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
Business Economics, Business and Managerial Analytics, Economic Policy Analysis, Financial Economics, Marketing Research, Real Estate Economics
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 (test code 5786) or GMAT scores (test code 1448).
   a. Applicants may request a waiver of the GMAT/GRE requirement if they have earned an overall quality point average of 3.250 or higher with proof of quantitative course coverage from an AACBS accredited school.
5. (For international applicants only) a TOEFL score (test code 1448 and department code 02) or other acceptable proof of English proficiency.

All application materials should be sent to:

Marquette University Graduate School of Management
Holthusen Hall, Third Floor
P.O. Box 1881
Milwaukee, WI 53201-1881

or by courier to: Marquette University Graduate School of Management; 1324 W. Wisconsin Avenue; Milwaukee, WI 53233

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 term only. Temporary non-degree status students are not eligible to continue taking classes beyond one term 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 includes: 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, business and managerial analytics, economic policy analysis, financial economics, marketing research and real estate economics. A no specialization option is also available. Students with no specialization must complete the 12 credit hours of required core courses, 12 credit hours of economics electives and six additional credit hours in economics, business, math, statistics 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 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 is administered in the student's last term of the program. This examination covers subject matter prescribed by the Department of Economics.

Program Details

Each student must choose one of the areas of specialization: business economics, business and managerial analytics, economic policy analysis, financial economics, marketing research, real estate economics or the no specialization option. All specializations and the no specialization option 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 to name a few.

<table>
<thead>
<tr>
<th>ACCO 6200</th>
<th>Managerial Accounting for Decision Making</th>
<th>3</th>
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Course work in Economics 6-9

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BULA 6110</td>
<td>Legal Issues in Business and Technology</td>
</tr>
<tr>
<td>MBA 6100</td>
<td>Business Analytics</td>
</tr>
<tr>
<td>FINA 6200</td>
<td>Advanced Financial Management</td>
</tr>
<tr>
<td>MBA 6140</td>
<td>Leading People and Change (1.5 crs.)</td>
</tr>
<tr>
<td>MBA 6160</td>
<td>Leadership Coaching and Development (1.5 crs.)</td>
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<tr>
<td>MARK 6160</td>
<td>Marketing Research</td>
</tr>
<tr>
<td>MARK 6165</td>
<td>Marketing Analytics</td>
</tr>
<tr>
<td>MARK 6200</td>
<td>Marketing for Management Decision Making</td>
</tr>
<tr>
<td>OSCM 6110</td>
<td>Manufacturing Management</td>
</tr>
<tr>
<td>OSCM 6200</td>
<td>Operations and Supply Chain Management</td>
</tr>
<tr>
<td>OSCM 6115</td>
<td>Service Operations Management</td>
</tr>
<tr>
<td>Three 1-credit MBA Skills courses (BUAD 6101-6125); ECON 6114 or 6115</td>
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Total Credit Hours 18


Business and Managerial Analytics

The Business and Managerial Analytics specialization is designed to provide the tools, structure and practice to help begin a career that focuses on investigation and analysis of big data to support data-driven business decisions. Students completing the specialization gain a practical set of skills across the entire range of analytics activities that can be applied to a wide variety of business tasks.

<table>
<thead>
<tr>
<th>MBA 6100</th>
<th>Business Analytics</th>
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<tbody>
<tr>
<td>or COSC 6520</td>
<td>Business Analytics</td>
</tr>
<tr>
<td>COSC 5820</td>
<td>Ethical and Social Implications of Data</td>
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</tbody>
</table>
COSC 6510  Business Intelligence  3
3 credits from:

Any 5000-level or 6000-level FINA course
MARK 5931  Topics in Marketing (Topic: Marketing Research)  3
or MARK 6160  Marketing Research
COSC 5610  Data Mining

OR

Three credits may be from GSM 1-credit skills classes from the following:
BUAD 6112  Skills: SAS  3
BUAD 6113  Skills: SPSS
ECON 6114  R Programming
ECON 6115  Research Methods in Economics

Total Credit Hours 18

Economic Policy Analysis

The Economic Policy Analysis specialization is designed for students who are interested in careers in the public sector requiring policy analysis. The goal is to provide students training in technical and research skills needed by non-academic professional economists for applying basic economic theory to specific policy problems. Electives in political science are offered in addition to economics.

