major

Majors in economics must meet the following minimum requirements:

| Code                         | Title                             | Credits   |
|------------------------------|-----------------------------------|-----------|
| Core courses: <sup>1</sup>   |                                   | 3.00-4.00 |
| ECON 261                     | Intermediate Macroeconomic Theory |           |
| ECON 262                     | Intermediate Microeconomic Theory |           |
| Select one of the following: |                                   |           |
| ECON 263                     | Statistics for Economics          |           |

|  |  |      |
|--|--|------|
| STAT 272 & ECON 385  | Statistical Modeling and Econometrics <sup>2</sup> | 4.00 |
| At least four economic analysis courses: at least one at level II and at least two at level III. |  |      |
| Foundation course:   |  | 1.00 |
| MATH 120   | Calculus I (or equivalent or higher credit)        |      |
| or MATH 119  | Calculus I with Review                             |      |
| Total Credits  |  | 8-9  |

<sup>1</sup> Core courses -- ECON 261 and ECON 262, and ECON 263, or STAT 272 plus ECON 385 -- all require an introductory course and calculus (usually ECON 121 and MATH 120). Core courses cannot be taken S/U.

<sup>2</sup> ECON 385 may count as a level III economic analysis course when taken to fulfill the core course requirement.

Students studying off-campus through St. Olaf affiliated programs may count up to two off-campus courses as level II economic analysis courses towards the economics major requirements. These courses must be approved in advance by the chair of the Economics Department. To count towards the economics major, courses must (a) be in recognized fields in economics, (b) require at least Principles of Economics (ECON 121) (or its equivalent) as a prerequisite, and (c) be taught in an economics program or by faculty from an economics program. Students may not count both a St. Olaf economic analysis course and a course taken off campus towards the major if the courses are substantially the same.

## Areas of Emphasis

The Economics Department offers four optional Areas of Emphasis that students may complete in addition to a major in economics. There are two economics areas: (1) international economic analysis and policy and (2) public policy economics, and two management areas: (3) management and (4) finance. Students may be certified in no more than one economics and one management studies area of emphasis. Grades of C or better must be earned in all courses counted towards an area of emphasis.

Contracts for each area of emphasis must be negotiated individually with the assigned area director before the end of the student's junior year. Copies of contracts can be found on the Economics Department web page (<http://wp.stolaf.edu/economics/forms/department-forms>). Please contact the Economics Department for names of the current area directors.

Courses counted toward an area of emphasis may not also be counted toward any requirements for the economics major.

## International Economic Analysis and Policy Emphasis

The purpose of the International Economic Analysis and Policy emphasis is to provide a structured program of study beyond the major, so that students will expand their understanding of the international economy, and be better prepared for careers in the private and public sectors.

| Code                         | Title                   | Credits |
|------------------------------|-------------------------|---------|
| ECON 382                     | International Economics | 1.00    |
| Choose two of the following: |                         | 2.00    |

|  |                                     |      |
|--|-------------------------------------|------|
| ECON 218   | Economic Progress in China (abroad) |      |
| ECON 243   | Economic Development                |      |
| Elective course outside of Economics Department that relates to international topics |                                     | 1.00 |
| Total Credits  |                                     | 4    |

## Public Policy Emphasis

The purpose of the public policy emphasis is to provide a structured program of study beyond the major to give motivated students the opportunity for in-depth work in a particular economic field. Students pursuing this emphasis develop the critical insights necessary to understand how government initiatives work, or do not work, to accomplish social goals such as environmental protection, economic development, poverty reduction, health care access, public education, and care for the elderly and the disabled. Completion of the emphasis not only promotes a lifetime of informed civic engagement and active citizenship, but it also prepares students for careers in the public sector, as well as for admission to graduate programs in public policy, economics, and law.

| Code                           | Title                                   | Credits |
|--------------------------------|---|---------|
| ECON 371                       | Economics of Public Policy <sup>1</sup> | 1.00    |
| Choose three of the following: |   | 3.00    |
| ECON 242                       | Environmental Economics                 |         |
| ECON 245                       | Economics of Health Care                |         |
| ECON 249                       | Urban Economics                         |         |
| ECON 385                       | Econometrics                            |         |
| Total Credits                  |   | 4       |

<sup>1</sup> ECON 371 cannot be used to satisfy both the requirements for the major and the requirements for this emphasis.

