



Portland State  
UNIVERSITY

## Department of Economics

# Graduate Student Handbook 2011-12

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<http://www.pdx.edu/econ>

## **I. MA/MS in Economics: General Information**

The Master of Arts and Master of Science programs in Economics at Portland State University offer students the opportunity to expand their knowledge of economics through coursework and interaction with a diverse group of faculty. The Graduate Student Handbook is designed to facilitate student progress through the program. However, should any questions arise, students are encouraged to seek the advice of the Department of Economics Graduate Committee Chair, Professor John Gallup. Students are also urged to consult the University catalogue and the Office of Graduate Studies regarding university requirements for the completion of a graduate degree at PSU. The web site of the Office of Graduate Studies ([www.pdx.edu/ogs](http://www.pdx.edu/ogs)) provides a variety of information and forms useful to graduate students.

**The Master of Arts in Economics requires a demonstrated proficiency in a second language; second language proficiency is not required for the Master of Science degree.**

The Department of World Languages and Literatures has determined that the graduate second language requirement can be met in the following ways:

1) Equivalent coursework: Students who have passed a course equivalent to PSU level 203 or higher in a second language will be deemed to have met the language requirement. The Office of Graduate Studies will certify completion upon evaluation of the student's academic record if the requirement was completed at PSU. If the requirement was completed at a different institution, the Department of World Languages and Literatures will issue a certificate of completion. M.A. students are responsible for making their academic records available in the first term of admission and requesting evaluation and certification.

2) Students who do not meet the requirement under 1) above should make an appointment with the Department of World Languages and Literatures during the first term after their admission to make an individualized plan for the completion of their language requirement. Options include preparing for and passing one of these evaluations: a) Oral proficiency interview (mandatory for M.A. TESOL students if they do not take a course at level 203 or above); b) A written test (mandatory for M.A. TESOL students if they do not take a course at level 203 or above), such as the Graduate Student Foreign Language Test or the CLEP exam or a special exam administered by the Department of World Languages and Literatures; c) Coursework after admission: taking a course at level 203 or above in residence or abroad; d) Special reading courses, if available. The Department of World Languages and Literatures will teach and test only in languages in which it has expertise. However, off-campus arrangements may be possible with the cooperation of other institutions and the approval of the chair of the PSU Department of World Languages and Literatures. Certification of having passed a second language examination from an institution other than PSU must be approved by the Department Chair of World Languages and Literatures at PSU prior to acceptance as fulfillment of the University's master's degree second language competency requirement. A student whose native language is not English may meet the second language requirement in English. For M.A. TESOL students only, a student whose native language is not English will meet the written requirement (2b) above) by achieving a TOEFL score of 600 or higher and will meet the oral requirement (2a) above) by passing a LING 500-level course with a grade of B or better.

## 1. Admission Requirements

Admission to the MA/MS program in the Department of Economics requires (in addition to the University admissions requirements):

- 1) **GPA Requirements:** A minimum of 3.00 GPA in overall undergraduate coursework AND a minimum of a 3.00 GPA in economics coursework. If you have already completed graduate coursework, a cumulative GPA of 3.00 in all graduate credit earned at accredited institutions is required.
- 2) **Coursework:** Undergraduate courses in Intermediate Microeconomics, Intermediate Macroeconomics, Statistics, Econometrics and Mathematics (or present equivalent competence). A working knowledge of mathematics and statistical methods is required of all students. Univariate and Multivariate Calculus as well as Linear Algebra are required for admission. **Courses in Mathematical Economics** and Advanced Calculus are recommended but not required.
- 3) **Testing:** GRE scores of 1100 (quantitative and verbal combined) or higher. **The TOEFL will be required for University admission for international students.** See University minimum TOEFL requirements at [www.pdx.edu/admissions/intl\\_grad\\_english.html](http://www.pdx.edu/admissions/intl_grad_english.html). The GMAT may be considered in lieu of the GRE.
- 4) **Recommendations:** Three (3) letters of recommendation sent either by mail to: Department of Economics, PSU, PO Box 751, Portland, OR 97207-0751, or by email to [econ@pdx.edu](mailto:econ@pdx.edu).
- 5) **Statement of Purpose:** Approximately 500-word essay on goals and aspirations for entering and completing the graduate program.
- 6) **Application/Transcripts:** Official transcripts from any other institutions (other than PSU) you may have attended. You will need an official transcript sent to the PSU Admissions Office for University admission AND an official transcript sent to the Department of Economics, PSU, P.O. Box 751, Portland, OR 97207-0751.

## 2. Degree Requirements

To satisfy degree requirements toward an MA/MS in Economics, students must complete a nine-course core requirement (36 credits) and 52 credits in total. Credit requirements beyond the core courses may be satisfied entirely with Economics elective courses or partially with a maximum of 8 credits of Economics research. Graduate courses from other departments may be substituted for Economics elective courses as long as they are approved by the Graduate Committee of the Department of Economics. Courses taken at other departments may count for a maximum of 8 credits towards the MA degree in Economics. Students must request approval before they take such courses. They must submit a request form to the Graduate Committee by Friday of week 6 of the quarter preceding the quarter when they intend to take the course.

