

## Job Opportunities



## Graduate Studies at EMU

A double major can pursue an M.A. at EMU (or an M.A. or Ph.D. at other institutions) in Mathematics or Economics:

- M.A. in Mathematics
- M.A. in Applied Statistics
- M.A. in Applied Economics
- M.A. in Health Economics
- M.A. in Trade and Development
- M.A. in Int'l Economics and Development
- M.B.A. (College of Business)

For information about admissions and graduate teaching/research assistantships, contact the department's Graduate Coordinator or the Department Head.



EMU Lake House

## Important Statistics by Major

Major	LSAT (%) <sup>1</sup>	GMAT (%) <sup>1</sup>	Starting Salary (000's) <sup>2</sup>	Mid-Career Salary <sup>2</sup>
Economics	+9.6	+7.3	\$48.5	\$95.0
Mathematics	+12.8	+13.3	48.5	85.8
Chemistry	+7.6	+7.5	44.7	87.5
Computer Science	N/A	N/A	58.4	100.0
Political Science	-1.6	+0.06	40.3	74.7
Physics	N/A	N/A	51.2	99.1
Actuarial Science	N/A	N/A	56.1	112.0
Statistics	N/A	N/A	49.3	99.5
Applied Math	N/A	N/A	50.8	102.0

1. The entries show the percentage by which the mean score of test takers from specific undergraduate majors differs from the mean score of all test takers. [www.math.duke.edu/major/whyMajor.html](http://www.math.duke.edu/major/whyMajor.html)

2. [www.payscale.com/college-salary-report-2013/majors-that-pay-you-back](http://www.payscale.com/college-salary-report-2013/majors-that-pay-you-back)



EMU Student Center

## Scholarships & Financial Aid

A variety of Scholarships and loans are available through EMU. For more information, please visit:

[www.emich.edu/admissions](http://www.emich.edu/admissions)

[www.emich.edu/finaid](http://www.emich.edu/finaid)

[www.emich.edu/economics/opp-scholarships/](http://www.emich.edu/economics/opp-scholarships/)

### Mathematics Department

515 Pray-Harrod,  
Ypsilanti, MI 48197  
Phone: 734.487.1444  
[www.emich.edu/math](http://www.emich.edu/math)

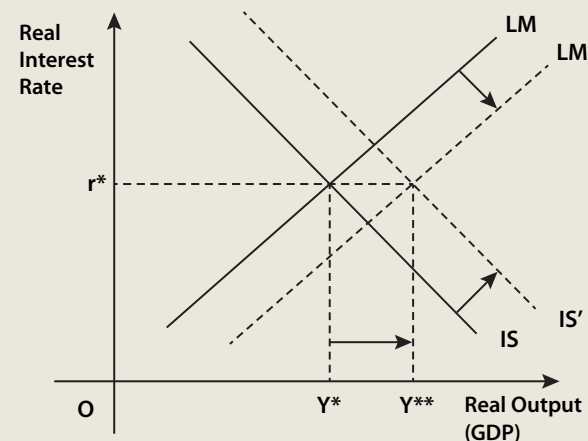
### Economics Department

703 Pray-Harrod,  
Ypsilanti, MI 48197  
Phone: 734.487.3395  
[www.emich.edu/economics](http://www.emich.edu/economics)

# College of Arts & Sciences Mathematics & Economics

A double major in mathematics and economics promises to enhance:

- Analytical Power
- Critical Thinking
- Job Prospects
- Options for Graduate Studies



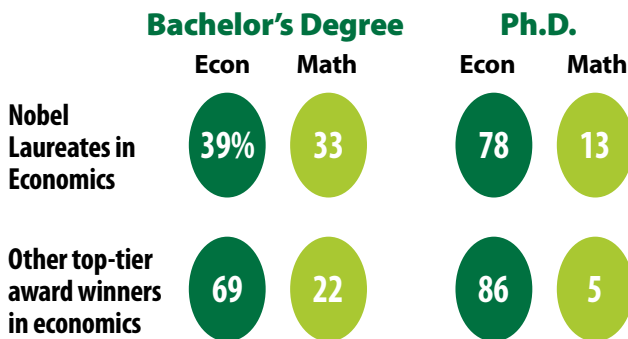
IS Equation: 
$$Y = \frac{1}{1-\phi} (a + 1 + G - \phi T) - \frac{\phi}{1-\phi} r$$

