Economics

Program Director: Dr. Farrokh Nourzad, Ph.D.
MS in Applied Economics website (http://business.marquette.edu/academics/msae)

Degree Offered

Master of Science in Applied Economics, Plan B Professional Project option only.

Program Description

The master of science program in applied economics is designed for individuals seeking careers as economics, financial or marketing analysts in business, industry, government or the financial sector. The program provides students with the solid grounding in economic theory and the working knowledge of advanced quantitative methods needed to succeed as business economists, financial analysts, economic and marketing researchers, government staff economists or economic consultants. The program concentrates on developing and applying practical skills which can be used to solve real problems confronting business and government. The curriculum is designed to produce practitioners who can develop and interpret economic models. Courses emphasize the application of economic theory and the use of quantitative techniques rather than the derivation of their theoretical underpinnings. Communication skills are stressed through frequent written and oral presentations of results from applied research projects.

Prerequisites for Admission

Applicants are expected to have a four-year baccalaureate degree with at least one course in each of the following areas: intermediate microeconomic theory, intermediate macroeconomic theory, statistical methods and calculus. Familiarity with personal computers is also required.

Specializations

A general plan, requiring no specialization, is also available.

Application Requirements

Students may apply for Regular Degree, Temporary Degree or Non-degree status. It is recommended that students apply for Regular Degree Status when possible. The application is online via the GSM website (http://business.marquette.edu/academics/gsm). Then click on Apply Now.

1. A completed application form and fee.
2. Official transcripts from all current and previous colleges/universities except Marquette.
3. Three letters of recommendation from former professors.
4. GRE scores or GMAT scores.
5. (For international applicants only) a TOEFL score or other acceptable proof of English proficiency.

All application materials should be sent to: Graduate School of Management; David A. Straz, Jr., Hall Executive Center, Suite 275; Marquette University; P.O. Box 1881; Milwaukee, WI 53201-1881.

Note: Temporary non-degree applicants (admission valid for one term only) must submit all of the above except the GMAT or GRE scores. Students are encouraged to complete all application materials and apply for degree status. Temporary status is valid for one semester only. Temporary non-degree status students are not eligible to continue taking classes beyond one semester without degree admission. Temporary non-degree status is not available to international students. International applicants must apply for regular degree admission status. Typically, non-degree admission is not recommended in the economics program.

Economics

The program requires a minimum of 30 credit hours of course work (at least 15 of which must be in 6000-level graduate courses), a non-credit master's professional project and an oral comprehensive examination.

For students completing a specialization, course work will include: 12 credit hours of required core courses in economic theory and quantitative analysis, 12 credit hours of course work relating to a chosen area of specialization and six credit hours of electives. Specializations include: business economics, financial economics, international economics, marketing research and real estate economics. A general track (no specialization) is also available. General track students must complete the 12 credit hours of required core courses, 12 credit hours of economics electives and six additional credit hours in economics, business or the social sciences. With the approval of the program director and appropriate extra work of graduate caliber, a student may apply toward the degree up to six credit hours of selected 5000-level upper division courses. Also, with the approval of the program director, a student may substitute, for the usual elective requirements, up to six credit hours of course work in fields outside of economics and business administration.
The master's professional project consists of a careful application of the student's newly acquired analytical skills to a particular issue or problem. The professional project is completed during the final term of the program and is often an extension of a previously completed course project. The outline for the MSAE Professional Project form is posted to the Graduate School of Management's website. Refer to the bulletin for the professional project outline and the professional project submission deadlines.

An oral comprehensive examination will be administered in the student's last term of the program. This examination will cover subject matter prescribed by the Department of Economics.

**Program Details**

Each student must choose one of the areas of specialization: business economics, financial economics, international economics, marketing research, real estate economics or the student must complete the general track. All specializations and the general track require a common set of core courses: two courses in quantitative analysis ECON 6560 Applied Econometrics and ECON 6561 Applied Time-Series Econometrics and Forecasting and two courses in microeconomic and macroeconomic theory ECON 6503 Microeconomic Theory and Applications and ECON 6504 Macroeconomic Theory and Applications. ECON 6560 Applied Econometrics is strongly recommended to be taken in the first term of course work.

