

Department of Economics and Finance

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The mission of the graduate program in economics is to provide students with advanced studies in economic theory and research methodology. To accomplish its mission, the Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics. The department's approach to these degree programs is global, interactive, and innovative. In the M.A. program, students are offered three curricular paths: general economics, Industrial Relations, and Financial Economics. M.A. students in economics are offered preparation for careers in private business and public service. The focus of the M.A. program is on decision analysis and applied research. Ph.D. students in economics are trained for careers in teaching and applied research. The Ph.D. provides students with the opportunity to combine advanced training in economics with educational pedagogy and research methodology.

The required test score for admission to the master's program is 380 on the Miller Analogies Test (30 on the old scale) or a satisfactory score on the Graduate Records Examination (GRE). Admission to the doctoral program requires a satisfactory score on the GRE.

Requirements for the Master of Arts (5000 and 6000 level)

1. Once admitted, candidates must complete a minimum of 30 semester hours (10 courses) if a thesis is written or a minimum of 33 semester hours (11 courses) if a thesis is not written. At least 24 hours (8 courses) must be in courses numbered exclusively as 6000-level graduate courses (other courses can be taken at the 5000 level). A minimum of 18 of these semester hours must be in economics and include ECON 6110, ECON 6120, and ECON 6620.
2. Students may include a minor in their degree programs. A minor consists of a minimum of 12 semester hours of approved courses. Students not electing a minor may include a cognate area of up to 6 semester hours in their programs. Cognate areas can be formed from courses in accounting, agriculture, finance, geography, geology, history, insurance, management, political science, psychology, real estate, and sociology.

Major in Economics (General)

Candidates choosing a major in Economics (general) must complete a minimum of 18 semester hours of economics including ECON 6110, 6120, and 6620. A minor (12 hours of approved courses) can also be included. A list of graduate minors can be found on page 59.

Students not electing a minor can include a cognate area of up to 6 semester hours in their programs. Cognate areas can be formed from courses in such fields as accounting, agriculture, finance, geography, geology, history, insurance, management, marketing, mathematics, political science, psychology, real estate, and sociology.

The student, with the assistance of the M.A. advisor, must file a degree plan prior to the completion of 21 credit hours.

Major in Economics with a Concentration in Financial Economics

Students in the Financial Economics concentration may choose to take the theoretical track (involves more mathematics)—ECON 6110, ECON 6120, and 6620—or the applied track—ECON 5620, ECON 6000, and ECON/FIN 6450.

In addition, candidates choosing the concentration in Financial Economics are required to complete the following three-hour courses:

ECON/FIN 6460	Seminar on Financial Markets
FIN 6710	Financial Analysis
ECON/FIN 6730	Seminar on Financial Institutions
FIN 6740	Security Analysis

An additional six hours of guided electives must be chosen from the following:

ECON/FIN 6430	Seminar on Public Finance
ECON/FIN 6450	Seminar on Monetary Policy
ECON 6530	International Trade Theory and Policy
FIN 6720	Cases in Financial Management
FIN 6860	International Financial Management

The remaining three hours are general electives.

Major in Economics with a Concentration in Industrial Relations

Students in the Industrial Relations concentration may choose to take the theoretical track (involves more mathematics)—ECON 6110, ECON 6120, and ECON 6620—or the applied track—ECON 5620, ECON 6000, and ECON/FIN 6450.

In addition, candidates choosing the concentration in Industrial Relations are required to complete ECON 6500, ECON 6510, and ECON 5390.