## Management Emphasis

The purpose of the management emphasis is to provide a structured program of study beyond the economics major to better prepare students for immediate careers in the private and public sectors of our economy.

| Code                                 | Title                          | Credits |
|--------------------------------------|--------------------------------|---------|
| MGMT 225                             | Principles of Accounting       | 1.00    |
| MGMT 237                             | Managerial Accounting          | 1.00    |
| MGMT 251                             | Management                     | 1.00    |
| MGMT 383                             | Management Policy and Strategy | 1.00    |
| Choose one of the following:         |                                | 1.00    |
| MGMT 250                             | Marketing                      |         |
| MGMT 252                             | Legal Aspects of Business      |         |
| MGMT 256                             | Entrepreneurship               |         |
| MGMT 281                             | Corporate Finance              |         |
| Other MGMT course (to be negotiated) |                                |         |
| Total Credits                        |                                | 5       |

## Finance Emphasis

The purpose of the finance area of emphasis is to provide a structured program of study beyond the economics major to better prepare

students for immediate careers in the private and public sectors of our economy.

| Code                         | Title   | Credits |
|------------------------------|---|---------|
| MGMT 225                     | Principles of Accounting  | 1.00    |
| MGMT 237                     | Managerial Accounting   | 1.00    |
| MGMT 281                     | Corporate Finance   | 1.00    |
| MGMT 380                     | Investments   | 1.00    |
| Choose one of the following: |   |         |
| MGMT 250<br>& MGMT 251       | Marketing and Management (both must be taken to fulfill the elective) |         |
| MGMT 252                     | Legal Aspects of Business   |         |
| MGMT 256                     | Entrepreneurship  |         |
| ECON 371                     | Economics of Public Policy  |         |
| ECON 374                     | Money and Banking   |         |
| ECON 382                     | International Economics   |         |
| ECON 385                     | Econometrics  |         |
| Total Credits                |   | 4       |

## Courses

### Introductory Courses

#### ECON 110-ECON 120 Gateways to Economics

These courses introduce students to principles of economics through special topics. Each course emphasizes the application of economic concepts to topics of general interest, capitalizing on the special interests and expertise of the faculty. Courses numbered 110-120 all present a common core of economic principles, and, therefore, credit will be given for only one of these courses. Courses numbered 110-120 cannot be taken after taking ECON 121. Students may only take one course from among 110-120; none of these courses may be repeated. Students considering a major in economics are encouraged to take Principles of Economics (ECON 121), below.

#### **ECON 111: Gateways to Economics: Transition Economies**

At one time, roughly one-third of the world's population lived in countries with centrally planned socialist economies. The world has witnessed a series of astonishing transitions as these planned economies moved to introduce market reforms. This course introduces and applies the basic tools of economic analysis to understand and explore the transitions taking place in these countries. The course focuses principally on China and Russia but will include examples drawn from Eastern Europe and Cuba. Offered periodically during Interim.

#### **ECON 113: Gateways to Economics: Capitalism**

This course uses major schools of economic thought and major economic writers from the past 600 years to introduce principles of economics. Readings include the architects of capitalism (Adam Smith, David Ricardo, etc.), the critics (Karl Marx, Thorstein Veblen, etc.), and the reformers (J.M. Keynes, Joseph Schumpeter, J.K. Galbraith, etc.). Offered periodically during Interim.

### Principles of Economics

Students considering a major in economics are encouraged to complete Principles of Economics (ECON 121) prior to taking any economics courses at level II or above.

