The Department of Economics offers both a Master of Science program and a PhD in applied Economics program. The most distinctive feature of these programs is their emphasis on applied economics, coupled with attention to providing a solid grounding in microeconomic and macroeconomic theory, and econometrics. Students come from all over the world, and the curriculum is designed with this in mind, striving for balance in coverage of economies that are rich and poor, large and small, mixed and market. This gives a unique flavor to the course of study, making it well-suited to the analysis of the emerging global economy of the 21st century.

The Master of Science program is in applied economic policy analysis, with broad specialization areas. The program is large enough to support a full slate of core and area courses each year, yet small enough to maintain a sense of community among the students.

The program is especially appropriate for those who wish to work in or return to positions in government, teaching, finance, or industry, while providing a rigorous basis for those who want to continue their studies to the doctoral level.

Our signature co-op program offers qualified MS students the opportunity to apply for paid work positions as practicing economists for up to six months as part of their academic program. This paid work experience enhances our MS degree and its emphasis on application. Students have an opportunity to learn how to apply their knowledge, to solve problems, and to make a difference in the world before they graduate. Our graduates either find full-time work in their area of specialty or go on to earn additional graduate degrees. All of our graduates find jobs after completing our program.

Master of Science students may choose to pursue a concentration in data science. The concentration strategically combines econometrics and machine-learning techniques to analyze and predict outcomes with big data. Students in Seattle are required to select this concentration.

Our master’s program-specific learning courses also feature ‘tracks.’ Along with the core MS classes, these tracks help our students prepare for different career paths. The Department of Economics currently offers three tracks (https://cssh.northeastern.edu/economics/graduate/ma/):

- policy
- quantitative analysis
- academic

The PhD program is small and focused, and we welcome applications from those with a bachelor’s or master’s degree who have had prior training in macroeconomic and microeconomic theory and possess strong quantitative skills. Students take coursework in industrial organization, competition policy, and regulatory and labor economics. Health economics or development economics are additional areas that may be integrated into the primary fields noted above.

**Programs**

**Doctor of Philosophy (PhD)**
- Economics (http://catalog.northeastern.edu/graduate/social-sciences-humanities/economics/economics-phd/)

**Master of Science (MS)**
- Economics (http://catalog.northeastern.edu/graduate/social-sciences-humanities/economics/economics-ms/)

**Courses**

**Economics Courses**

Search ECON Courses using FocusSearch (http://catalog.northeastern.edu/class-search/?subject=ECON)

**ECON 5105. Math and Statistics for Economists. 4 Hours.**
Offers an intensive study of the statistical methods and techniques and mathematical fundamentals necessary for quantitative economics. Statistical topics include descriptive statistics, probability theory, fundamentals of estimation and hypothesis testing, and regression and correlation analysis. Mathematical topics include linear algebra and differential and integral calculus. Computer applications are an integral part of the course.

**ECON 5110. Microeconomic Theory. 4 Hours.**
Presents a survey of microeconomic theory at the beginning graduate level. Topics include theories of the consumer, firm, and market (including input and output markets), welfare economics, and market failures. Includes applications of theory to public policy questions in such fields as industrial organization and public finance. Requires knowledge of undergraduate microeconomic theory.

**ECON 5120. Macroeconomic Theory. 4 Hours.**
Examines theories of the short-run determination of output, employment, and prices, and long-run economic growth. Presents alternative macroeconomic models. Also consists of applied case study analysis of the theoretical models presented in class. Requires knowledge of undergraduate microeconomic theory.

**ECON 5140. Applied Econometrics. 4 Hours.**
Offers an intensive study of econometric techniques applied to cross-section, time-series, and panel data. Applies the fundamentals of econometrics to analyzing structural economic models, forecasting, and policy analysis. Computer applications and an empirical research project are an integral part of the course.

**ECON 5200. Topics in Applied Economics. 4 Hours.**
Presents an application of microeconomic and macroeconomic theory, as well as quantitative methods, to a variety of social issues, both domestic and international. May be repeated without limit where topics are unique.
ECON 5291. Applied Development. 4 Hours.
Focuses on major macroeconomics policy questions for developing countries in an open economy context. Combines theoretical foundations with institutional analysis and empirical evidence. Begins by developing a macroeconomic framework to analyze short-term macroeconomic adjustment and concludes with long-term growth, emphasizing the effects of financial integration and capital account regulations on macroeconomic performance in developing countries. Approaches macroeconomic policy issues from a political economy perspective on macroeconomics. Empirical data and country experiences help assess the validity of theoretical propositions and explain the complexity of development trajectories. Requires previous course work in macroeconomic theory.

