I. Masters in Economics
II. Graduate Certificate in Environmental and Resource Economics
III. Faculty Areas of Specialization

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pdx.edu/econ
econ@pdx.edu
(503) 725-3915 (office)
(503) 725-3945 (fax)
I. Masters in Economics

The Master of Science and Master of Arts 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.

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 Bulletin and the Office of Graduate Studies regarding university requirements for the completion of a graduate degree at PSU. The website of the Office of Graduate Studies (www.pdx.edu/ogs) provides a variety of information and forms useful to graduate students.

The MS and MA degrees differ in that the MA requires proficiency in a second language. The MS does not.

1. Admission Requirements

Applications to both the university and to the department must be completed. The university application for graduate admission needs to be submitted to the PSU Admissions Office. Their application is online at www.pdx.edu/admissions/graduate-applicant.

Admission to the Department of Economics Graduate Program is also online. Please go to http://www.pdx.edu/econ/graduate for more information. Please be sure to read the Admissions Requirements and Instructions for Graduate Program Online Application before completing the application.

Requirements for admission to the Master’s program in the Department of Economics are as follows:

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: The following undergraduate courses are required:

   Intermediate Microeconomics
   Intermediate Macroeconomics
   Statistics
   Econometrics
   Univariate and Multivariate Calculus
   Linear Algebra

   Courses in Mathematical Economics and Advanced Calculus are recommended but not required.

3) Testing: GRE scores of 300 (quantitative and verbal combined; 1100 by the old GRE scale) or higher. Request that Educational Testing Services (ETS) send a copy of your scores to code #4610 (Portland State University), #1801 (Department of Economics at PSU) when registering. Either the TOEFL or IELTS is required for University admission for international students, unless they have a U.S. university degree. See University minimum TOEFL/IELTS requirements at http://www.pdx.edu/admissions/english-language-proficiency-requirements-graduate. The GMAT with a score of 520 or higher may be considered in lieu of the GRE. Applicants must either upload a copy of their GRE/GMAT scores or complete the section requesting the scores.
4) Statement of Purpose: Approximately 500-word essay on goals and aspirations for the graduate program. This is to be done as part of the online application.

5) Recommendations: Three (3) letters of recommendation. It is preferred that at least two of the recommendations from Economics professors. This is also to be done as part of the online application.

6) Transcripts: An official transcript from any university other than PSU that you have attended must be sent to the PSU Admissions Office for University admission. Official transcripts must be sent to the PSU Admissions, Portland State University, P.O. Box 751, Portland, OR 97207-0751. As part of the Department of Economics online application, you will need to scan either a copy of your official transcript or a copy of your unofficial transcript from each institution you have attended (except PSU).

Recommended Application Dates:
FALL: February 1
WINTER: September 1
SPRING: November 1
SUMMER: February 1

2. Degree Requirements

To satisfy degree requirements toward a Masters 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 518, EC 596 and EC 597. However, the maximum number of EC 518 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 575 Applied Advanced Econometrics (4)
- EC 580 Mathematical Economics (4)
- EC 581 Advanced Microeconomics (4)
- EC 584 Applications of Advanced Microeconomic Theory (4)
- EC 590 Advanced Macroeconomics (4)
- EC 592 Applications of Advanced Macroeconomic Theory (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).

**Study Plans**

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 518 (Seminar), or sometimes EC 501 (Research), for additional credit.

**Standard two year sequence**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall Term</th>
<th>Winter Term</th>
<th>Spring Term</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>EC 570 (Econometrics)</td>
<td>EC 571 (Adv Metrics)</td>
<td>EC 590 (Adv Macro)</td>
</tr>
<tr>
<td></td>
<td>EC 580 (Math Econ)</td>
<td>EC 581 (Adv Micro)</td>
<td>EC 584 (Appl Micro)</td>
</tr>
<tr>
<td></td>
<td>EC 518 (1 credit)</td>
<td>EC 518 (1 credit)</td>
<td>EC 518 (1 credit)</td>
</tr>
<tr>
<td>Second Year</td>
<td>EC 592 (Appl Macro)</td>
<td>Elective 2</td>
<td>EC 560 (Hist of Thought)</td>
</tr>
<tr>
<td></td>
<td>EC 575 (Appl Metrics)</td>
<td>Elective 3</td>
<td>Elective 4</td>
</tr>
<tr>
<td></td>
<td>EC 518 (1 credit)</td>
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</tbody>
</table>

Note: Core graduate courses are offered once each year, and not offered during the summer.