#### **ECON 121: Principles of Economics**

This course takes an analytical approach to economic reasoning and contemporary issues. The course introduces microeconomic and macroeconomic theories with applications to relevant topics, such as employment, growth, environmental protection, affirmative action, exchange rate fluctuations, taxes, and welfare reform. Students explore economics as an intelligent approach to understanding our daily lives as citizens, workers, managers and consumers. Offered each semester. Counts toward environmental studies major (social science emphasis) and management studies concentration.

### Core Courses

#### **ECON 261: Intermediate Macroeconomic Theory**

This course addresses the economic institutions and forces that determine levels of income, output, employment, and prices in our society. Questions related to employment prospects and standard of living provide an important focus. Classical and Keynesian perspectives are employed in attempting to understand these matters, the macroeconomic problems in market economies and the policies that economists prescribe as remedies for these problems. Offered each semester.

**Prerequisites:** MATH 119 or MATH 120, and one of Economics 110-121 or permission of instructor.

#### **ECON 262: Intermediate Microeconomic Theory**

Microeconomics is the study of the resource allocation decisions by households, producers, and government and the resource allocation process in various types of market structures. Students are trained in the use of economic models and optimizing techniques to address a variety of real-world problems, including case studies from business and public policy. Offered each semester.

**Prerequisites:** MATH 119 or MATH 120, and one of Economics 110-121 or permission of instructor. Offered each semester.

#### **ECON 263: Statistics for Economics**

This course emphasizes skills necessary to understand and analyze economic data. Topics include descriptive statistics, probability and random variables, sampling theory, estimation and hypothesis testing, and practical and theoretical understanding of simple and multiple regression analysis. Applications to economic and business problems use real data, realistic applications, and econometric/statistical software. Offered each semester. ECON 263 is required for economics majors who do not take both STAT 272 and ECON 385. Credit towards the economics major will not be given for ECON 263 following completion of STAT 272. Counts toward environmental studies major (social science emphasis).

**Prerequisite:** MATH 119 or MATH 120 and one of Economics 110-121, or consent of the instructor.

### Economic Analysis Courses, Level II

#### **ECON 200: Topics in Economic Analysis**

In this course students apply the models, insights, and analytical techniques of economics to a specific topic or economic problem. Topics vary from year to year. May be repeated if topic is different. Offered periodically.

**Prerequisites:** one of Economics 110-121 or permission of instructor.

**ECON 218: Economic Progress in China (abroad)**

This course tracks economic development in China with emphasis on Shanghai. The course examines the emergence and evolution of markets in rural, urban, commercial, and financial centers and how the changes affect culture, attitudes, customs, and life of the people. Shanghai will be compared with other Chinese cities, including Nanjing, Suzhou, Hangzhou and Hong Kong. The role of Hong Kong in China's reform and its integration since 1997 is also discussed. Offered alternate Interims. Counts toward Asian studies major and concentration.

**Prerequisites:** one of Economics 110-121 or permission of instructor.

**ECON 220: Economic Justice**

This course examines Christian ethics along with major frameworks in philosophical ethics (Utilitarianism, Liberalism, and Marxism) in addressing economic issues. Offered annually.

**Prerequisites:** one of Economics 110-121 and completion of BTS-T or permission of instructor.

**ECON 222: Game Theory in Economics**

Game theory is the formal study of the strategic interactions between individuals and between groups of individuals. Game theory has become a widely adopted tool of analysis in economics, business, law, politics, anthropology, sociology, and international relations. This course introduces students to the theoretical constructs of game theory and focuses on economic applications in the fields of labor economics, international trade, environmental economics, macroeconomics, and industrial organization. Offered annually.

**Prerequisite:** one of Economics 110-121 or permission of instructor.

**ECON 242: Environmental Economics**

The powerful insights of microeconomic analysis inform this consideration of environmental policy and regulation. Coursework emphasizes issues germane to setting and attaining specific environmental objectives - how much pollution to allow, how much to encourage preservation, how much cutting to permit. By considering whether and how to assign monetary values to goods like species diversity and climactic stability, students gain practical experience applying benefit-cost analysis to environmental decisions. Offered annually. Counts toward American studies major. Counts toward environmental studies major (all emphases) and concentration.