Students without substantial experience in the field of industrial relations may be required to complete the following as initial courses in the concentration:

ECON 5420	Labor and Human Resource Economics
ECON 5490	Industrial Relations Legislation
ECON 5510	Unions and Collective Bargaining
ECON 6040	Survey of Employment Relations

Comprehensive Examinations

1. Candidates must successfully complete a written comprehensive examination that may be taken no more than twice. For the major in Economics, the comprehensive examination covers the three core areas: macroeconomics, microeconomics, and Econometrics I. For the major in Economics with a concentration in Financial Economics, the comprehensive examination includes macroeconomics, microeconomics, and a financial economics field examination. For the major in Economics with a concentration in Industrial Relations, the comprehensive examination includes macroeconomics, microeconomics, and an employment relations field examination.
2. Before taking the comprehensive examination, the student is expected to attend and actively participate in regularly scheduled departmental student/faculty workshops where research papers are presented and discussed by the participants.

Requirements for the Doctor of Philosophy (6000 and 7000 level)

The Ph.D. in Economics provides students with the opportunity to combine advanced training in economics with educational pedagogy and applied research. Students completing the Ph.D. in Economics will have the academic and pedagogical skills necessary to teach economics at the collegiate level and to conduct applied research in economics.

General Admissions Requirements

For admission to the doctoral program, candidates are expected to attain a GRE score of 1100 or better. On matriculation, students will complete a degree plan. The Ph.D. advisor must approve the degree plan. In some cases, it may be possible to complete the program on a part-time basis, but the program is designed for full-time students.

Requirements for the Ph.D. in Economics

1. Students entering the Ph.D. program in economics must hold a baccalaureate degree and meet the entrance requirements listed under the General Admissions Requirements.
2. Students entering with a baccalaureate degree are required to complete a minimum of 64 semester hours, including a minimum of 51 hours of formal coursework, a one-credit hour economics workshop (two presentations), and 12 hours of dissertation research. Of the total 64 hours, 43 hours must be at the 7000 level. Up to 12 semester hours of formal coursework may be applied toward the minimum of 51 hours of formal coursework for students entering with an M.A. in economics.
3. In consultation with graduate advisor, the student must file a degree plan prior to the completion of 21 credit hours.
4. Students must complete the Qualifying Examination as described on page 53 of the Graduate Catalog. Competency in economic theory is tested by qualifying examinations in microeconomics and macroeconomics at the end of

the student's first year of study. A major field examination and either a minor field exam or an econometrics exam will test a candidate's competency in two applied fields. These field examinations will be taken after completion of all the course requirements for the specific field. A field consists of a *minimum* of two doctoral-level (7000-level) courses plus electives as advised by the field coordinators. The field requirements are listed below.

5. Candidates must successfully defend a dissertation prospectus (page 54 of the Graduate Catalog) and, upon approval by the candidate's dissertation committee, prepare a dissertation. The student is responsible for contacting a Ph.D. faculty member about becoming the chair of the student's dissertation committee. The chair will suggest other potential committee members.
6. After completion of the dissertation, the candidate is given an oral examination dealing with the structure and content of the dissertation. The dissertation defense is discussed on page 54 of the Graduate Catalog. The candidate will be notified in writing of the committee's approval of the dissertation.

Sample Course and Examination Schedule

The following sample schedule outlines the sequence of Ph.D. course requirements.

Fall Semester - Year 1

ECON 6100 Mathematical Methods for Economics
 ECON 6110 Macroeconomics I
 ECON 6120 Microeconomics I
 ECON 6620 Econometrics I

Spring Semester - Year 1

ECON 6630 Econometrics II
 ECON 7110 Macroeconomics II
 ECON 7120 Microeconomics II
 ECON 7660 History of Economic Thought

Summer - Year 1

ECON 7130 Microeconomics III
 Qualifying Exam—Macroeconomics
 Qualifying Exam—Microeconomics

Fall Semester - Year 2

ECON 7630 Econometrics III
 ECON 7600 Instructional Development and Practice in Economics
 ECON/FIN Major Field Course I
 ECON/FIN Minor Field Course I

Spring Semester - Year 2

ECON 7900 Research Seminar
 ECON/FIN Major Field Course II
 ECON/FIN Minor Field Course II
 ECON/FIN Elective Course