ECON 5292. Gender and Development Economics. 4 Hours.
Examines topics at the intersection of women’s empowerment and economic development from an economic perspective. Introduces potential explanations for the gender inequalities in the context of developing countries as well as the role of public policy in addressing such disparities. Studies microeconomics topics such as education gaps, fertility, family planning, HIV/AIDS, marriage dynamics and intrahousehold allocation of resources, female labor outcomes and migration, as well as conflict and domestic violence. Offers students an opportunity to apply basic economic theory associated with each topic as well as the research methodologies used in recent empirical papers. Students with an econometrics background have a better understanding of the empirical papers. Requires previous course work in microeconomic theory and in statistics.

ECON 5293. Agriculture and Development. 4 Hours.
Explores primarily the role of agriculture in the evolving development context and the global economy. Reviews historical and current thinking on agriculture and development to offer students a theoretical and applied perspective on agricultural development and structural transformation in developing countries. Discusses current and emerging trends in agriculture, including agriculture’s central role in rural poverty reduction; food security, health, and nutrition issues related to natural resource use; and global developments in agriculture trade and investment within the overall framework of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

ECON 6962. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ECON 6964. Co-op Work Experience. 0 Hours.
Provides eligible students with an opportunity for work experience. May be repeated without limit.

ECON 7200. Topics in Applied Economics. 4 Hours.
Presents an application of microeconomic and macroeconomic theory, as well as quantitative methods, to a variety of social issues, both domestic and international. May be repeated without limit.

ECON 7210. Applied Microeconomic Policy Analysis. 4 Hours.
Examines the alternative microeconomic activities of the public sector and the role of a diverse array of microeconomic tools and techniques in public sector policymaking, planning, program administration, and evaluation. Topics include the economics of market failure; the economics of information, corruption, public goods, and services provision; production externalities; economics of deregulation and privatization; and policy and program evaluation techniques including outcome and impact evaluation, social and economic experiments, objective functions, cost-effectiveness analysis, and benefit-cost analysis. ECON 5140 is recommended as a previous course.

ECON 7240. Workshop in Applied Econometrics. 4 Hours.
Offers an intensive, hands-on application of econometrics to research problems in economics, using current econometric software packages. Both cross-section and time-series techniques are used and applied to different areas of economics, such as global economics, labor economics, urban economics, public finance, policy evaluation, and so on. Students are expected to complete a written applied econometrics project and present the results to the class.

ECON 7250. International Economic Development. 4 Hours.
Covers leading research topics in development economics, with a particular focus on patterns of global inequality and globalization, effects of trade policy on labor market adjustment, gender and development, education and health, long-term effects of institutions, commodity price dynamics, and Dutch disease. Course objectives include exploring the cutting-edge literature emerging on these topics and improving understanding of the most recent empirical methods used in the literature. Offers students an opportunity to learn how to apply econometric techniques to particular research questions while evaluating advantages and disadvantages of using different approaches and to demonstrate understanding of difference-in-differences analysis, instrumental variables, randomized evaluation, regression discontinuity, and structural vector autoregressive models. Students critically assess the limitations of these methods.

ECON 7251. International Finance. 4 Hours.
Introduces students to international finance and equips them with tools and methods to study and analyze international economic issues and problems. Topics include the foreign exchange market, balance of payments, international investment and banking, monetary and fiscal policy in an open economy, economic integration and monetary unification, the international monetary system, and optimum currency areas. Each student is required to write a short paper on a current problem in international finance.

ECON 7253. International Integration. 4 Hours.
Examines the evolution of global markets for goods, services, capital, and labor over the past two centuries, the stylized facts regarding trends in integration, the factors affecting the trends in integration, the linkages between integration of different markets, and the impact of integration on the dynamics of global development and disparities. The analysis follows an eclectic approach to the questions addressed, drawing upon different intellectual traditions in economics. Requires knowledge of intermediate microeconomic theory.

ECON 7260. Urban Economic Systems. 4 Hours.
Examines urban economic systems including systematic relationships among cities, as well as those within cities. The portion of the course devoted to intermetropolitan analysis covers central place theory, the location of economic activity, and intermetropolitan trade. Intrametropolitan analysis includes urban form and land use, land use controls, and local government systems.

ECON 7261. Urban Economic Development. 4 Hours.
Examines urban economic development processes. Topics include models and techniques for describing and evaluating urban economies; development strategies and tools; commercial, industrial, and housing development; and problems of poverty and housing.

ECON 7262. Regional Economic Theory. 4 Hours.
Analyzes the following topics: comparative costs and location analysis for industry, various indices of location measures, land use theories, interregional labor migration, interregional trade, regional development, regional equilibrium analysis, regional and interregional input-output analysis, and econometric models for regional analysis.
ECON 7266. Economics of Government. 4 Hours.
 Presents an overview of the economics of government and the role of public policy. Develops guidelines to determine which economic activities are best performed by government and which are not. Topics include public choice, public goods, externalities, public enterprise, and efficiency and equity effects of alternative tax systems.