Students have two options for completing the economics electives and/or research requirements:

- 1) Option 1: 16 credits of Economics electives.
- 2) Option 2: 8 (maximum 12) credits of Economics elective courses and 8 (minimum 4) credits of research. The research credits may be completed by taking any of the following courses EC 501, EC 507, EC 596 and EC 597. However, the maximum number of EC 507 credits that can be used to satisfy credit requirements is 4.

### **Core Economics Courses:**

EC 560 History of Economic Thought (4)  
EC 570 Econometrics (4)  
EC 571 Advanced Econometrics (4)  
EC 580 Mathematical Economics (4)  
EC 581 Advanced Microeconomics (4)  
EC 582 Advanced Macroeconomics (4)  
EC 591 Applications of Advanced Microeconomic Theory (4)  
EC 592 Applications of Advanced Macroeconomic Theory (4)  
EC 595 Applied Advanced Econometrics (4)

### **Economics Electives and/or Economics Research:**

Option I: Economics Electives (16)  
Option II: Economic Electives (8-12) and Economics Research (4-8)

Any transferred graduate economics credits that satisfy University requirements may be applied toward major electives. Core requirements may not be waived or substituted by course work from other PSU departments or institutions without the assent of the Graduate Committee. Students with questions concerning transferred credits should contact the Chair of the Graduate Program Professor John Gallup ([jlgallup@pdx.edu](mailto:jlgallup@pdx.edu)).

### 3. Graduate Candidate Requirements and Deadlines

Graduate students in the MA/MS Economics program must generally submit 3 forms to the Office of Graduate Studies in the term prior to graduation. Additional forms may be required in special cases; students are encouraged to consult with an advisor as well as familiarize themselves with University requirements. The table below lists the forms required of all graduate students and their deadlines. The forms are included in the appendix. Electronic copies of these and other forms can be obtained from the Office of Graduate Studies at <http://www.pdx.edu/ogs/forms>.

	<b>Fall 2011</b>	<b>Winter 2012</b>	<b>Spring 2012</b>	<b>Summer 2012</b>
<b>Form GO-12:</b> Approved Graduate Degree Program	Oct. 1	Jan. 7	April 1	June 24
<b>Form GO-17:</b> Recommendation for the Master's Program Completion Form (These forms not to be handled by students -- Prepared and submitted by the department or doctoral program for all graduate students)	Dec. 14	March 22	June 14	Aug. 16
Application for Degree Form: No student will graduate without submitting this form	Oct. 1	Jan. 7	April 1	June 24

### 4. Tuition and Fees

The tuition and fees for the standard sequence of classes for the first year of the MA program are \$10,722 for Oregon residents and \$15,678 for non-residents. The standard sequence entails 8 course credits in the fall and winter quarters, and 12 credits in the spring quarter. Tuition and fee rates by credit for 2010-2011 are available at [http://www.pdx.edu/sites/www.pdx.edu.bao/files/BAO\\_PSU\\_2010\\_2011\\_FeeBook.pdf](http://www.pdx.edu/sites/www.pdx.edu.bao/files/BAO_PSU_2010_2011_FeeBook.pdf). The criteria for Oregon residency are explained at <http://www.pdx.edu/admissions/residency-requirements>

**Questions regarding the Graduate Program?** Contact the Graduate Committee:  
Professor John Gallup, 503-725-3929 [jlgallup@pdx.edu](mailto:jlgallup@pdx.edu) – Director  
Professor Olena Kostyshyna, 503-725-3942 [okostysh@pdx.edu](mailto:okostysh@pdx.edu)  
Professor Robin Hahnel, 503-725-5935 [hahnel@pdx.edu](mailto:hahnel@pdx.edu)

**Questions regarding the Admission Process?** Contact:  
Margie Port, 503-725-3974, [mport@pdx.edu](mailto:mport@pdx.edu)

## **II. Graduate Certificate in Environmental and Resource Economics**

### **1. Goal of the Program**

The Graduate Certificate in Environmental and Resource Economics provides students with an understanding of the critical linkages between economics and key environmental issues. It also offers an introduction to the most important analytical tools, including cost-benefit analysis.

### **2. Educational Objectives**

- Develop a solid understanding of the major local, national and global environmental challenges;
- Provide insights into how markets allocate natural resources and the market and government "failures" associated with the environment;
- Introduce some of the tools used to analyze the effects of alternative resource and environmental regulations and policies.