Summer - Year 2

Field Exam Major Field Exam
 Field Exam Econometrics or Minor Field Exam

Fall Semester - Year 3

ECON 7500 Economics Workshop
 ECON 7640 Dissertation Research

Spring Semester - Year 3

ECON 7640 Dissertation Research

Summer - Year 3

Proposal Dissertation Proposal

Fall Semester - Year 4

ECON 7640 Dissertation Research

Spring Semester - Year 4

ECON 7640 Dissertation Research

Summer - Year 4

Defense Dissertation Defense

Required Core Courses

ECON 6100 Mathematical Methods for Economics
 ECON 6110 Macroeconomics I
 ECON 7110 Macroeconomics II
 ECON 6120 Microeconomics I
 ECON 7120 Microeconomics II
 ECON 7130 Microeconomics III
 ECON 6620 Econometrics I
 ECON 6630 Econometrics II
 ECON 7630 Econometrics III
 ECON 7600 Instructional Development and Practice in Economics
 ECON 7660 History of Economic Thought
 ECON 7900 Research Seminar
 ECON 7500 Economics Workshop

Fields of Study

Every student has to choose two fields and four 7000-level field courses.

Financial Economics

Required Courses:

FIN 7710 Advanced Financial Economics I
 ECON/FIN 7720 Advanced Financial Economics II

Labor Economics and Employment Relations

Required Courses:

ECON 7510 Advanced Labor Economics I
 ECON 7520 Advanced Labor Economics II

Courses in Economics [ECON]

5310 Public Finance II. Three credits. (Same as FIN 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

5390 Employee Benefits. Three credits. (Same as FIN 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to develop applied skills. Social insurance and international benefits integrated.

5400 Business and Government. Three credits. Structure, conduct, and performance of American industries; public policies toward business; economic analysis of these policies.

5420 Labor and Human Resource Economics. Three credits. Current issues and theories, returns to training and education (human capital), earnings differences; theoretical interpretation and empirical economic impacts of unions, government regulation, and

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international forces upon labor relations and labor markets; human resource information systems (spreadsheet applications) and integration of Internet information sources and forensic analysis.

5440 International Economics. Three credits. Differences between domestic trade and international trade and foundations of international trade; economic effects of free trade and restricted trade; mechanisms of international payments and structure of balance of payments; history and contemporary issues of trade policies and world monetary systems.

5470 Economic Development of the Third World. Three credits. Conditions and problems of the less developed countries; causes, processes, and consequences of economic development; introduction to basic growth models, development theories, and strategies for development. Economic as well as noneconomic factors studied.

5490 Industrial Relations Legislation Three credits. Effects of domestic and international legislation and regulation of governments on the practical functions of labor markets and employment relations in the public and private sectors. Specific dimensions include unions and other collective and collaborative institutions, workforce diversity, and the impacts of technology. Domestic and international electronic resources heavily integrated into learning experiences based on research and analysis.

5510 Unions and Collective Bargaining. Three credits. Collective bargaining contract administration and alternative dispute resolution mechanisms. Information technology tools. Analytical focus on the impacts of total compensation agreements, strike strategies, and the interdependent influences of the union and non-union sectors of the economy. Practical cases emphasized. A brief international comparative survey of unions and other collective relationships included.

5620 Econometrics and Forecasting. Three credits. Prerequisites: QM 2610 and MATH 1810 or equivalent. Application of mathematical and statistical techniques to economic problems. Introduces econometric model construction and estimation and related problems. Requires use of econometric computer package.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

5890 Internship in Economics. One to three credits. Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience.

5990 Problems in Economics. One to three credits. Problems for intensive study are chosen in joint consultation between student and instructor.

6000 Managerial Economics. Three credits. Prerequisites: ECON 2410 and 2420 or 4570 or equivalent. Primarily for M.B.A. students with particular attention given to business administration and finance topics including demand analysis, production and cost decisions, quantitative market analysis, capital budgeting, and alternative theories of the firm. Special emphasis on case studies, software applications, and interpretation of economic meanings of related analyses.