LM Equation: 
$$r = \frac{M - a_0}{a_1} + \frac{a_2}{a_1} r$$

Slutsky Equation: 
$$\frac{\partial x_i^h}{\partial p_j} = \frac{\partial x_i^m(p, y)}{\partial p_j} + \frac{\partial x_i^m(p, y)}{\partial y} x_j^m$$

**EASTERN**  
MICHIGAN UNIVERSITY  
*Education First*

Mathematics and economics are a natural combination. Each builds on the other, making the double major better than either on its own by being more marketable. It is no surprise that many mathematicians have become economists and established global fame — and have even received the Nobel Prize in Economics for their ground breaking contributions.



Source: <http://qz.com/15156/to-win-the-nobel-prize-in-economics-it-helps-to-wield-math-lots-of-it/>

## Mathematics Programs

The mathematics program is designed to give majors certain basic courses, and to ensure a broad background, yet allow enough electives to adapt to any of the following areas: education, statistics, economics, engineering, the physical sciences or graduate work in pure or applied mathematics. One complementary yet unique aspect of economics is that it gives mathematicians/statisticians new challenges, new outlets and new ideas to incorporate in mathematics.

### Undergraduate Mathematics Programs

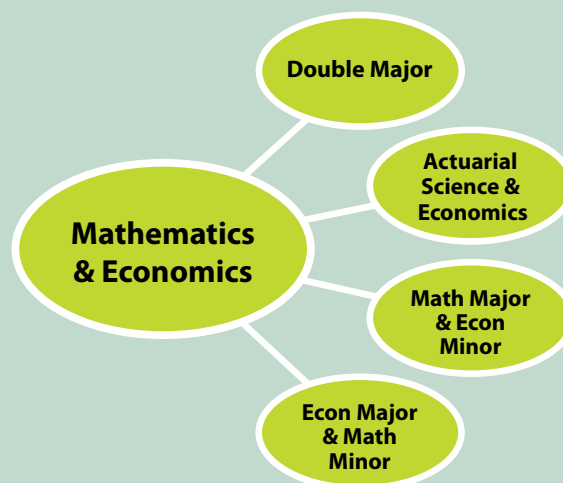
- **Mathematics major**  
A flexible program that can lead to any of the careers listed above.
- **Mathematics minor**  
This minor will enhance any major in the physical or social sciences.
- **Mathematics major with concentration in Statistics**  
For anyone interested in pursuing statistics or analytics.
- **Actuarial Science and Economics**  
Prepares students for the demanding but highly rewarding career of an actuary.

## Why Double Major in Math & Econ?

A degree in mathematics offers job opportunities in academia, and in the private and public sector—doing data analysis and research.

However, integrating mathematics with an applied academic curriculum such as Economics, Actuarial Science, or Applied Statistics can enhance marketability.

### Joint Undergraduate Programs:



**Katy Kembitzky** (mathematics and economics double major) plans to pursue a Ph.D. in economics at a highly reputable institution such as Northwestern University in Chicago.



**Kara Binning** (economics major with a minor in mathematics with concentrations in statistics) desires to work in the public sector after graduation — possibly in the Federal Reserve Bank — before pursuing advanced degrees.

It is common for students pursuing a Ph.D. in economics to have a double major in mathematics and economics. The importance of mathematics to the field of economics is underscored by the irrefutable fact that one cannot pursue a Ph.D. in economics without having a strong grounding in mathematics and statistics.

## Economics Programs

For mathematics majors, the next best alternative to an Economics Major both for increasing job prospects and pursuing graduate studies is having a minor in economics. The requirement for a minor in economics is ECON 201 (Principles of Macroeconomics) and ECON 202 (Principles of Microeconomics) plus 14 hours of electives from a diverse list of courses.

### Undergraduate Economics Programs:

- **B.B.A. in Economics**  
Bachelor of Business Administration (BBA) in economics provides training in economics applicable to business management.
- **B.A. or B.S. in Economics**  
This program prepares students for administration, careers in business, finance, government and so on.
- **B.A. or B.S. in Actuarial Science**  
This joint program is a job-specific major — preparing students to successfully complete examinations offered by leading actuarial societies.