### **3. Degree Requirements**

Completion of the program requires a total of 20 graduate credits including:

- Resource and Environmental Economics (EC 530)  
Overview of different approaches to economic analysis of resources and the environment, policies to protect and improve environmental quality and efficiently manage natural resources and sustainability. Covers the theory of externalities, resource allocation over time, common property resources, public goods and valuation.
- Cost-Benefit Analysis (EC 585)  
Main theory and empirical methodologies for assessing costs and benefits of projects with varying timeframes and levels of uncertainty. Focus on analyzing public projects, including environmental, infrastructure and social service activities. Methodologies for valuation of non-marketed goods like environmental services are important focuses.
- Economics of Sustainability: Theory and Practice (EC 522)  
Economic concepts and theories for analyzing sustainable development. Market and non-market values for environmental and social services, approaches to measure national progress toward sustainable development, causes and potential solutions to environmental and social degradation, roles of the business, government and non-profit sectors in fostering sustainability and the emerging field of ecological economics.
- Any Two Graduate Economics Elective Courses (non-Economics courses with permission)

### **4. Environmental and Resource Economics Elective Courses**

Advanced Environmental Economics (EC 532)

Business Environmental Management (EC 534)

Global Environmental Economics (EC 543)

## 5. Applying to the Graduate Certificate in Environmental and Resource Economics

Admission to the Graduate Certificate in Environmental and Resource Economics program requires the following in addition to Portland State University's admission requirements:

- 1) A Bachelor's degree from an accredited institution with either a minimum cumulative GPA of 2.75 in all undergraduate courses or a cumulative GPA of at least 3.00 in all graduate credit earned at accredited institutions (a minimum of 9 letter-graded credits). Applicants with 0-8 credits of graduate work and cumulative undergraduate GPAs between 2.50 and 2.74 may be considered for conditional admission at the discretion of the Department. Applicants with 9 or more letter-graded graduate credits must have a cumulative graduate GPA of at least 3.00.
- 2) Completion of principles of microeconomics course or equivalent with a letter grade of B or higher. Undergraduate intermediate microeconomics and econometrics courses are recommended prior to enrollment, but not required.
- 3) A written statement of purpose, one to two pages in length, detailing future aspirations and past experience with environmental and resource economics.
- 4) Two letters of recommendation.

### How to Apply:

- If you are currently admitted to a Master's or Ph.D. degree program at PSU and currently registered for classes, use the GO-19M or GO-19D form to request the addition of the Graduate Certificate program. You must also be in good academic standing. Submit the form directly to the Department of Economics.

- All other applicants must submit the following materials to PSU Admissions Office:

- 1) University Application for Graduate Admission.
- 2) \$50.00 non-refundable application fee (do not send cash). Authorize credit card payment at the bottom of the application form, or attach a check or money order payable to Portland State University.
- 3) One official transcript in an unopened envelope sealed at the original institution from every college and university other than PSU you have attended, sent to PSU Admissions Office (Mailcode: ADM).

- All applicants (those already admitted to a graduate program as well as those applying for the first time) must submit the following materials to the Department of Economics:

- 1) Departmental Graduate Admission Application.
- 2) One official transcript (other than PSU) from any college or university you may have attended prior to PSU Admission.
- 3) Statement of purpose: a written statement, 1-2 pages in length, detailing your future aspirations and past experience with environmental and resource economics.
- 4) 2 letters of recommendation (may be emailed directly to [mport@pdx.edu](mailto:mport@pdx.edu) or mailed).

**Questions regarding the GCERE?** Contact the Department Chair:

Professor Tom Potiowsky, 503-725-3938 [potiowskyt@pdx.edu](mailto:potiowskyt@pdx.edu) or 503-725-2288  
or [www.pdx.edu/econ/graduate-certificate-environmental-and-resource-economics](http://www.pdx.edu/econ/graduate-certificate-environmental-and-resource-economics)

Admissions: [www.pdx.edu/admissions/graduate-admission](http://www.pdx.edu/admissions/graduate-admission) or  
<http://cs.pdx.edu/pdfs/gradcertadmit.pdf>

### **III. Graduate Course Descriptions (Not every course is offered every year)**

EC 501 RESEARCH (Credit to be arranged.) Consent of instructor.

EC 503 THESIS (Credit to be arranged.)

EC 504 COOPERATIVE EDUCATION/INTERNSHIP (Credit to be arranged.)

EC 505 READING AND CONFERENCE (Credit to be arranged.) Consent of instructor.

EC 507 ECONOMICS SEMINAR SERIES (1) Graduate students currently enrolled in an economics course may earn one credit per term for enrollment in the PSU Economics Seminar. Students will be expected to attend a minimum of three economics seminars in a term, submitting a short, written summary of each. Consent of instructor.

EC 510 ENERGY ECONOMICS (4) This course investigates the economics of energy production and consumption, global energy resources, impact of price on economic efficiency and equity, policy trends, and, in particular, Pacific Northwest energy issues. Conventional and unconventional energy technologies will be examined. Environmental problems and the treatment of externalities will be explored. So, too, will conservation as an energy resource. Potential energy shocks, ways to address uncertainty, and reliance on the market to solve energy problems will be studied. Several expert guest lecturers are scheduled. The class will focus on contemporary Northwest, as well as national and global, energy issues.