6030 Survey of Economic Theory. Three credits. Overview of micro- and macroeconomic principles with an emphasis on applications to decision making in a competitive market environment. **May not be used for elective credit in graduate business degree programs.**

6040 Survey of Employment Relations. Three credits. Survey of employment relations with emphasis on developing a general context, computational skills, and ability to conduct informed discourse on the content. Computational skills include simple time value and statistical analysis limited to calculator or spreadsheet applications. Students expected to demonstrate presentation skills utilizing different media. For current or aspiring professionals in employment relations who need to retool and/or need a course which, upon successful completion, will facilitate entry into the M.A. in Economics Industrial Relations concentration. Also a suitable elective for students in related fields of study.

6100 Mathematical Methods for Economics. Three credits. Preparation for core courses in economics. Covers all essential mathematical methods including basic matrix algebra, exponential and logarithmic functions, the basics of differential calculus, unconstrained optimization, constrained optimization subject to equality and inequality constraints, comparative statics, and the Envelope theorem.

6105 Advanced Mathematical Methods for Economics. Three credits. Prerequisite: ECON 6100 or equivalent as determined by instructor. Covers methods of dynamic optimization including calculus of variations, optimal control, and dynamic programming and the mathematical prerequisites of these methods such as integration, difference and differential equations, and advanced matrix algebra. Covers basics of mathematical statistics. Computer applications emphasized.

6110 Macroeconomics I. Three credits. Prerequisite: ECON 6100 taken concurrently or approval by instructor. Serves as the first semester core course in macroeconomic theory for students pursuing a Ph.D. in economics. First part focuses on long-run economic growth. Topics include exogenous and endogenous growth theory, overlapping generations models, and the neoclassical growth model. Second part focuses on short-run economic fluctuations. Topics include real business cycle theory, traditional Keynesian theories, and New Keynesian models featuring rational expectations. Mathematical models used to address competing theories; comfort with multivariate calculus and linear algebra essential.

6120 Microeconomics I. Three credits. Prerequisite: ECON 6100 taken concurrently or approval by instructor. Serves as the first semester core course in microeconomic theory for students pursuing a Ph.D. in economics. First part develops the theory of consumer choice, with extensions including the labor supply model, intertemporal choice, and choice under uncertainty. Second part models theory of the firm in both perfectly competitive and monopoly industry settings. Mathematical models used to derive theories; comfort with multivariate calculus and linear algebra essential.

6200/ 7200 Economics of Education. Three credits. Prerequisite: ECON 6120 or permission. The role of education in creating human capital, the existence of externalities, the returns to education, the education "industry," and the issues surrounding education reform.

6390/ 7390 Social Insurance, Pensions, and Benefits. Three credits. Prerequisites: ECON 4390/5390 (or equivalent). An intensive survey of policy and practice in employee benefits, with an in-depth examination of pension plans. Covers an interdisciplinary mix of economics, accounting/finance, law, and regulation.