ECON 7270. Economics of Law and Regulation. 4 Hours.
 Relies on models of welfare economics to analyze the impact of laws, regulation, and deregulation, in terms of both positive and normative aspects. Topics include economic analysis of market failures and government remedies; property, tort, and contract law; and economic and social regulation. Students are encouraged to develop critical skills in analyzing various types of economic policy. Requires knowledge of microeconomics.

ECON 7271. Industrial Organization. 4 Hours.
 Analyzes the market structure of industries and strategic behavior by businesses, and the effect that these have on economic performance. Draws on economic theory, empirical evidence, and case studies. Also includes a brief discussion of governmental policies such as antitrust, regulation, and public ownership/private regulation.

ECON 7710. Microeconomic Theory 2. 4 Hours.
 Continues ECON 5110, building on its theories. Topics include game theory, economics of information, incentive theory, welfare economics, general equilibrium, and social choice theory.

ECON 7720. Macroeconomic Theory 2. 4 Hours.
 Continues ECON 5120. Offers an advanced course in macroeconomic analysis where economic theory and econometric evidence are brought together to explain economic events and changes at the macro level including economic growth, changes in unemployment and inflation rates, and business cycles. Topics include the Solow growth model, overlapping-generations models, research and development models of growth, real-business-cycle theory, Keynesian theories of economic fluctuations, microfoundations, consumption, investment, unemployment, inflation and monetary theory, and budget deficits and fiscal policy.

ECON 7740. Applied Econometrics 2. 4 Hours.
 Continues ECON 5140. Extends students’ understanding of econometrics beyond the topics covered in the earlier course. Students develop and complete an econometric research project using methods covered. Topics include models with multiple equations, nonlinear regression models, asymptotic theory, maximum likelihood, discrete choice models, limited dependent variables and duration models, panel data, regression models for time-series data, and unit roots and cointegration.

ECON 7763. Labor Market Analysis. 4 Hours.
 Offers a theoretical and methodological survey of the field of neoclassical labor market analysis at the PhD level. Topics include the supply of labor from the perspective of the individual and the family, human capital, the demand for labor, market equilibrium, and the determination and distribution of wages and earnings. Other topics that may be included are unions, unemployment, labor mobility, alternative models of labor markets, labor productivity and growth, and income distribution and poverty.

ECON 7764. Topics in Labor Economics. 4 Hours.
 Covers the theoretical and empirical issues surrounding current topics in the area of labor economics. Topics may vary each time the course is offered and may include discrimination, efficiency wage theory, labor legislation, life cycle analysis, and the use of microdata (panel studies, search behavior, intergenerational earnings mobility, and employment and training policies).

ECON 7771. Framework of Industrial Organization. 4 Hours.
 Sets out the analytical framework of industrial organization economics-the basis and method for evaluating the performance of markets and firms and for prescribing policies for improvement. Topics include size and structure of firms, market concentration, pricing in oligopoly and other markets, entry and entry deterrence strategies, and advertising and product strategies. Each of these topics is examined using a range of tools including microeconomic theory, game theory, and statistical analysis.

ECON 7772. Public Policy Toward Business. 4 Hours.
 Covers the three major facets of public policy toward business: antitrust, regulation, and privatization. Demonstrates how economic theory and evidence are brought to bear on practical questions of market failure and policies to remedy such failure. Topics include mergers, collusion and facilitating practices, predatory conduct, cost of service regulation, price caps and incentive regulation, deregulation, and public enterprise vs. privatization. Policies are analyzed for their rationale, techniques for implementation, and effects as measure in the context of actual experience in the United States and other countries.

ECON 7962. Elective. 1-4 Hours.
 Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

ECON 7976. Directed Study. 1-4 Hours.
 Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May not be substituted for requirements leading to a BA or BS in economics. May be repeated without limit.

ECON 7990. Thesis. 1-4 Hours.
 Provides thesis supervision by members of the department. May be repeated without limit.

ECON 8550. Internship In Economics. 1-4 Hours.
 Comprises academic credit for internship work in economics. May be repeated without limit.

ECON 8960. Exam Preparation—Doctoral. 0 Hours.
 Provides students with the opportunity to prepare for the qualifying exam during the semester in which they are registered for this course. Registration in this course constitutes full-time status.

ECON 8986. Research. 0 Hours.
 Offers an opportunity to conduct full-time research under faculty supervision. May be repeated without limit.

ECON 9000. PhD Candidacy Achieved. 0 Hours.
 Indicates successful completion of the doctoral comprehensive exam.

ECON 9986. Research. 0 Hours.
 Offers an opportunity to conduct full-time research under faculty supervision. May be repeated without limit.

ECON 9990. Dissertation Term 1. 0 Hours.
 First of two consecutive semesters to meet the residency requirement of the doctoral program.

ECON 9991. Dissertation Term 2. 0 Hours.
 Offers dissertation supervision by members of the department.

ECON 9996. Dissertation Continuation. 0 Hours.
 Requires registration for those students who have completed the doctoral program’s residency requirement, but who have not yet completed the dissertation.