EC 510 ART AND SCIENCE OF MIGRATION RESEARCH (4) The class will strengthen students' understanding of the several tools necessary for fieldwork and research on Mexican migration. These include basic statistical concepts, qualitative research methods, fieldwork exercises, and Spanish language for fieldwork. This course is one of a package of four related courses; students should enroll in a minimum of three. The class includes a three-week stay in Oaxaca, Mexico to engage in fieldwork and research. There are no prerequisites; interested students should contact the instructor.

EC 510 WOMEN AND DEVELOPMENT (4) Development has impacted men and women differently in the Third World, and very often, it is men who benefit disproportionately. Development experts have often failed to incorporate the productive and reproductive roles of women in development planning. So, despite their demographic superiority, women have been marginalized in Third World development. The impacts of tradition, culture, colonialism, and economic neglect have combined to undermine the potential contributions by women in development planning and program implementation. This course will focus on examining theoretical relationships of gender and development, including emerging debates, understanding the role of women in development within society's social context, and exploring empowerment strategies for mainstreaming women into the development process.

EC 511 CULTURAL ECONOMICS (4) Focus is on a general theory of economic development and growth, in the conceptual framework of culture and its evolution. The economic process fed by the dynamics of technological change is analyzed in cultural and social terms in the tradition of institutional and/or evolutionary economics. This framework is relevant and will be applied to current issues such as: globalization, trade, jobs and the environment, sustainable development, corporate power, cultural lags and social justice.

EC 517 WOMEN IN THE ECONOMY (4) Different economic theoretical perspectives are presented to account for women's particular economic roles currently and historically. Emphasis on women's responsibility for child rearing and housework; women's relatively low wages; occupational segregation by gender; economic differences among women due to ethnicity, generation and class; and policy issues with particular importance for women's economic situations. Recommended prerequisite: EC 201.

EC 519 ECONOMICS OF RACE AND ETHNICITY (4) Survey of the economic history of ethnic groups in the United States, various economic theoretical perspectives advanced to account for past and current experience of people of color in the U.S. economy, and examination of selected economic policy issues. Recommended prerequisite: EC 201.

EC 520 MONEY AND BANKING (4) Functional and empirical definitions of money and interest rates. Characteristics and role of bank and non-bank financial institutions in determining the level of money and interest rates. History of the Federal Reserve System. Instruments of monetary control by the Federal Reserve. Alternative models of monetary influence on the economy. Prerequisites: EC 201, 202; EC 312 or consent of instructor.

EC 522 ECONOMICS OF SUSTAINABILITY: THEORY AND PRACTICE(4) Economic concepts and theories for analyzing sustainable development, including the emerging field of ecological economics. Roles and practices of the business, government and nonprofit sectors in fostering sustainability.

EC 525 ECONOMICS OF INDUSTRIAL ORGANIZATION (4) Study based upon the application of microeconomic theory to the analysis of firms, markets and industries. Search for economic explanations for the structure of markets and for the behavior of the firms which trade in them. Seeks also to explain the internal organization of firms and to assess the efficiency of the market in determining organization. Prerequisites: EC 201; EC 311 or consent of instructor.

EC 526 ECONOMICS OF REGULATION (4) Study of government regulation designed to control – or at least to influence – the performance of the market in specific ways. Historical and economic analyses of three main forms of regulation: direct regulation of monopoly and competition, and social regulation to protect the environment and the individual. Recommended: EC 201.

EC 530 RESOURCE AND ENVIRONMENTAL ECONOMICS (4) Overview of different approaches to economic analysis of resources and environment, and fundamental issues of economy/environment interactions, as well as the emerging subject of sustainability. Covers the basics of standard environmental and resource economics including the theory of externalities, resource allocation over time, common property resources, public goods and valuation. Includes an overview of the economic dimension of policies designed to protect and improve environmental quality and protect and efficiently manage natural resources. Prerequisite: EC 201.

EC 531 URBAN ECONOMICS (4) Functions of the urban economy: the market sector and the public sector. Economic analysis of issues such as land use, environmental quality, transportation, housing, income distribution, and the organization and financing of urban public services. Recommended: EC 201, 202. This course is the same as USP 431/531; course may only be taken once for credit.

EC 532 ADVANCED ENVIRONMENTAL ECONOMICS (4) Examination of the economics of environmental degradation, externalities and pollution control. Emphasis is on the theoretical aspects of market failure, policies/regulations to promote efficient outcomes and policy applications. Prerequisites: EC 311 and EC 430/530 or permission of instructor. EC 469 or equivalent recommended.

EC 533 ADVANCED NATURAL RESOURCE ECONOMICS (4) An examination of the economic concepts and theories for analyzing natural resource production, extraction and use. Focus on natural resources, such as land, minerals, forests, fisheries and wildlife and the barriers to achieving sustainability. Regional, national and international case studies used to illustrate key policy issues. Prerequisites: EC 311 and EC 430/530 or permission of instructor. EC 469 or equivalent recommended.

EC 534 BUSINESS ENVIRONMENTAL MANAGEMENT ECONOMICS (4) Examines the economic costs and benefits that affect the decisions of business firms to develop integrated environmental management systems. Analysis of policy options to foster business environmental management for public goods. Case studies of selected firms. Recommended: EC 201.