- 6400 Economics of Health Care.** Three credits. Applications of microeconomics to analysis of the health care delivery system in the United States. Major issues include the private and public demand for health care, supply of health care, cost of health care, the pricing of health care, and the analysis of the various health care reform policies of the industry. Examines how economics can provide valuable insights into the above problems of social choice.
- 6430 Seminar on Public Finance.** Three credits. (Same as FIN 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity and completeness of voting preferences, income redistribution and economic justice, social insurance, health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.
- 6440 Special Topics in Economics.** One to three credits. Independent study of a particular topic selected by the student and approved by the instructor. Provides an opportunity to study special areas of interest for which regular courses are not offered.
- 6450 Seminar on Monetary Policy.** Three credits. (Same as FIN 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decisions on economic activity and business decisions.
- 6460/ 7460 Seminar on Financial Markets.** Three credits. (Same as FIN 6460/7460.) Prerequisite: FIN 3000 or 3010 or 6000 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.
- 6470/ 7470 Seminar in Economic Growth and Development.** Three credits. Prerequisites: ECON 2410 and 2420 and permission of instructor. Satisfies the M.B.A. international course requirement. Critical analysis of causes, processes, and consequences of economic development; evaluation of various policies and strategies for economic development; introduction to advanced growth models and theories. Special emphasis on the less developed countries.
- 6500 Modern Issues in Labor and Industrial Relations.** Three credits. A survey of labor market and employment relations issues evolving in our changing economic environment. Coverage includes the concepts of efficiency, equity, and ethics of market and institutional behavior and economic issues related to work force demographics and work place organization. Distinction drawn between cooperative and competitive models of economic organization and outcomes in the employer-employee relations environment. Internet labor market information sources and international comparisons incorporated.
- 6510 Theory and Analysis in Labor Economics and Industrial Relations.** Three credits. Prerequisite: ECON 4570 or 6000 or 4420/5420 (or equivalent of either). Recommended prerequisites: Courses or equivalent experience involving financial computations, spreadsheet applications, and statistical software. Micro and macro theory of labor demand and supply and government policy implications, economic theory and measurement of human capital, returns to education, discrimination, income distribution, and impacts of international trade.
- 6520 Special Media Projects.** Three credits. Nontraditional learning experiences. Approval includes faculty and student written mutual agreement and conformance to departmental standards for independent study. Examples of special projects include production of CDs, DVDs, cable TV programming, Internet projects, internships that clearly add nonredundant learning experiences, or highly applied projects that demonstrate the integration of information technologies into mainstream business or other organization decision making.
- 6530/ 7530 International Trade Theory and Policy.** Three credits. Prerequisite: ECON 5440 or equivalent background recommended. Advanced study of the key topics covered and introduction to other topics not covered in ECON 5440. Critical examination of major issues and evaluation of latest theories in international trade and monetary relations.
- 6540 Japanese Society and Business.** Three credits. (Same as SOC 6710.) Japanese economy, business practices, and social and physical environment in comparison with those in other countries, particularly the United States.
- 6550 Studies in Economic Development: Pacific Asia.** Three credits. Prerequisite: ECON 5470 or equivalent recommended. Analysis and evaluation of processes of economic development with focus on a specific area of the United States or of the world. Area covered varies.
- 6560 Mergers, Acquisitions, and Corporate Restructuring.** Three credits. (Same as FIN 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.
- 6570/ 7570 Industrial Organization and Strategy.** Three credits. Prerequisites: ECON 6120 and 6620 (or equivalent) or permission of the instructor. Historical overview of the development of industrial organization as a field, followed by intensive review of the recent theoretical and empirical literature on industry behavior and strategy. Behavior of firms in oligopoly markets emphasized. Topics include basic theory of non-cooperative games, welfare effects of non-competitive behavior, and antitrust and regulatory policy toward such behaviors.
- 6620 Econometrics I.** Three credits. (Same as FIN 6620.) Prerequisite: ECON 4620 or equivalent. Focuses on ordinary least squares regression analysis, covering the problems of specification, multicollinearity, heteroskedasticity, autocorrelation, and endogeneity. SAS statistical software used as a tool for manipulating data, conducting forecasts, carrying out Monte Carlo simulations, and performing statistical inference.
- 6630 Econometrics II.** Three credits. Prerequisite: ECON 6620 or permission of instructor. Emphasizes methods of time series analysis, including Box-Jenkins methods, general-to-specific modeling, volatility models, vector autoregressions, unit roots and cointegration, unobserved component and state space models, and neural

networks. Integrates practical applications in various computing environments including SAS, RATS, and Matlab.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6660/ 7660 History of Economic Thought. Three credits. Prerequisites: Graduate status and proficiency in reading and writing English. Examines the history of Western economics beginning with the ancient Greeks, including the medieval scholastics, the early modern mercantilists, and selected thinkers from classical liberal economics, socialism, the historical and institutionalist schools of economics, neoclassical economics, and contemporary economics.