**Intensive one-and-a-half year schedule**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall Term</th>
<th>Winter Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC 570 (Econometrics)</td>
<td>EC 571 (Adv Metrics)</td>
<td>EC 560 (Hist of Thought)</td>
</tr>
<tr>
<td></td>
<td>EC 580 (Math Econ)</td>
<td>EC 581 (Adv Micro)</td>
<td>EC 590 (Adv Macro)</td>
</tr>
<tr>
<td></td>
<td>EC 518 (1 credit)</td>
<td></td>
<td>EC 584 (Appl Micro)</td>
</tr>
<tr>
<td>Second Year</td>
<td>EC 592 (Appl Macro)</td>
<td>Elective 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC 575 (Appl Metrics)</td>
<td>Elective 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective 1</td>
<td>Elective 4</td>
<td></td>
</tr>
</tbody>
</table>

Note: Core graduate courses are offered once each year, and not offered during the summer.
Second Language Requirement for the MA in Economics

The graduate second language requirement for the MA can be met in the following ways. The MS in Economics does not require second language proficiency.

1) Equivalent coursework: Students who have passed a course equivalent to PSU level 203 or higher in a second language (as judged by the chair of the Department of World Languages and Literatures) will be deemed to have met the language requirement.

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 a) A test of oral proficiency, b) A written test, or c) taking a course at level 203 or above after admission. A student whose native language is not English may meet the second language requirement in English. For more details, see www.pdx.edu/wll/node/196#MA_require.

3. Tuition and Fees

The tuition and fees for the standard sequence of classes for the first year of the MA program are $10,989 for Oregon residents and $16,227 for non-residents in 2014-2015. The standard sequence entails 9 course credits each quarter for three quarters. Tuition and fee rates by credit are available at http://www.pdx.edu/financial-services/sites/www.pdx.edu.financial-services/files/PSU_2014_2015_FeeBook.pdf (for tuition, see “Differential Programs - Graduate for “Liberal Arts Graduate Level L1” on p. 5 and for graduate fees see page 2). The criteria for Oregon residency are explained at http://www.pdx.edu/registration/residency.

4. Graduate Assistantships

The Department of Economics offers graduate assistantships each year. Application for a graduate assistantship is also part of the online application should be submitted by February 1. Selection of the assistants is quite competitive. Recipients are provided with tuition remission (in-state or out-of-state) and paid a stipend according to University rates (0.3 FTE) for the academic year. University fees and health insurance are not included in the tuition remission and take up about half the stipend.

GAs are required to complete 9 credit hours each term toward a Masters degree in Economics. They will work 15 hours per week assisting faculty with teaching and research. GAs may grade problem sets and exams for professors, proctor exams, tutor 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 or 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 GA duties.

The appointment of GAs may be terminated at any time due to unsatisfactory performance. Rules governing PSU graduate assistantships can be found on the Graduate Studies web site: http://www.pdx.edu/ogs/graduate-assistantships.
5. 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 by applying to the Graduate Committee before the course is undertaken.