EC 535 PUBLIC SPENDING AND DEBT POLICY (4) Analysis of the role of the state in a competitive economy. Development of decision rules for state economic action. Includes a detailed study of the principles of voting, public budgeting including cost-benefit analysis and PPBS, the theory of fiscal federalism, and the theory and principles of public debts. Recommended: EC 201, 202.

EC 536 TAXATION AND INCOME POLICIES (4) Principles and problems of government financing. Critical analysis of alternative taxes as sources of public revenue with emphasis on theories of incidence and economic effect. Recommended: EC 201, 202.

EC 537 PUBLIC UTILITY ECONOMICS (4) Examines the rationale, economic principles, and institutions of historic economic regulation. Contemporary theory of the firm and microeconomic pricing are analyzed. Technological changes suggest that to achieve economic efficiency it may no longer be necessary or appropriate to subject energy and telecommunications firms to traditional utility regulation. There is academic enthusiasm for displacing economic regulation with competition. Deregulation and restructuring are explored with emphasis on contemporary issues in Oregon, the Pacific Northwest, and the nation. In particular, difficulties in transformation to the marketplace will be examined. Expert guest lecturers from the utility and regulatory communities will be scheduled, and contemporary scholarly literature will be reviewed. Recommended: EC 201, 202.

EC 540 INTERNATIONAL TRADE THEORY AND POLICY (4) Theories of international trade. Analysis of the normative aspects of trade including the gains from trade and the effect of trade on economic welfare. Examination of international trade policy and issues of economic integration, economic growth, and current trade problems. Prerequisites: EC 201; EC 311 or consent of instructor.

EC 541 INTERNATIONAL MONETARY THEORY AND POLICY (4) Balance of payments theory including balance of payments accounting and foreign exchange market; theoretical models of fixed and flexible exchange rate systems using both Neoclassical and Keynesian approaches. Historical evolution of the international monetary system. Current international monetary policies and problems. Prerequisites: EC 201, 202; EC 312 or consent of instructor.

EC 542 THE MULTINATIONAL ENTERPRISE IN THE WORLD ECONOMY (4) The study of the multinational (transnational) enterprise as a form of direct foreign investment. Analysis of theories of direct investment; the impact of the multinational enterprise on the national and international economy and the relationship of such firms to the concept of the nation-state. Recommended: EC 201, 202.

EC 543 GLOBAL ENVIRONMENTAL ECONOMICS (4) An examination of economic forces and theories to understand the causes of global environmental problems and evaluate policy options. Primary emphasis is on developing countries and countries in transition, though linkages with developed countries also considered. Topics include poverty, population, economic development and the environment, global warming, biodiversity protection, sustainability, and pollution control.

EC 544 ECONOMICS OF GREEN POWER (4) The economic feasibility and rationale of producing

electricity using several alternative environmentally-friendly technologies. The economic and environmental costs and benefits of employing these technologies are identified and compared to the dominant technologies (coal, oil, hydropower). Alternative policies that provide incentives for the adoption of green technologies are examined. Recommended: EC 201.

EC 545 COMPARATIVE ECONOMIC SYSTEMS (4) Introduces the evolutionary-institutional method of analysis, incorporating history, the legacy of ideas, and the dynamics of change over time. Using this method, we shall examine economic systems of Ancient Rome, Medieval Feudalism, the Laissez-Faire Market Economy, Fascist Command Economy, and others. Recommended: EC 201, 202.

EC 546 INSTITUTIONAL ECONOMICS (4) Considers the contributions of seminal thinkers to what is regarded as an alternate or heterodox school in economic science. Contribution of Thorstein Veblen, John R. Commons, Wesley Mitchell, Simon Kuznets, Clarence Ayres, Gunnar Myrdal, and John Kenneth Galbraith, as well as more contemporary thinkers, will be explored. Institutional theory will be compared and contrasted with neoclassical economics, and shown as a viable theory posing a formidable challenge to the dominant paradigm of orthodoxy. Neo-institutionalist challenges will also be considered.

EC 547 ECONOMICS OF TRANSITION (4) Examines the formation of the Soviet-type economic system in the 1920s and 30s and its dissemination after World War II to Eastern Europe, China, and other selected countries. Emphasis is placed on the history of ideas and the historical setting which gave rise to the Soviet model. Includes the examination of the internal contradictions of the model, the "unwinding" of planned socialism, and the prospects for the move toward mixed-market economies. Recommended: EC 201, 202.

EC 550 ECONOMICS OF DEVELOPMENT (4) Examines problems of post-colonial legacy: underdevelopment and persistent poverty. Rapid population growth, uneven development, capital flight, dual economy, brain drain. Industrialization strategies, foreign trade, education and human capital, population slowdown, microcredit institutions, role of women. Prerequisites: EC 201, 202.