**Business Economics**

The Business Economics specialization is suitable for individuals seeking careers in the private sector in industries such as utilities, services and manufacturing. It combines economics courses with such business courses as managerial accounting, marketing management and operations management.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 6100</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 6160</td>
<td>Business Analytics Using Spreadsheets</td>
<td>6-9</td>
</tr>
<tr>
<td>BULA 6110</td>
<td>Legal Issues in Business and Technology</td>
<td>6-9</td>
</tr>
<tr>
<td>FINA 6100</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MANA 6100</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MARK 6100</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MARK 6160</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>OSCM 6100</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>OSCM 6110</td>
<td>Manufacturing Management</td>
<td>3</td>
</tr>
<tr>
<td>OSCM 6115</td>
<td>Service Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>Up to three MBA skills classes (BUAD 6101-6125)</td>
<td>6-9</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

* Ideally, BUAD 6108 GIS, BUAD 6112 SAS and BUAD 6113 SPSS or equivalent.

**Financial Economics**

The Financial Economics specialization is appropriate for those interested in a career in the financial services sector including banks, insurance companies and securities markets. It blends such economics courses as monetary theory and policy with courses in financial policy and advanced seminar in finance. Financial economics requires the core course work plus:

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<tbody>
<tr>
<td>ACCO 6100</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 6580</td>
<td>Monetary Theory and Policy</td>
<td>3</td>
</tr>
<tr>
<td>FINA 6100</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 6111 - 6953</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Graduate electives in Economics</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

**International Economics**

The International Economics specialization is appropriate for those interested in a career in industries or in government that deal in the ever-expanding global economy. This is accomplished by completing courses in international trade and international currency markets, as well as those with an emphasis on global business practices. International economics requires the core course work plus:

<table>
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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ECON 6580</td>
<td>Monetary Theory and Policy</td>
<td>3</td>
</tr>
<tr>
<td>ECON 6544</td>
<td>International Currency Markets</td>
<td>3</td>
</tr>
<tr>
<td>ECON 6546</td>
<td>International Trade</td>
<td>3</td>
</tr>
</tbody>
</table>
Six credit hours selected from:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 5045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>INBU 6951</td>
<td>International Study in Business:</td>
</tr>
<tr>
<td>INTE 6157</td>
<td>Global Information Technology Sourcing</td>
</tr>
<tr>
<td>MANA 6140</td>
<td>International Management</td>
</tr>
<tr>
<td>MARK 6140</td>
<td>Global Marketing Strategy</td>
</tr>
<tr>
<td>OSCM 6140</td>
<td>Globalization and Global Operations</td>
</tr>
<tr>
<td>POSC 6621</td>
<td>International Political Economy</td>
</tr>
</tbody>
</table>

Graduate elective in Economics 3

Total Credit Hours 18

Marketing Research
The Marketing Research specialization is designed for students interested in a career in marketing research and market analysis, working either for marketing research consulting companies or in marketing research departments of companies in the service, manufacturing or financial sector. It combines the applied econometric and forecasting courses taught in the economics core with courses in marketing management, marketing research and other traditional marketing areas. Marketing Research requires the core course work plus:

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<tbody>
<tr>
<td>MARK 6100</td>
<td>Marketing Management</td>
</tr>
<tr>
<td>MARK 6160</td>
<td>Marketing Research</td>
</tr>
</tbody>
</table>

Six credit hours from MARK 6110-6953 6

up to three 1-credit GSM skills classes (BUAD 6101-6125)*

Graduate electives in Economics 6

Total Credit Hours 18

* Ideally, BUAD 6108 Skills: GIS Business ArcView Software, BUAD 6112 Skills: SAS and BUAD 6113 Skills: SPSS or equivalent

Real Estate Economics
The Real Estate Economics specialization is intended for students interested in careers regarding the development, site selection, financing and construction of real estate properties as well as urban/regional development. For that purpose, the specialization includes courses in urban and regional economics, the financial and development aspects of real estate as well as courses in data management and GIS tools often used by practitioners in the field. Real estate economics requires the core course work plus:

