# Mathematics for Economics Majors

## Required for the BA in Economics

<table>
<thead>
<tr>
<th>Track A</th>
<th>OR</th>
<th>Track B</th>
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</thead>
<tbody>
<tr>
<td>M 115 Probability &amp; Linear Math</td>
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<tr>
<td>M 162 Applied Calculus</td>
<td></td>
<td>M 171 Calculus I</td>
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<tr>
<td>STAT 216 Intro to Statistics</td>
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<td>M 172 Calculus II</td>
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<td></td>
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<td>STAT 216 Intro to Statistics</td>
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**Track B** is recommended for students who plan to attend graduate school in economics or who enjoy and are proficient at mathematics. In some cases, the Economics Department will allow you to substitute a different math class for M 115 or waive M 115.

**Track B** possible substitutions include:
- STAT 341 Intro to Probability & Statistics for M 115
- STAT 451 and 452 Statistical Methods I & II for STAT 216

## Recommended for Students who will pursue an MA in Economics

**Track B** possible substitutions include:
- STAT 341 Intro to Probability & Statistics for M 115
- STAT 451 and 452 Statistical Methods I & II for STAT 216

In addition, we suggest:
- M 221 Intro to Linear Algebra
- M 273 Multivariable Calculus
- M 307 Intro to Abstract Mathematics

Students have been admitted to MA programs in Economics with **Track A**, but it does put you at a disadvantage in some MA classes.

## Recommended for students who will pursue a PhD in Economics

We recommend that you take as much math as possible. Many economics PhD students have math degrees and several of your Economics faculty have undergraduate math degrees.

**Track B** **Plus** (in order of importance):
- M 221 Intro to Linear Algebra
- M 273 Multivariable Calculus
- M 307 Intro to Abstract Math

**Plus** any of the following:
- M 381 Advanced Calculus I
- A STAT sequence (341-421-422 or 451-452 with 457-458)
- M 473 Intro to Real Analysis
- An Optimization Sequence (361-62-63)
- Differential Equations (274, 311, 412)
- M 549 Applied Sampling
- Plus any other 400- or 500-level math class that you can handle.

(over)
Required for the Math Minor

A minor in math requires 23 credits in M, MATH or STAT courses — M courses must be numbered 115 or higher, and MATH courses must be numbered 111 or higher — and must include:

- M 162 or M 172 (needed for Economics as well)
- At least three 3- or 4-credit mathematics courses at the 300-level or above

M 172 is recommended since it is a prerequisite for many upper-division courses; however, there are enough upper-division classes with just M 162 as a prerequisite that the minor is still possible with M 162.

If you are on Track B for the Economics major you are already well on your way to the minor. You do the math.