EC 551 MICRO-ENTERPRISES IN DEVELOPING AREAS (4) Examines role of small businesses in promoting economic development in low-income areas in Asia, Latin America and Africa. Entrepreneurship as motor of economic growth and social transformation. Appraisal of institutions as constraints and advantages. Consideration of complex political environments affecting small business. Survival strategies of entrepreneurs. Recommended: EC 201, 202.

EC 553 THEORY OF ECONOMIC GROWTH (4) Introduction to the theory of economic growth. This course will emphasize the theoretical basis and the models developed to measure growth and change in modern industrial societies. Recommended: EC 201, 202.

EC 556 AMERICAN ECONOMIC HISTORY: THE FIRST CENTURY (4) The economic background of the War of Independence and the seeds of the Civil War. Industrialization, urbanization, and development of the frontier. Rise of big business and organized labor. Laissez-faire, federalism and the gradual emergence of the national government in economic policy. Changes in foreign trade and in the international position of the U.S. Recommended: EC 201, 202. \*Also offered as HST 538.

EC 557 AMERICAN ECONOMIC HISTORY: THE 20TH CENTURY (4) Economic impact of U.S. involvement in World War I. Postwar structural changes. Waning of laissez-faire. Causes of the Great Depression. Economic policies of Hoover and Roosevelt administrations. The New Deal reforms. World War II and emergence of the administered system. Evolution of the mixed economy and growing role of the government. The industrial-military complex. Social imbalance. Recommended: EC 201, 202. \*Also offered as HST 539.

EC 560 HISTORY OF ECONOMIC THOUGHT (4) Selections from the economic writings of various thinkers from antiquity through the Reformation. A survey of the work of the most important economic theorists of the 18<sup>th</sup>, 19<sup>th</sup>, and 20<sup>th</sup> centuries including Adam Smith, Ricardo, Marx, Marshall, Veblen, and Keynes. Readings include original writings and interpretations by later economists. Scholars will be studied in terms of their historical context and the contemporary relevance of the theories and policy recommendations. Prerequisites: EC 201, 202.

EC 561 THE ECONOMICS OF EMPIRE AND WAR (4) Historical and contemporary analyses of the economic motivations and consequences of imperialism and war, distinguishing formal and informal imperialism, with a particular focus on the recent history of the United States. Expected preparation: EC 201 and 202.

EC 565 LABOR ECONOMICS AND INDUSTRIAL RELATIONS (4) After a survey of the history of American labor market institutions including unions, this course investigates the big questions in labor economic theory including the sources of unemployment, wage determination, and the reasons demographic groups fare differently in the labor market. Also considered are appropriate policies for current developments in the labor market, such as increasing wage inequality, globalization, and the widespread use of new technologies. Recommended: EC 201.

EC 569 INTRODUCTION TO ECONOMETRICS (4) General survey of empirical techniques useful for economic analysis. Focus on the applications of mathematical tools and regression analysis in economics. Quantitative topics will be introduced systematically with hands-on case studies and examples related to the fields of economics, public policy, and urban studies. This course will not be counted as credit for economics graduate students, but may be taken by graduate students in other programs. Prerequisites: EC 201, 202, MTH 251, STAT 243 and 244.

EC 570 ECONOMETRICS (4) Covers the theory and application of statistical regression, hypothesis testing, and simulation of econometric models. Emphases are placed on model construction and efficient use of economic data. Problems of multicollinearity, heteroscedasticity, autocorrelation, and distributed lags are discussed. Some familiarity with calculus, matrix algebra, and computer applications are assumed. Prerequisites: EC 469 or consent of instructor.

EC 571 ADVANCED ECONOMETRICS (4) Advanced econometrics topics including system of linear equations, panel data, nonlinear models, nonparametric estimation and prediction, and applications in consumption and production models. Data resources available to the practicing economists will be covered. Prerequisites: EC 570 or consent of instructor.

EC 572 TIME SERIES ANALYSIS AND FORECASTS (4) Time series analysis, emphasizing model identification, estimation and forecasting. Non-stationary time series analysis includes unit root and cointegration tests. Techniques of moving average, differencing, and autocorrelation adjustment are introduced. Diagnostic checking following the model evaluation provides the base model for forecasting. Recommended: EC 469 for 472, 570 for 572.

EC 580 MATHEMATICAL ECONOMICS (4) Mathematics for economists. Applications of differential calculus and matrix algebra to economics. Topics include consumer theory, production functions, and applied general equilibrium models. Prerequisites: EC 311, 312 and 380 (or equivalently: MTH 251, 252, and MATH 261 in place of EC 380).

EC 581 ADVANCED MICROECONOMICS (4) Theory of consumer behavior and of the firm. Market and multi-market equilibrium and stability. Varieties of imperfect competition. Prerequisites: EC 480/580 or consent of instructor.

EC 582 ADVANCED MACROECONOMICS (4) Theories of national income, employment and price levels with special emphasis on recent developments in analytical techniques and empirical findings. Required Prerequisites: EC 480/580 or consent of instructor and EC 581 or consent of instructor.