**Prerequisite:** one of Economics 110-121 or permission of instructor.

**ECON 243: Economic Development**

Students in this course learn and apply economic analysis, tempered by an appreciation for the political and institutional contexts of the less developed countries, to gain an understanding of these countries' economies. Using cases involving both written and oral analysis, students explore topics such as economic growth in Brazil, trade strategies in Singapore, poverty and income distribution in Taiwan, or macroeconomic performance in Mexico. Offered annually. Counts toward environmental studies major (social science emphasis) and Latin American studies major and concentration.

**Prerequisite:** one of Economics 110-121 or permission of instructor.

**ECON 245: Economics of Health Care**

The health care sector in the U.S. is undergoing rapid change that affects patients, providers and payers. Managed care and managed competition are restructuring the delivery of health care services and reducing costs, while frustrating physicians and patients. The course examines the economic factors leading to the changes, current issues and controversies, and federal health policies. Students interested in nursing, medicine, and the sciences are encouraged to enroll. Offered annually. Counts toward American studies major.

**Prerequisites:** one of Economics 110-121 or permission of instructor.

**ECON 247: History of Economic Thought**

Many aspects of our lives and our society are influenced by the ideas (or the theories) of economists. This course explores where economic ideas have come from, how they have changed over time and the extent to which they are compelling. While the ideas of many important figures are covered, economists such as Smith, Ricardo, Marx, Marshall, and Keynes receive particular attention. Offered annually.

**Prerequisite:** one of Economics 110-121 or permission of instructor.

**ECON 249: Urban Economics**

This class applies economic principles to issues of urban development. Topics include urban economic history, location analysis, policy analysis (especially concerning poverty, housing, transportation and education), land use controls, and macroeconomic forecasting. Offered annually.

**Prerequisites:** one of Economics 110-121 or permission of instructor.

## Economic Analysis Courses, Level III

**ECON 371: Economics of Public Policy**

Government action affects us all. We pay taxes; we use public roads, schools, and parks. Some prices we pay are lower due to government subsidies; others are higher due to taxes. Government actions influence both the efficiency of our economy and the equity and equality within our society. Students learn valuable analytical tools for evaluating public projects, tax policies, entitlement programs and voting behavior. Offered annually. Counts toward American studies major.

**Prerequisite:** ECON 262 and either ECON 263 or STAT 272, completion of BTS-T, or permission of instructor.

**ECON 372: Behavioral Economics**

Classic economics assumes that people make decisions rationally. Behavioral economics weakens that assumption, incorporating the findings of psychology into economic models. Students learn to apply behavioral economics theories to improve their understanding of business, marketing, public policy, and other domains of economics. Students utilize skills they have learned from microeconomic theory and statistics orally and in writing. Offered annually.

**Prerequisites:** ECON 262 and either ECON 263 or STAT 272, or permission of instructor.

**ECON 373: Health Care, Behavioral Economics, and Technology**

In this course, students explore the technological and social forces that cause change in the health-care sector over time. Topics include health incentives, diffusion of technology, big data, uncertainty in health care decision-making, expertise and the health care workforce, and the personalization of medicine. A semester-long research project trains students in empirical research and effective academic writing. Offered periodically.

**Prerequisites:** ECON 262 and either ECON 263 or STAT 272, or permission of instructor.

**ECON 374: Money and Banking**

This course addresses the institutions that comprise modern monetary systems and the influence that these systems have on levels of income, output, employment, and prices in market economies. Monetary theory and monetary policy, including both the nature of our central bank and the role that it plays in our monetary system, are also addressed in some detail. Offered annually. Counts toward American studies major.

