APPLIED ECONOMICS, MASTER OF SCIENCE

MS in Applied Economics
http://appliedeconomics.jhu.edu

Economic analysis is no longer relegated to academicians and a small number of PhD-trained specialists. Instead, economics has become an increasingly ubiquitous and rapidly changing line of inquiry that requires people who are skilled in analyzing and interpreting economic data, and then using it to effect decisions about national and global markets and policy involving everything from health care to fiscal policy, from foreign aid to the environment, and from financial risk to real risk.

The Master of Science in Applied Economics develops skills in economic reasoning and in constructing and estimating economic models through the use of econometrics and other quantitative techniques. This is accomplished by a rigorous and demanding curriculum and a talented and dedicated staff of instructors. This is a 10-course degree program, with classes offered in the evenings at the Washington, DC Center of the Johns Hopkins University (near Dupont Circle) and online. The degree can be pursued at a part-time or a full-time pace, on-site or online, or in both modes. All undergraduate majors are welcome.

Admissions Criteria for all Advanced Academic Programs (http://e-catalog.jhu.edu/arts-sciences/advanced-academic-programs/enrollment-services/admission/)

Program Specific Requirements
In addition to the materials and credentials required for all programs, the Master of Science in Applied Economics also requires:

- One semester of introductory microeconomics, passed with at least a B
- One semester of introductory macroeconomics, passed with at least a B
- One semester of undergraduate calculus or equivalent, passed with at least a B
- A grade in a higher level course trumps a grade in a lower level course. A B grade or higher upon repeat is not acceptable.

Prerequisite Math Requirement
Those entering with only a single calculus course must take in their first semester AS.440.304 Math Methods for Economists, a three-semester undergraduate credit, full-length course, at half tuition. The course does not count toward the degree. In order to waive the Math Methods for Economists course, evidence of multivariable calculus is required.

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.440.601</td>
<td>Microeconomic Theory</td>
<td>12</td>
</tr>
<tr>
<td>AS.440.602</td>
<td>Macroeconomic Theory</td>
<td></td>
</tr>
<tr>
<td>AS.440.605</td>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>AS.440.606</td>
<td>Econometrics</td>
<td></td>
</tr>
</tbody>
</table>

Advanced Econometrics Course

Select one of the following:
- AS.440.614 Macroeconometrics [Time-Series Analysis]
- AS.440.615 Macroeconomic Forecasting [Time Series Analysis]
- AS.440.617 Financial Econometrics [Time-Series Analysis]
- AS.440.618 Microeconometrics [Cross-Section and Panel Analysis]

Electives
Select five elective courses (15 credits)
- AS.440.616 Bayesian Econometrics
- AS.440.622 Cost-Benefit Analysis
- AS.440.624 Computable General Equilibrium Modeling
- AS.440.625 Machine Learning in Statistics
- AS.440.629 Survey Research Methods
- AS.440.630 Monetary Economics
- AS.440.631 Finance and the Macroeconomy
- AS.440.632 Topics in Macroeconomics and Finance
- AS.440.634 Economic Growth
- AS.440.639 International Finance (Open Economy Macro)
- AS.440.640 Financial Economics
- AS.440.641 Financial Intermediation & Financial Markets
- AS.440.643 Economics of Investments and Financial Management
- AS.440.645 Behavioral Economics & Finance
- AS.440.646 Economics of Derivatives
- AS.440.650 Environmental & Resource Economics
- AS.440.653 Economics of the Labor Market
- AS.440.656 Political Economy
- AS.440.658 Industrial Organization
- AS.440.659 Law and Economics
- AS.440.661 Public Economics
- AS.440.663 Development Microeconomics
- AS.440.665 International Trade (Open Economy Micro)
- AS.440.666 Regional Economics
- AS.440.667 Urban Economics
- AS.440.672 Economics of Health Care
- AS.440.684 Game Theory
- AS.440.692 Thesis