<table>
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</thead>
<tbody>
<tr>
<td>ECON 6512</td>
<td>Studies in Urban and Regional Economics</td>
</tr>
<tr>
<td>FINA 6100</td>
<td>Financial Management</td>
</tr>
<tr>
<td>FINA 6163</td>
<td>Real Estate Finance and Investments</td>
</tr>
</tbody>
</table>

up to three 1-credit MBA skills classes (BUAD 6101-6125)*

Graduate elective in Economics** 6

Total Credit Hours 18

* Ideally, BUAD 6108 Skills: GIS Business ArcView Software, BUAD 6112 Skills: SAS and BUAD 6113 Skills: SPSS or equivalent

** Preferably ECON 6510 Economics of the Public Sector.

The General Economics track provides a more flexible option for students who wish to focus almost exclusively on economics courses. The general economics track requires the core course work plus: 12 credits in economics and 6 elective hours in economics, business administration, mathematics, statistics or social sciences.

Note: Graduate School of Management courses may require appropriate prerequisites.

Research Involving Humans or Animals
A student whose research either on or with humans or animals must receive written approval before undertaking such research. The approval forms for human or animal research may be obtained through the Office of Research Compliance. This approval form and any additional paperwork must be submitted to the Graduate School of Management. Additional information may be found at marquette.edu/researchcompliance.

Bachelor’s–Master’s Program
This five-year program allows students to earn both their master of science in applied economics (M.S.A.E.) and an undergraduate degree from the College of Arts and Sciences or the College of Business. Undergraduate students begin their graduate work in their senior year by taking two graduate level courses.
These graduate courses double-count toward the undergraduate and graduate degrees. Should a student be denied admission to the M.S.A.E. program, the courses will be counted toward the undergraduate degree. A minimum grade of B is required for courses taken as a undergraduate student for graduate credit to apply toward graduate program requirements. Upon completion of the first term as a master's candidate, the student must petition the appropriate Graduate School of Management program director to transfer the courses taken as an undergraduate to the master's degree.

To be considered for admission to the five-year program, applicants must formally apply to the Graduate School of Management during their senior year at Marquette University, complete all of the application requirements as listed above and indicate on the application that they are applying for the five-year program. For detailed information, contact the Economics Department by telephone (414) 288-7377 or fax (414) 288-5757.

Courses

ECON 5008. Economics and Law. 3 cr. hrs.
Relationship between the rights and obligations which the legal system confers on individuals and the allocation of resources which results from alternative assignments of legal rights. Uses and limitations of economic analysis in explaining the process by which legal rights are conferred. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 5016. Environmental and Natural Resource Economics. 3 cr. hrs.
Economic analysis of environmental and natural resources including land, air, and water. Special emphasis on the role of human values and economic institutions in resource exploitation. Topics covered include: air and water pollution, energy, ocean resources, forestry practices, mineral resources, the population problem, and agriculture. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 5045. Comparative Economic Systems. 3 cr. hrs.
An analysis and description of institutional differences among national economies. A theoretical framework for analyzing the effects of alternative systems on social and economic behavior is developed. Theoretical models are applied to specific cases, with special emphasis on issues of growth and development in advanced variants of capitalist, post-communist and less developed economies. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 5070. Economics and Ethics. 3 cr. hrs.
Interaction of economic principles and understanding with ethical principles and understanding in contemporary society. Analysis of affluence's impacts on character development, the practice of moderation and justice, and the meaning of spiritual poverty. Applications of this ethic to critical features of modern industrial society. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 5931. Topics in Economics. 1-3 cr. hrs.
Topics vary. Prereq: Admitted to BUAD, ECON, ENMA, HCTM, HURE or NURS program; or cons. of M.B.A. prog. dir. Other prerequisites may vary from course to course.

ECON 5951. Marquette Led Travel and Study Abroad in Economics. 3 cr. hrs.
Provides an overview of a range of international economics and business issues, with a focus on Central Europe and the Czech Republic. The following topics are covered: the transition of Central European economies from socialist to market oriented systems; business strategy and marketing issues for companies operating in Central Europe, with special emphasis on the Czech Republic; comparisons of human resource and labor relations practices in Europe, the United States and other industrialized countries. Prereq: Cons. of prog. dir.; Jr. stndg.

ECON 5953. Seminar in Economics. 3 cr. hrs.
Prereq: Admitted to the graduate ECON program; or consent of MSAE program director.

