# MATHEMATICAL ECONOMICS (B.A.)

The purpose of the program is to provide rigorous training in mathematics and economics for students whose career goals require a high level of technical proficiency in these subjects. The program will be valuable for students who intend to pursue graduate work in economics, finance or applied mathematics, or pursue a career in economic analysis, finance, underwriting, actuarial sciences, banking, international trade, applied statistics, or operations research.

## Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (http://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University.

## Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

## Major Requirements

Students considering a mathematical economics major should take ECO 2010 and ECO 2020 (Principles of Microeconomics and Macroeconomics) and MAT 2010 (Calculus 1) as soon as possible.

To satisfy the university bachelor's degree requirement, Mathematical Economics majors must have a cumulative grade point average of 2.0 in their major courses. Also, students must receive a grade of 'C-' or better in all mathematics, statistics and economics courses.

A major consists of at least forty-six credits total - at least twenty-two credits in mathematics courses and twenty-four credits in economics courses. At least fifteen credits (eight credits of economics and seven credits of math) must be earned at Wayne State University.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECO 5020</td>
<td>Fundamentals of Economic Analysis I</td>
<td>4</td>
</tr>
<tr>
<td>ECO 5030</td>
<td>Microeconomic Theory</td>
<td></td>
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<tr>
<td>ECO 5100</td>
<td>Introductory Statistics and Econometrics</td>
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<td>ECO 5200</td>
<td>Environmental Economics</td>
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<tr>
<td>ECO 5250</td>
<td>Economic Analysis of Law</td>
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<tr>
<td>ECO 5260</td>
<td>Economic Analysis of Law II: Applications of Statistics and Econometrics</td>
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</tbody>
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## Mathematics Requirements

MAT 2010 Calculus I 4  
MAT 2020 Calculus II 4  
MAT 2030 Calculus III 4  
MAT 2250 Elementary Linear Algebra 3  
MAT 5700 Introduction to Probability Theory 4

### Total Credits: 46-47

1. This course could be done in conjunction with ECO 5993.
2. Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, MAT 6150, MAT 6170, MAT 6180, MAT 6200 and MAT 6210.
3. This is a paper completed in conjunction with a 5000-level economics, mathematics or statistics elective course. You must register for this course during the same semester that the 5000-level elective taken. Permission from the instructor is required.

## Minimal Grade Requirements

Students must receive a grade of 'C-' or better in all economics, mathematics and statistics courses. An overall grade point average of 2.0 ('C') is required for graduation.

## Writing Proficiency/Writing Intensive Requirement

To enable the Department to evaluate their writing proficiency, mathematical economics majors must register for ECO 5993, the zero-credit WI course. This is a paper completed in conjunction with a 5000-level economics, mathematics or statistics elective course. They must register for this during the same semester that the 5000-level elective course is taken. All mathematical economics majors must satisfy this requirement, even if they are not subject to the University General Education Requirements.

## Student's Responsibility

It is each student's responsibility to learn the requirements, policies, and procedures governing the program they are following and to act accordingly. Students should consult both Mathematical Economics
program advisors regularly in order to verify that Mathematical Economics requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.