6730 Seminar on Financial Institutions. Three credits. (Same as FIN 6730.) Focus on the common and distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks that they face and the management of those risks, evolution experienced during the 1980s and 1990s, and the probable course of change in the years ahead.

6999/ 7999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7110 Macroeconomics II. Three credits. Prerequisites: ECON 6100 and 6110. Second semester core course in macroeconomic theory for students pursuing a Ph.D. in economics. Focuses on modern intertemporal macroeconomics. Develops discrete-time dynamic optimization techniques and examines the role of fiscal and monetary policies in centralized and decentralized economies and their welfare implications. Reviews recent developments in economic growth theory and international macroeconomics. Focus of course is quantitative but developing intuition about macroeconomic dynamics stressed.

7120 Microeconomics II. Three credits. Prerequisites: ECON 6100 and 6120. Second semester core course in microeconomic theory for students pursuing a Ph.D. in economics. Examines oligopolies and pricing strategies with game theory, general equilibrium including the incorporation of public goods and externalities, and information economics with asymmetric information in principle-agent models. Mathematical models used to derive the theories; comfort with multivariate calculus and linear algebra essential.

7130 Microeconomic III. Three credits. Prerequisite: ECON 7120. Third semester course in microeconomic theory for students pursuing a Ph.D. in economics. Advanced methods used in practical applications in microeconomics. Topics include set theory approach to cost and production with an emphasis on measurement methods for productivity and efficiency, multifactor productivity and index numbers, and applications of game theory to issues in law and economics, political economy, and finance. Familiarity with calculus, linear algebra, and game theoretic analysis of basic strategies in oligopoly expected.

7250 Methods of Outcome Assessment. Three credits. Prerequisites: ECON 7120 and 7630. Deals with outcomes assessment of the educational process. Covers techniques to rank educational

institutions, methods to assess the effectiveness of educational programs, ways to evaluate individual courses or instructors, and methods to assess student learning. Key quantitative tools that are used in outcomes assessment, including data envelope analysis, stochastic frontier models, and hierarchical linear models. Also considers the political and incentive problems that typically arise in implementing assessment methods in practice.

7500 Economics Workshop. One credit. Students present material related to their dissertation proposals or ongoing dissertation research to peers and the graduate faculty in a formal workshop setting. Credit is awarded after a student completes **two** separate workshop presentations that are judged satisfactory by the attending graduate faculty.

7510 Advanced Labor Economics I. Three credits. Prerequisites: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. First half of an introduction of leading theories in labor economics including labor supply, education and human capital, job search, labor demand, compensating wage differentials and discrimination, contracts, risk-sharing, incentives, and collective bargaining. Frequent use of multivariate regression analysis and other modern econometric techniques allows students to enhance skills necessary to conduct independent research in the field.

7520 Advanced Labor Economics II. Three credits. Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Second half of an introduction of the leading theories in labor economics including unemployment and inflation, employment allocation and job loss, technological progress, globalization, inequalities, labor market policies, and institutions and labor market performance. Frequent use of multivariate regression analysis and other modern econometric techniques allows students to enhance skills necessary to conduct independent research in the field.

7550 Quantitative Policy Analysis in International Economics. Three credits. Prerequisites: ECON 6530, 7120, and 7630. Applications-oriented course emphasizing quantitative tools to analyze policy issues related to international trade, exchange rates, sectoral resource allocation, and growth. Topics include an extended introduction to trade policy analysis using a general equilibrium modeling framework. Practical aspects of general equilibrium modeling emphasized and applied to a particular issue of interest, such as the impact of trade liberalization on labor markets and growth or the impact of trade and exchange rate distortions on resource allocation and growth.

7600 Instructional Development and Practice in Economics. Three credits. Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Workshop environment where students present key economic concepts, use new technology, organize and structure courses and individual classes, use assessment tools, and deal with conflict in the classroom. Offers preparation to teach undergraduate classes in economics.