6. Suggested math courses for students pursuing a Ph.D. in Economics

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 below provide a stronger mathematical foundation and improve your admission chances. Real analysis in particular is challenging, but quite useful for showing Ph.D. programs that you will be fully prepared mathematically, strengthening your application. The courses in set theory and game theory are more specialized, appropriate for students interested in specializing in these areas.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Course Number*</th>
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<tbody>
<tr>
<td>Advanced calculus</td>
<td>MTH 311, 312, 313</td>
</tr>
<tr>
<td>Applied Linear Algebra</td>
<td>MTH 343</td>
</tr>
<tr>
<td>Statistics</td>
<td>STAT 561, 562, 563 (Intro to Math Stat)</td>
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<tr>
<td></td>
<td>STAT 567, 568 (Applied Probability)</td>
</tr>
<tr>
<td>Real Analysis</td>
<td>MTH 511, 512, 513</td>
</tr>
<tr>
<td>Set Theory</td>
<td>MTH 534, 535, 536</td>
</tr>
<tr>
<td>Game Theory</td>
<td>MTH 557, 558</td>
</tr>
</tbody>
</table>

*See PSU Bulletin for course prerequisites.

7. Graduation Deadlines

Graduate students in the MA/MS Economics program must generally submit 2 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 www.pdx.edu/ogs/forms.

<table>
<thead>
<tr>
<th>Form</th>
<th>Fall Term</th>
<th>Winter Term</th>
<th>Spring Term</th>
<th>Summer Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for Degree Form</td>
<td>The Application for Awarding of Master’s is due the first Friday of the term in which you plan to graduate. Please see the Graduate Candidates' Deadlines (<a href="http://www.pdx.edu/ogs/graduate-candidate-deadlines">http://www.pdx.edu/ogs/graduate-candidate-deadlines</a>)</td>
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<tr>
<td>(no student will graduate without this form)</td>
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<tr>
<td>Recommendation for Master’s Program Completion</td>
<td></td>
<td></td>
<td>Please see the Graduate Candidates' Deadlines (<a href="http://www.pdx.edu/ogs/graduate-candidate-deadlines">http://www.pdx.edu/ogs/graduate-candidate-deadlines</a>) for specific due dates.</td>
<td></td>
</tr>
</tbody>
</table>
Questions regarding the Graduate Program? Contact the Graduate Committee:
Professor John Gallup, jlgallup@pdx.edu, 503-725-3929 – Director

Professor Arnab Mitra, arnab@pdx.edu, 503-725-3937

Professor Jamie Woods, woodsj@pdx.edu, 503-465-4883

Professor Rossitza Wooster, wooster@pdx.edu, 503-725-3944

Professor César Rodríguez, cesar.rodriguez@pdx.edu, 503-725-3943

Questions regarding the Admission Process? Contact:
Margie Port, mport@pdx.edu, 503-725-3974

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 16 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 527)**
  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 one 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:
1. All applicants must apply to the Economics Department using the online application located at [http://www.pdx.edu/econ/certificate-programs](http://www.pdx.edu/econ/certificate-programs).
2. Applicants who are not currently registered for classes in a PSU Masters or PhD degree program will also need to:
   a. complete a university application for Graduate Admission at [www.pdx.edu/admissions/graduate-applicant](http://www.pdx.edu/admissions/graduate-applicant). There is a $50 non-refundable application fee.
   b. Submit one official transcript in an unopened sealed envelope from every college and university other than PSU that you have attended. These should be sent to PSU Admissions Office, P.O. Box 751, Portland, OR, 97207.
3. If you are currently admitted to a Master’s or Ph.D. degree program at PSU, you will need to:
   a. use the GO-19M or GO-19D form from [www.pdx.edu/ogs/forms](http://www.pdx.edu/ogs/forms) 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.
   b. Submit one official transcript in an unopened sealed envelope from every college and university other than PSU that you have attended. These should be sent to PSU Admissions Office, P.O. Box 751, Portland, OR, 97207.
Requirements for admission to the Economics Graduate Certificate in Environmental and Resource Economics are as follows:

1) Departmental Graduate Admission Application.
2) As part of the Department of Economics online application, you will need to scan documents from each institution you have attended (except PSU) into your online application. If you are accepted, you will need to send official transcripts to the Department of Admissions, Portland State University, P.O. Box 751, Portland, OR, 97207-0751.
3) Statement of purpose: a written statement, 1-2 pages in length, detailing your future aspirations and past experience with environmental and resource economics. This is part of the online application.
4) 2 letters of recommendation, preferably from former or current faculty members. You will submit these names and emails as part of the online application and those individuals will get emails notifying them of your request.