Total Credits: 30

Applied Economics students tailor their own course of study and can pursue any of the following areas, or mix and match:

Public Policy
(on-site and online)

For contributing to any level of government policy formulation and policy making. Choose from among a rich variety of electives: Industrial Organization, Public Economics, Economics of Health Care, Environmental & Resource Economics, Economics of the Labor Market, Law and Economics, and Political Economy. Cost-Benefit Analysis provides conceptual and quantitative tools essential for contemporary microeconomic policy formulation and evaluation. Both Microeconometrics and Macroeconometrics are germane to the subject, as is Survey Research Methods. Computable General Equilibrium
Modeling builds a powerful tool with widespread use in the analysis of taxation, income distribution, and environmental matters.

**Financial Economics and the Macroeconomy (on-site and online)**

These are two by now obviously strongly complementary subjects, and we have a rich set of offerings. The foundation for the microeconomic analysis of intertemporal and interstatial risk allocation is laid in Financial Economics. Financial Intermediation & Financial Markets considers how existing institutions cope with both. Theory and practice are deepened in Economics of Investments & Financial Management and Economics of Derivatives. Further perspective is gained through Behavioral Economics & Finance. The economic aggregates are treated in Monetary Economics, International Finance [Open Economy Macro], and Economic Growth, while Finance and the Macroeconomy and Topics in Macroeconomics provide additional depth and integration. Quantitative tools are found in Macroeconometrics, Financial Econometrics, and Macroeconomic Forecasting.

**International Economics and Development (on-site and online)**

For gaining an analytical and quantitative perspective on global matters. Substantive courses include International Finance [Open Economy Macro], International Trade [Open Economy Micro], Development Microeconomics, and Economic Growth. Here too, Cost-Benefit Analysis provides essential conceptual and quantitative tools. Microeconometrics and/or Macroeconometrics, as well as Survey Research Methods, further develop the corresponding quantitative skills. Computable General Equilibrium Modeling builds a powerful tool with widespread applicability in this field.

**Spatial Economics (online only)**

For contributing to local economic policy analysis and policy making. Students choose Regional Economics and Urban Economics from the Applied Economics Program, and up to two courses from the Geographic Information Systems Program, or one course from the Geographic Information Systems Program and 470.703 Urban Data Analytics from the Government Analytics Program.

**Environmental Economics (on-site and online)**

For contributing to efficient corporate and public policy. Students take Environmental & Resource Economics, Cost-Benefit Analysis, and Microeconometrics and/or Macroeconometrics in the Applied Economics Program. Computable General Equilibrium Modeling builds a powerful tool with widespread use in the field. Up to two courses from the in-house Environmental Science and Policy, Energy and Climate Change, or Geographic Information Systems programs, some of which are available online, can count towards the electives in the program.

**Health Economics (on-site and online)**

Bring to bear the tools of economics in this burgeoning field. Students take Economics of Health Care, Cost-Benefit Analysis, and Microeconometrics in the Applied Economics Program, and choose three to six credits from science, specialized quantitative, and policy courses in the part-time Master of Public Health Program at the Bloomberg School, offered online.

**Quantitative Methods (on-site and online)**

Any or all courses offering training in advanced econometrics and empirical methods — Microeconometrics, Macroeconometrics, Financial Econometrics, Macroeconomic Forecasting, Bayesian Econometrics, Survey Research Methods, Cost-Benefit Analysis, Computable General Equilibrium Modeling, and Machine Learning in Statistics — are sincerely recommended for consideration to non-degree seeking students and degree candidates alike.

**Formal Concentration in Financial Economics (on-site and online)**

Students may declare a formal concentration in Financial Economics if they wish to elect their courses according to the requirements listed here (https://advanced.jhu.edu/academics/graduate-degree-programs/applied-economics/concentration-in-financial-economics/). Such a concentration would be noted on the student’s transcript.