7610 Economic Internship. Three credits. Prerequisites: FOED 7520 and SPSE 7550. Supervised teaching of undergraduate economics courses.

7630 Econometrics III. Three credits. Prerequisites: ECON 6620 and 6630; student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Third course in the econometrics sequence with an emphasis on nonlinear estimation methodology for cross section and panel data. Includes discussion of various qualitative and limited dependent variable models, including those for discrete responses, censored and truncated data, sample selection problems, treatment effects, and duration

analysis. Incorporates practical applications in SAS, STATA, and other computing environments.

7640 Dissertation Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. S/U grading.

7710 Advanced Financial Economics I. Three credits. (Same as FIN 7710.) Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Provides an integrated treatment of a variety of dynamic optimization and dynamic equilibrium models and examines their empirical implications for individual choices and, in particular, savings and asset prices. Three frameworks studied: infinitely lived representative agent models, heterogenous agent models, and representative and heterogenous agent models with financial frictions. Advanced numerical solution methods and panel data estimation techniques also incorporated.

7720 Advanced Financial Economics II. Three credits. (Same as FIN 7720.) Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Introduction to leading theories in monetary economics including measurement of the empirical impact of monetary shocks on real activity, money in the utility function and cash-in-advance models, and New Keynesian models featuring sluggish price and wage adjustment. Emphasis on the analysis of interest rate rules and the conduct of optimal monetary policy under commitment and discretion. Frequent use of numerical dynamic programming and empirical estimation of monetary models allows students to enhance skills necessary to conduct independent research in the field.

7900 Research Seminar. Three credits. Prerequisites: ECON 7630; student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Students practice writing academic papers, critiques, and monographs in economics and finance with some emphasis on developing a viable dissertation proposal. Incorporates a detailed discussion of essential steps in the publication process such as identifying a topic, fitting it into the literature, developing a theoretical background, preparing the data, choosing an appropriate methodology, and presenting the results, as well as pitfalls to avoid in working on dissertations and academic papers.

Courses in Finance [FIN]

5310 Public Finance II. Three credits. (Same as ECON 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

5360 Management of Financial Institutions. Three credits. Prerequisite: FIN 3210 or equivalent or consent of instructor. Application of principles of institution management with a focus on operations, policy making, asset, liability, and capital management of commercial banks and nonbank financial institutions.

5390 Employee Benefits. Three credits. (Same as ECON 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to

develop applied skills. Social insurance and international benefits integrated.

5430 Real Property Valuation. Three credits. Prerequisite: FIN 2450 or consent of instructor; FIN 3010 strongly recommended. Theory and methods of real property valuation. Qualitative and quantitative analysis incorporated to appraise residential and income-producing properties. Comparable sales, cost-depreciation, and income capitalization analysis emphasized.

5590 Problems in Real Estate. Three credits. Current controversial conditions in the field of real estate with concentration on major problems and policies in managing real estate and other related resources.

5710 Insurance in Estate Planning. Three credits. Prerequisite: FIN 3610 or permission of instructor. Insurance as it may relate to estate planning examined in detail. Focus on estate planning principles including the problems of estate liquidity, taxation, governmental regulation, and costs involved in handling estates. Also included are ownership provisions and beneficiary designations, settlement options, and trusts.

5730 Insurance Company Operations. Three credits. Prerequisite: FIN 3610 or permission of instructor. Insurance marketing, underwriting, reinsurance, rate making, claims adjusting, loss control activities, and other functions and activities.

5750 Risk Management. Three credits. Prerequisite: FIN 3610 or permission of instructor. Analysis of major sources of liability loss exposures and the insurance coverages designed to meet those exposures. Noninsurance techniques such as loss control and risk transfer are also discussed.