EC 583 IMPACT ASSESMENT (4) Empirical techniques employed in measuring the impacts associated with land use change. Topics: goals achievement matrix approaches to impact assessment; trade-offs between community and regional welfare; distance and times in urban analysis; estimating the social profitability of land development; cost-benefit analysis applied to freeway location techniques for valuation of non-priced resources; measuring municipal revenue and expenditure impacts; gravity models and transport demand estimation; economic base analysis for employment and population impact assessment; and estimating air and noise pollution associated with land development. Recommended: EC 311.

EC 585 COST-BENEFIT ANALYSIS (4) Main theory and empirical methodologies for assessing costs and benefits of projects with varying timeframes and levels of uncertainty. Focus on public projects, including environmental, infrastructure and social service activities. Methodologies for valuation of nonmarketed goods, such as environmental services, also covered. Prerequisite: EC 201.

EC 586 PROJECT EVALUATION (4) Cost and benefit evaluation. Choice of projects. Case studies related to water resources, transportation, and industrial projects. Recommended: EC 311.

EC 587 ECONOMIC PLANNING (4) Aspects of the economic planning process including target setting, tests of feasibility, consistency, optimality, and plan implementation. Recommended: EC 311.

EC 591 APPLICATIONS OF ADVANCED MICROECONOMIC THEORY (4) Applies theories of consumer and producer behavior to a variety of real world problems. Different sub-disciplines of microeconomics will be covered, which may include two or three of the following: information economics, environmental economics, economics of regulation, industrial organization, law and economics, natural resource economics, labor economics, regional economics, urban economics, and the economics of contracting. For each sub-discipline covered, the most important economic model will be discussed and a review of major research studies and techniques will be undertaken. Prerequisites: EC 581 or consent of instructor.

EC 592 APPLICATIONS OF ADVANCED MACROECONOMIC THEORY (4) Coverage includes current topics of interest in macroeconomics. The focus is on the applications of neoclassical and Keynesian theories of macroeconomic theory to a variety of real world problems. The various sub-disciplines of macroeconomics that may be covered include: financial economics, monetary economics, economic growth models, labor economics, public finance, international economics, and radical macroeconomic thought. Prerequisites: EC 582 or consent of instructor.

EC 595 APPLIED ADVANCED ECONOMETRICS (4) Covers advanced topics related to methodological issues in econometrics, with emphases on computation, simulation and non-linear methods in econometrics. Nonlinear econometric models including Box-Cox variable transformation, autoregressive time series analysis, and qualitative choice models. Simulation-based econometrics covers topics of Monte Carlo experiments and bootstrapping methods. Prerequisites: EC 570, 571 or consent of instructor.

**Suggested courses from the PSU Math Department for Masters students who wish to pursue a Ph.D. degree in Economics (for students who have not already taken equivalent courses)**

The courses are listed in order of priority for preparing for a Ph.D. program. Ph.D. programs usually require only multivariable calculus, linear algebra, and statistics. The courses in these areas below provide a stronger foundation than basic courses covering these topics. Real analysis is challenging, but quite useful in Ph.D. programs, and having it on your transcript strengthens your application. The courses in set theory and game theory are more specialized, appropriate for students interested in pursuing these areas.

<b>Subject Area</b>	<b>Course Number*</b>
Advanced calculus	MTH 311, 312, 313
Applied Linear Algebra	MTH 343
Statistics	STAT 461/561, 462/562, 463/563 (Intro to Math Stat) STAT 467/567, 468/568 (Applied Probability)
Real Analysis	MTH 411/511; MTH 412/512; MTH 413/513
Set Theory	MTH 434/534; MTH 435/535; MTH 436/536
Game Theory	MTH 457/557; MTH 458/558

\*Please see PSU course catalogue for current course prerequisites.

## **IV. Tentative 2-Year Study Plan: Examples**

For degree-planning purposes, below are a couple of examples of how students can structure their degree over a two-year period. Students are encouraged to meet with a graduate advisor to determine the best schedule given current course offerings.

For degree-planning purposes, below are a couple of examples of how students can structure their degree over a two-year period. Students are encouraged to meet with a graduate advisor to determine the best schedule given current course offerings. Note that students on financial aid or receiving graduate assistantships must be enrolled full time at 9 credits per term. Two MA courses amount to 8 credits, so most of these students take EC 507 (Seminar), or sometimes EC 501 (Research), for additional credit.

### **Example 1: Two year degree standard sequence**

	<b>Fall Term</b>	<b>Winter Term</b>	<b>Spring Term</b>
<b>First Year</b>	EC 570 (Econometrics) EC 580 (Math Econ) EC 507 (1 credit)	EC 571 (Adv Metrics) EC 581 (Adv Micro) EC 507 (1 credit)	EC 582 (Adv Macro) EC 591 (Appl Micro) EC 507 (1 credit)
<b>Second Year</b>	EC 592 (Appl Macro) EC 595 (Appl Metrics) EC 507 (1 credit)	Elective 2 Elective 3	EC 560 (Hist of Thought) Elective 4

Note: Core graduate courses are generally not offered during the summer.