Questions regarding the GCERE? Contact:
Professor Randy Bluffstone, bluffsto@pdx.edu, (503) 725-3938

Economics Department GCERE information: pdx.edu/econ/

PSU Graduate Admissions: www.pdx.edu/admissions/graduate-admission
### III. Faculty Areas of Specialization

<table>
<thead>
<tr>
<th>FULL-TIME FACULTY</th>
<th>SPECIALIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Randall Bluffstone</td>
<td>Professor**&lt;br&gt;503-725-3938&lt;br&gt;<a href="mailto:bluffsto@pdx.edu">bluffsto@pdx.edu</a></td>
</tr>
<tr>
<td>**Jamein P. Cunningham</td>
<td>Assistant Professor**&lt;br&gt;503-725-3934&lt;br&gt;<a href="mailto:jamein.cunningham@pdx.edu">jamein.cunningham@pdx.edu</a></td>
</tr>
<tr>
<td>**John Gallup</td>
<td>Associate Professor**&lt;br&gt;503-725-3929&lt;br&gt;<a href="mailto:jlgallup@pdx.edu">jlgallup@pdx.edu</a></td>
</tr>
<tr>
<td>**John Hall</td>
<td>Professor**&lt;br&gt;503-725-3939&lt;br&gt;<a href="mailto:hallj@pdx.edu">hallj@pdx.edu</a></td>
</tr>
<tr>
<td>**Hiro Ito</td>
<td>Professor**&lt;br&gt;503-725-3930&lt;br&gt;<a href="mailto:ito@pdx.edu">ito@pdx.edu</a></td>
</tr>
<tr>
<td>**Kuan-Pin Lin</td>
<td>Professor**&lt;br&gt;503-725-3931&lt;br&gt;<a href="mailto:link@pdx.edu">link@pdx.edu</a></td>
</tr>
<tr>
<td>**Arnab Mitra</td>
<td>Assistant Professor**&lt;br&gt;503-725-3937&lt;br&gt;<a href="mailto:arnab@pdx.edu">arnab@pdx.edu</a></td>
</tr>
<tr>
<td>**Tom Potiowsky</td>
<td>Professor**&lt;br&gt;503-725-2288&lt;br&gt;<a href="mailto:potiowskyt@pdx.edu">potiowskyt@pdx.edu</a></td>
</tr>
<tr>
<td>**Cesar M. Rodriguez</td>
<td>Assistant Professor**&lt;br&gt;503-725-3943&lt;br&gt;<a href="mailto:cesar.rodriguez@pdx.edu">cesar.rodriguez@pdx.edu</a></td>
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<tr>
<td>**Rajiv Sharma</td>
<td>Associate Professor**&lt;br&gt;503-725-3925&lt;br&gt;<a href="mailto:sharman@pdx.edu">sharman@pdx.edu</a></td>
</tr>
<tr>
<td>**Sarah Tinkler</td>
<td>Professor**&lt;br&gt;503-725-3933&lt;br&gt;<a href="mailto:tinkler@pdx.edu">tinkler@pdx.edu</a></td>
</tr>
<tr>
<td>**J. Forrest Williams</td>
<td>Assistant Professor**&lt;br&gt;503-725-3908&lt;br&gt;<a href="mailto:forrest.williams@pdx.edu">forrest.williams@pdx.edu</a></td>
</tr>
<tr>
<td>**Jamie Woods</td>
<td>Assistant Professor**&lt;br&gt;503-465-4883&lt;br&gt;<a href="mailto:woodsj@pdx.edu">woodsj@pdx.edu</a></td>
</tr>
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<td>**Rossitza Wooster</td>
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