5790 Problems in Insurance. Three credits. Prerequisite: FIN 3610 or permission of instructor. Application of various insurance coverages to fulfillment of personal, business, and social needs. Special problems are chosen or assigned in areas of the student's interest in joint consultation between student and instructor.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

5890 Internship in Finance. Three credits. Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience.

5990 Problems in Finance. One to three credits. Chosen in joint consultation between student and instructor.

6000 Survey of Financial Management. Three credits. Principles and tools of financial management including time value of money, security valuation, funds acquisition and capital budgeting, and cost of capital. **May not be used for elective credit in graduate business degree programs.**

6430 Seminar on Public Finance. Three credits. (Same as ECON 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity and completeness of voting preferences, income redistribution and economic justice, social insurance,

health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.

- 6440 Readings in Finance.** One to three credits. Independent readings-based study of a particular topic in finance selected by the student and approved by the instructor. Provides an opportunity to study special areas of interest for which regular courses are not offered.
- 6450 Seminar on Monetary Policy.** Three credits. (Same as ECON 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decision on economic activity and business decisions.
- 6460/ 7460 Seminar on Financial Markets.** Three credits. (Same as ECON 6460/7460.) Prerequisite: ECON 3210 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.
- 6550 Real Estate Investment.** Three credits. Prerequisites: FIN 2450 and 3010. Development of a framework for making real estate investment decisions and for analyzing real estate investment alternatives.
- 6560 Mergers, Acquisitions, and Corporate Restructuring.** Three credits. (Same as FIN 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.
- 6620 Econometrics I.** Three credits. (Same as ECON 6620.) Prerequisite: ECON 4620 or equivalent. Focuses on ordinary least squares regression analysis, covering the problems of specification, multicollinearity, heteroskedasticity, autocorrelation, and endogeneity. SAS statistical software used as a tool for manipulating data, for conducting forecasts, for carrying out Monte-Carlo simulations, and for performing statistical inference.
- 6710 Financial Analysis.** Three credits. Prerequisite: FIN 3010 or 6000. Theory of corporate finance with applications. Techniques and problems for maximizing wealth through the application of discounted cash flow analysis. Emphasis on risk, capital budgeting, and capital structure.
- 6720 Cases in Financial Management.** Three credits. Prerequisite: FIN 6710. Applications-oriented approach to managerial problem-solving. Topics may include working capital management, capital budgeting, cost of capital estimation, lease/purchase decisions, bond refunding, and international issues.
- 6730 Seminar on Financial Institutions.** Three credits. (Same as ECON 6730.) Focus on the common and the distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks they face and the management of those risks, evolution experienced during the 1980s and 1990s, and the probable course of change in the years ahead.
- 6740 Security Analysis.** Three credits. Prerequisite: FIN 3810 or consent of instructor. Interpretation of financial statements, valuation and selection of securities, security risk, legal and regulatory issues, and agency problems.
- 6860 International Financial Management.** Three credits. Prerequisite: FIN 3010 or 6000. International capital markets, exchange rate exposure, risk management, and other multinational finance issues. Essential not only for United States exporters, but also for those facing competition from abroad.
- 6999 Comprehensive Examination and Preparation.** One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.
- 7710 Advanced Financial Economics I.** Three credits. (Same as ECON 7710.) Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Provides an integrated treatment of a variety of dynamic optimization and dynamic equilibrium models and examines their empirical implications for individual choices and, in particular, savings and asset prices. Three frameworks studied: infinitely lived representative agent models, heterogenous agent models, and representative and heterogenous agent models with financial frictions. Advanced numerical solution methods and panel data estimation techniques also incorporated.
- 7720 Advanced Financial Economics II.** Three credits. (Same as ECON 7720.) Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Introduction to the leading theories in monetary economics including measurement of the empirical impact of monetary shocks on real activity, money in the utility function and cash-in-advance models, and New Keynesian models featuring sluggish price and wage adjustment. Emphasis on the analysis of interest rate rules and the conduct of optimal monetary policy under commitment and discretion. Frequent use of numerical dynamic programming and empirical estimation of monetary models allows students to enhance skills necessary to conduct independent research in the field.