### **Example 2: Intensive one-and-a-half year schedule for degree completion.**

	<b>Fall Term</b>	<b>Winter Term</b>	<b>Spring Term</b>
<b>First Year</b>	EC 570 (Econometrics) EC 580 (Math Econ)	EC 571 (Adv Metrics) EC 581 (Adv Micro)	EC 560 (Hist of Thought) EC 582 (Adv Macro) EC 591 (Appl Micro)
<b>Second Year</b>	EC 592 (Appl Macro) EC 595 (Appl Metrics) Elective 1	Elective 2 Elective 3 Elective 4	

Note: Core graduate courses are generally not offered during the summer.

## V. Faculty Areas of Specialization

FULL-TIME FACULTY	SPECIALIZATION
<b>Randall Bluffstone</b>   <i>Professor</i>	Environmental and Resource Economics, Sustainable Development, Economic Development, Economics of Transition
<b>Sahan Dissanayake</b>   <i>Visiting Professor</i>	Environmental Economics, Natural Resource Economics, Mathematical Programming
<b>David Ervin</b> <i>Professor, Economics &amp; Environmental Management</i>	Environmental and Ecological Economics, Economics of Sustainability, Business Environmental Management and Sustainability
<b>John Gallup</b>   <i>Assistant Professor</i>	Development Economics, Labor Economics, Geography, Applied Econometrics
<b>Charles Grant</b>   <i>Senior Lecturer</i>	Microeconomics, International Trade, International Finance, Managerial Economics
<b>Robin Hahnel</b>   <i>Visiting Assistant Professor</i>	Environmental Economics, Radical Political Economy, Microeconomic Theory, Globalization
<b>John Hall</b>   <i>Professor</i>	Comparative Economics, Economics of Transition, History of Economic Thought, Institutional Economics, Post-Keynesian Economics, Sustainability and Development, Economics of Frontier Regions
<b>Hiro Ito</b>   <i>Associate Professor</i>	International Finance, East Asian Economies, Macroeconomics, Japanese Economy
<b>Mary King</b>   <i>Professor</i>	Labor Economics, Economics of Ethnicity and Gender, Political Economy, Sustainability
<b>Olena Kostyshyna</b>   <i>Assistant Professor</i>	Macroeconomics, Monetary Economics, Computational Economics, Experimental Economics
<b>Kuan-Pin Lin</b>   <i>Professor</i>	Econometrics, Mathematical Economics, Microeconomic Theory, Chinese Economy
<b>Jenny Liu</b>   <i>Visiting Assistant Professor</i>	Environmental and Resource Economics, Transportation Economics, Energy Economics, Microeconomics
<b>Tom Potiowsky</b>   <i>Professor</i>	Microeconomics, Macroeconomics, Applied Econometrics, Oregon Economy
<b>Rajiv Sharma</b>   <i>Associate Professor</i>	Health Economics, Microeconomics
<b>Sarah Tinkler</b>   <i>Professor</i>	Women in the Economy, Labor Economics, International Economics, Economic Education
<b>John Walker</b>   <i>Professor</i>	Public Finance, 20 <sup>th</sup> Century American Economic History
<b>Jamie Woods</b>   <i>Assistant Professor</i>	Energy Economics, Behavioral Economics
<b>Rossitza Wooster</b>   <i>Associate Professor</i>	International Trade, Game Theory, Econometrics Mathematical Economics

## **VI. Graduate Assistantships and Internships**

Information about graduate scholarships and awards administered through the Office of Graduate Studies is available at: [www.pdx.edu/ogs/graduate-assistantships](http://www.pdx.edu/ogs/graduate-assistantships).

### **1. Economics Department Graduate Assistantships**

The Department of Economics offers graduate assistantships each year; applications are usually publicized in January and should be submitted by April 1. Graduate students can apply for these on a competitive basis. Successful recipients are paid according to University rates (0.3 FTE) for the academic year plus tuition remission.

GAs are required to successfully complete at least 9 credit hours each term toward a graduate (MA/MS) degree in Economics. They will work a maximum of 15 hours/week assisting faculty with teaching and research. Depending on qualifications, GAs may tutor undergraduate courses, proctor exams, advise undergraduates, staff the Econometrics Lab, or work with faculty on research.

At the conclusion of each term, the Graduate Committee will review the performance of each GA to ensure that he/she has fulfilled University and Department of Economics requirements for maintaining the assistantship. In addition to university eligibility requirements, graduate assistants are required to:

- (1) Complete a minimum of 9 credit hours of graduate coursework per term (this precludes grades of incomplete, which will terminate the GAship).
- (2) Maintain a minimum 3.0 GPA with no grades below B-.
- (3) Satisfactorily perform all duties.

The appointment of GAs may be terminated at any time due to unsatisfactory performance.

### **2. Internships**

Graduate students can arrange to receive credit for an internship by signing up for EC 504 (Cooperative Education/Internship). Credit for this course can be arranged on a case-by-case basis.