ECON 6000. Economics Foundations. 2 cr. hrs.
Principles, analytic concepts, and techniques of the economic way of thinking, applied to consumer choice, resource use, and the firm's pricing, hiring, and production decisions. The operation of markets and the economic role of government. Determinants of aggregate production, employment, and the price level. Prereq: Admitted to the graduate BUAD, HCTM, HURE, LEDR or NURS program; or cons. of M.B.A. prog. dir.

ECON 6100. Managerial Economics. 3 cr. hrs.
Incorporates the tools and logic of microeconomics together with quantitative and statistical methods. The principal focus is on understanding and predicting economic behavior of consumers, firms, and industries through product-line and industry modeling and model estimation. The use of current statistical software and computer technology is promoted throughout the course. May include a segment in applied microeconomics that addresses economic policy issues. Prereq: Admitted to the graduate ACCO, BUAD, ENMA, HCTM, HURE or NURS program; ECON 6000, MANA 6000 and 6001; or cons. of M.B.A. prog. dir.

ECON 6111. Bloomberg. 1 cr. hr.
Students learn the operation and content, and build a proficiency in Bloomberg Professional Services, which is a global leader in providing financial information about publicly traded companies worldwide as well as one of the top sources for business news and economic data. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6112. Financial Econometrics. 1 cr. hr.
Financial econometrics is a relatively new branch of econometrics that is concerned with the challenges presented by financial data and models. These challenges include the high frequency of financial data and the fact that econometric models using these data typically do not satisfy some of the assumptions of the classical linear regression model such as linearity, homoscedasticity and normality. Instructs how these issues can be handled in empirical financial analysis. Topics include: alternative models of financial volatility, models with categorical dependent variables and switching models. Working in teams, students are required to complete a research project using financial data. Prereq: Admitted to graduate ECON program; or cons. of M.S.A.E. prog. dir.
ECON 6113. Spatial Econometrics. 1 cr. hr.
Students learn the theory of spatial econometrics, and then learn how to use econometric software to spatially analyze data, detect whether there are spatial patterns in the error structure of the model and correct for spatial dependence and spatial autocorrelation. Prereq: Admitted to graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6503. Microeconomic Theory and Applications. 3 cr. hrs.
Surveys mathematical techniques applied to economics, including differential calculus and linear algebra. Develops neoclassical theory of firm and consumer behavior using mathematical techniques. Emphasizes the methodology of constructing and using microeconomic models. Explains economic behavior at the individual, firm, market, and general equilibrium levels. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6504. Macroeconomic Theory and Applications. 3 cr. hrs.
Covers both long-run growth and short-run fluctuations. Begins with an analysis of the economy's long-run growth path using neoclassical and endogenous growth models, then surveys theories of the business cycle orthodoxy by orthodoxy in historical order. Static and dynamic models of the economy are developed and used for policy analysis. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6506. Industrial Organization and Public Policy. 3 cr. hrs.
Empirical studies in patterns of market structure, business behavior and performance. Industrial concentration, entry barriers, pricing and promotional behavior, efficiency and profitability. Applications in the field of antitrust and regulation. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6510. Economics of the Public Sector. 3 cr. hrs.
Economic analysis of the public sector, including the topics of taxation and expenditure policy, federalism/centralism, economics of law, Parento criteria, and constitutional economics. Culminates in the presentation of a research paper on a suitable topic in public economics. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6512. Studies in Urban and Regional Economics. 3 cr. hrs.
Uses economic tools to examine decisions of firms and households in a spatial setting. Covers regional economic issues, such as why cities exist and where they tend to develop, inter-urban household migration and firm location decisions, and models of urban growth. The urban economic topics explored include the inter-urban location decisions of economic agents in the context of amenities, public goods and zoning restrictions. Finally, the tools developed in the class are used to investigate urban problems such as poverty, housing, and transportation issues. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6520. Studies in Labor Market Analysis. 3 cr. hrs.
Determinants of the demand and supply of the services of human beings. Compensatory wage differentials, human capital investment, migration and immigration, and labor market discrimination. The role of unions, government in the labor market and current issues. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6522. Health Economics. 3 cr. hrs.
Focuses on the use of economic models and regression methods in the analysis of healthcare. Covers a variety of topics including the cost-benefit analysis and managed care, demand for health, production of health services, income disparities in health outcomes and distribution of health, insurance and risk-sharing, and the role of government. At the end of this course, you will be able to apply economic reasoning and statistical methods to many healthcare issues. Prereq: Admitted to the graduate ECON program or cons. of M.S.A.E. prog. dir.

