Applied Mathematical Economics

Director: Andrew Meyer, Ph.D.

This interdisciplinary major blends mathematics and economics to provide the quantitative tools necessary for modern economic analysis. Economics students could find this major to be excellent training for employment as a business economist or excellent preparation for graduate study. The mathematics, engineering or science student who wants to use mathematical expertise to learn a business discipline could find this major to be an interesting and useful application of mathematics.

Applied Mathematical Economics Major

The major consists of 42 credit hours as follows: 18 credit hours in economics courses and 15 credit hours in math, from the required course list below. Electives include one upper-division economics course (3 credit hours) and two mathematics courses (6 credit hours) from the elective course listing below.

### Required Economics Courses:
- **ECON 1103** Principles of Microeconomics 3
- **ECON 1104** Principles of Macroeconomics 3
- **ECON 3003** Intermediate Microeconomic Analysis 3
- **ECON 3004** Intermediate Macroeconomic Analysis 3
- **ECON 4060** Introduction to Econometrics 3
- **ECON 4065** Mathematical Economics 3

### Required Mathematics Courses:
- **MATH 1450** Calculus 1 4
- **MATH 1451** Calculus 2 4
- **MATH 2450** Calculus 3 4
- **MATH 4710** Mathematical Statistics 3
- or **MATH 4720** Statistical Methods 3

### Elective Economic Courses: Choose one from the following courses 3
- **ECON 3001** Applied Business Economics
- **ECON 4006** Industrial Organization
- **ECON 4008** Economics and Law
- **ECON 4010** Public Finance
- **ECON 4012** Urban and Regional Economics
- **ECON 4016** Environmental and Natural Resource Economics
- **ECON 4020** Economics of Labor Markets
- **ECON 4022** Economics of Healthcare and Health Policy
- **ECON 4040** International Economic Issues
- **ECON 4044** Global Integration of Financial Sectors
- **ECON 4045** Comparative Economic Systems
- **ECON 4046** International Trade
- **ECON 4047** Development Economics
- **ECON 4070** Economics and Ethics
- **ECON 4072** Behavioral Economics
- **ECON 4080** Money, Banking and Monetary Policy
- **ECON 4931** Topics in Economics
- **ECON 4953** Seminar in Economics

### Elective Mathematics Courses: Choose two from the following courses 6
- **MATH 2451** Differential Equations
- or **MATH 4500** Theory of Differential Equations
- **MATH 3100** Linear Algebra and Matrix Theory
- **MATH 4630** Mathematical Modeling and Analysis
- **MATH 4650** Theory of Optimization
- **MATH 4700** Theory of Probability
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 4760</td>
<td>Time Series Analysis</td>
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<tr>
<td>MATH 4780</td>
<td>Regression Analysis</td>
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Total Credit Hours: 42