**Prerequisite:** ECON 261 and either ECON 263 or STAT 272, or permission of instructor.



**ECON 376: Labor Economics and Employment Relations**

What do workers want from work? What do employers want from workers? Pressing policy issues exist for workers competing in the global economy. Unions, unemployment insurance, welfare and the minimum wage enhance the prospects of many, while leaving others even worse off. This course utilizes microeconomic theory, statistics and institutional analysis to understand labor markets. Offered annually. Counts toward American studies major.

**Prerequisites:** ECON 262 and either ECON 263 or STAT 272, completion of BTS-T, or permission of instructor.

**ECON 382: International Economics**

This course offers the students an integrated approach of theory, policy, and enterprise to understand international trade and investment. The course focuses on the costs and benefits of global economic interdependence for students who plan to enter an international business career or to work for government and international organizations in activities affected by international economic relations. Offered annually.

**Prerequisites:** ECON 261 and ECON 262, and either ECON 263 or STAT 272, or permission of instructor.

**ECON 385: Econometrics**

Ideal for students interested in applying statistical models to economic problems, this course emphasizes theoretical foundations, mathematical structure and applications of major econometric techniques, including ordinary least squares, generalized least squares, dummy variables, non-linear transformations, instrumental variables, simultaneous equation modeling, and time series models. Students in the class complete a sophisticated economic research project of their choice. Offered annually.

**Prerequisites:** ECON 261 and either ECON 263 or STAT 272 or permission of instructor.

**ECON 399: Seminar in Economics**

Selected topics to be announced. May be repeated if topics are different.

**Prerequisites:** ECON 261 and/or ECON 262 (at the discretion of the instructor) and either ECON 263 or STAT 272, or permission of instructor.

**Other Courses**

**ECON 294: Academic Internship**

**ECON 298: Independent Study**

**ECON 394: Academic Internship**

**ECON 396: Directed Undergraduate Research**

This course provides a comprehensive research opportunity, including an introduction to relevant background material, technical instruction, identification of a meaningful project, and data collection. The topic is determined by the faculty member in charge of the course and may relate to his/her research interests. Offered based on department decision. May be offered as a 1.00 credit course or .50 credit course.

**Prerequisite:** determined by individual instructor.

**ECON 398: Independent Research**

**Related Courses**

For courses in accounting and management, see the Management Studies (<http://catalog.stolaf.edu/academic-programs/management-studies>) section of this catalog.

**Faculty****Chair, 2017-2018 (Interim and spring)**

**Anthony Becker** (on leave fall)

Professor of Economics  
econometrics; forecasting; economic damages; microeconomic theory; public policy

**Chair, 2017-2018 (fall)**

**Paul Wojick**

Associate Professor of Economics  
macroeconomics; history of economic thought; monetary theory and policy

**Thomas Bernardin**

Assistant Professor of Economics  
macro and monetary economics; finance; applied econometrics; history and philosophy of economics

**Seth I. Binder**

Assistant Professor of Economics and Environmental Studies  
environmental and natural resource economics and policy; development economics; applied microeconomics; environmental economics

**Adam J. Dowd**

Instructor in Economics  
business law

**Alexander O. Everhart**

Instructor in Economics

**Vladimir Fleurimond**

Visiting Assistant Professor of Economics

**Richard Goedde**

Associate Professor of Economics  
finance; management

**Ashley R. Hodgson**

Associate Professor of Economics  
health care economics; behavioral economics; microeconomic theory; public policy; industrial organization

**Rebecca P. Judge**

Professor of Economics, Associate Dean of Social Sciences  
environmental economics; public policy

**Jerry K. Lee**

Instructor in Economics  
financial accounting; managerial accounting

**Sian E. Muir**

Entrepreneur in Residence  
marketing; entrepreneurship; strategy; arts management

**Mark Pernecky** (on leave)

Associate Professor of Economics  
macroeconomics; labor economics; economic justice

**Xun Pomponio**

Associate Professor of Economics  
international economics; China (sustainable) economics; statistics; cross-cultural studies in economics

**Mark D. Skeba**

Instructor in Economics

**Bruce A. Wambheim**

Instructor in Economics

monetary theory, economic history, international economics