ECON 6544. International Currency Markets. 3 cr. hrs.
An examination of various foreign currency markets, including spot, forward and derivative instruments, understanding the economic, historical, institutional, and empirical aspects of these markets. Analysis of the relationship between currency markets, money markets and bond markets. Development and study of the fundamental models of balance of payments and exchange rate determination. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6546. International Trade. 3 cr. hrs.
Examines traditional and contemporary issues of international trade using the basic tools of microeconomics. Addresses the basis for trade, the effects of trade, and impediments to trade in particular. Specific topics include various trade theories, arguments for and against protection, the instruments and effects of trade policies, economic integration, and foreign direct investment. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6560. Applied Econometrics. 3 cr. hrs.
Specification, estimation, and statistical verification of multiple linear regression models, and hypothesis testing. Causes, consequences, detection of such problems as heteroscedasticity, autocorrelation, specification and measurement errors. Other topics include estimation of models with panel data and limited dependent variables. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6561. Applied Time-Series Econometrics and Forecasting. 3 cr. hrs.
Continuation of ECON 6560 focusing on more advanced econometric and forecasting techniques using primarily time-series models such as ARIMA and transfer functions, VAR, VEC, and GARCH, as well as the method of combining forecasts. Emphasis on the practical knowledge of above techniques, and on reporting and presenting econometric results. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.
ECON 6580. Monetary Theory and Policy. 3 cr. hrs.
Factors affecting money supply, money demand, and money's influences on the macroeconomy. Federal Reserve policy and its implication for money supply. International monetary economics and coordination of monetary policy among different countries. Monetary policy under different exchange rate regimes. Examination of contemporary theoretical and econometric monetary issues and policy prescriptions. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6931. Topics in Economics. 1-3 cr. hrs.
Topics will vary. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir. Prerequisites may vary from course to course.

ECON 6953. Seminar in Economics. 1-3 cr. hrs.
Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir. Prerequisites may vary from course to course.

ECON 6986. Internship in Applied Economics. 1-3 cr. hrs.
Directed work in applied economic analysis under the supervision of a working professional in a business, financial, international or public policy area. Requires a faculty supervisor. Course does not apply toward degree requirements. Prereq: Admitted to the graduate ECON program; student must have completed 9 credits in program; or cons. of M.S.A.E. prog. dir.

ECON 6987. Internship Work Period. 0 cr. hrs.
Full-time directed work in applied economics under the supervision of a working professional in the area of applied economics. Requires faculty supervisor. Must have approved academic component and approved total work hours. Internship does not apply toward degree requirements. (Full-time equivalency for financial aid, zero credits for academics/tuition.) Prereq: Admitted to the graduate ECON program; completed 9 credits in program; cons. of M.S.A.E. prog. dir. SNC/UNC grade assessment.

ECON 6988. Internship Grading Period. 3 cr. hrs.
Grading for preceding internship work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports and other materials as required during each term in school following a work period. (3 credits for academics/tuition; not financial aid eligible.) Prereq: ECON 6987.

ECON 6995. Independent Study in Economics. 1-3 cr. hrs.
Prereq: Admitted to the graduate ECON program and cons. of M.S.A.E. prog. dir.

ECON 6998. Professional Project. 0 cr. hrs.
Provides direct supervision of the research that constitutes the core of the professional project. Students submit drafts of various sections of their project as each is completed. These sections are: literature review, development of theoretical model, specification of empirical model of theory, creation of the necessary data set and execution of the empirical model. The final output of the course is a complete draft of the project that meets project director's approval. Prereq: Approval of project outline by the proj. dir. and prog. dir. by the stated deadline.

ECON 9991. Professional Project Continuation: Less than Half-Time. 0 cr. hrs.
Fee. SNC/UNC grade assessment. Prereq: Cons. of G.S.M.

ECON 9992. Professional Project Continuation: Half-Time. 0 cr. hrs.
Fee. SNC/UNC grade assessment. Prereq: Cons. of G.S.M.

ECON 9993. Professional Project Continuation: Full-Time. 0 cr. hrs.
Fee. SNC/UNC grade assessment. Prereq: Cons. of G.S.M.