6 credit hours selected from:

ECON 6510  Economics of the Public Sector  6
ECON 6512  Studies in Urban and Regional Economics
ECON 6520  Studies in Labor Market Analysis
ECON 6522  Studies in Health Economics

6 credit hours of graduate electives selected from:

ECON 5016  Environmental and Natural Resource Economics  6
ECON 5040  International Economic Issues
ECON 6506  Industrial Organization and Public Policy
POSC 6361  Women and Public Policy
POSC 6954  Research Seminar in American Politics (Topic: Urban Public Policy)

Total Credit Hours 18

Financial Economics

The Financial Economics specialization is appropriate for those interested in a career in the financial services sector including commercial and investment banks, insurance companies and wealth management. 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:

ACCO 6200  Managerial Accounting for Decision Making  3
ECON 6580  Monetary Theory and Policy  3
FINA 6200  Advanced Financial Management  3

Graduate level finance class  3
Graduate electives in economics  6

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:

MARK 6160  Marketing Research  3
MARK 6200  Marketing for Management Decision Making  3

Six credit hours from graduate MARK courses  6
3 credits may be from GSM 1-credit skills classes (BUAD 6101-6125); ECON 6114 and ECON 6115

Graduate electives in economics

Total Credit Hours

1


**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>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECON 6512</td>
<td>Studies in Urban and Regional Economics</td>
<td>3</td>
</tr>
<tr>
<td>FINA 6163</td>
<td>Real Estate Finance and Investments</td>
<td>3</td>
</tr>
<tr>
<td>FINA 6200</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>3 credits may be from GSM 1-credit skills classes (BUAD 6101-BUAD 6125); ECON 6114 and ECON 6115</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Graduate elective in economics</td>
<td>6</td>
<td></td>
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<tr>
<td>(REAL 6931 may substitute for 3 graduate elective credits in Economics)</td>
<td></td>
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</tbody>
</table>

Total Credit Hours 18

1


2

Preferred, ECON 6510 Economics of the Public Sector.

The **No Specialization Economics** option provides a more flexible option for students who wish to focus almost exclusively on economics courses. The no specialization option 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 Accelerated Degree 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 Administration. Undergraduate students may begin their graduate work in their junior year. A maximum of 9 credits may count for both the undergraduate and graduate degrees.

Should a student be denied admission to the M.S.A.E. program, the courses are counted toward the undergraduate degree only. 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.

**Courses**

**ECON 5005. Sports Economics. 3 cr. hrs.**

Application of relevant statistical tools and economic models to the economics of sports. One major aspect applies those tools and models to investigate the behavior of athletes and coaches. A second major aspect deals with business aspects of sports, including topics such as the organization of sports franchises and leagues, the public financing of stadiums, and labor issues including compensation and discrimination. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.
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 5040. International Economic Issues. 3 cr. hrs.
Survey of international economics. Basis for and welfare effects of international trade, commercial policies, and economic growth. International organizations, trading regions, and trade accords. Balance of payments concepts and exchange rate theories. History and theory of international monetary systems including fixed versus flexible exchange rates. Prereq: Admitted to the graduate ECON program; or consent of the M.S.A.E. prog. dir.

ECON 5045. Comparative Economic Systems. 3 cr. hrs.
An analysis and description of economies as they evolved from ancient societies through today. Analyze the effects of alternative systems on social and economic behavior under differing levels of technology and development. Compare the economic behavior and policy between socialistic markets and capitalistic markets as the development reaches present-day levels. 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 5072. Behavioral Economics. 3 cr. hrs.
An introduction to behavioral economics. Traditional economic models assume that people have perfect rationality and perfectly process all available information. Behavioral economics relaxes some of the assumptions made about people to reconcile traditional models with real world observations. Coverage of behavioral economic theory is presented by emphasizing empirical results from lab experiments and the real world, and investigating some public policy implications. 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, HCTM, HURE, LEDR or NURS program; or cons. of M.B.A. prog. dir. Prerequisites vary depending on topic.

ECON 5953. Seminar in Economics. 3 cr. hrs.
Topics vary. Specific titles to be announced in the Schedule of Classes. Prereq: Admitted to the graduate ECON program; or consent of M.S.A.E. prog. dir.

ECON 6114. R Programming. 1 cr. hr.
Introduction to R Programming. Prereq: Admitted to the graduate ECON program; or cons. of M.S.A.E. prog. dir.

ECON 6115. Research Methods in Economics. 1 cr. hr.
Provides skill sets to select research topic for professional project; provides guidance in strategies used in research, writing and presentation components. Prereq: Admitted to graduate ECON; or cons. of M.S.A.E. prog. dir.

ECON 6200. Economics for Management Decision Making. 3 cr. hrs.
Incorporates the tools and logic of microeconomics together with quantitative and statistical methods to assist managers in sound, ethical decision making. The principal focus is on understanding and predicting economic behavior of consumers, pricing strategies of firms, and the impact of industry competition through product-line and industry modeling and model estimation. May also consider the impact of various industries. The use of current statistical software and computer technology is required. Prereq: Admitted to graduate ACCO, BUAD, CCOM, HCTM, HURE, LEDR or NURS prog.; MBA 6010, MBA 6020; or cons. of M.B.A. 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. Studies in 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. Students gain the ability 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 ACAN, ECON or BMAN Certificate 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 or BMAN Certificate program; or cons. of M.S.A.E. prog. dir.

ECON 6568. 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: Admitted to the graduate ECON program; approval of project outline by the prog. dir. and cons. of M.S.A.E. 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.