

GUIDE

for Applied Mathematics Majors to Add Economics as a Secondary Major

ECONOMICS AS A SECONDARY MAJOR:

For mathematics students seeking to complement their studies, S&T's STEM Economics program prepares them as future industry professionals who can apply the core economics principles and quantitative methods to articulate and make policy recommendations aligned with the current and projected economic environment. The degree provides knowledge of market structure, global business, data analytics, and public policies necessary for strategic decision-making.

Required a total of ten (10) Economics courses (30 hours):

Five (5) Required Courses (15 hours):

- ECON 1100 Principles of Microeconomics
- ECON 1200 Principles of Macroeconomics
- ECON 2100 Intermediate Microeconomics
- ECON 2200 Intermediate Macroeconomics
- ECON 3300 Introduction to Econometrics

Five (5) 3000-level or above Economics Elective Courses (15 hours):

For Applied Mathematics Majors, any two (2) 5000-level statistics courses, one (1) programming course, and MATH 5737 can be substituted for up to four (4) elective courses.

WHICH ECONOMICS COURSES TO TAKE?

Consult the back table and recommendations for appropriate economics courses within the Applied Mathematics degree program, which has various emphasis areas.

**TO
PROCEED
FORWARD**

1. Contact Dr. Melody Lo, chair of Economics, who will be your Economics advisor via melodylo@mst.edu or 573-341-4618.
2. Fill out two forms:
 - [MajorUpdateForm](#)
 - [SecondBSDegree10CoursesForm](#)

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S&T[™]

Economics
Department

ECONOMICS EMPHASIS AREA

Each Is Required a Total of Four (4) Courses:

Decision Data Analytics

- ECON 3300 Introduction to Econometrics (fall semester)
- ECON 3333 Computational Economics (spring semester)
- ECON 5360 Data-Driven Strategic Insights (fall semester)
- ECON 5380 Data Intelligence Using Case Studies (spring semester)

Financial Economics & Technology

- ECON 3333 Computational Economics (spring semester)
- ECON 4383 Financial Economics (spring semester)
- ECON 5337 (MATH 5737) Financial Mathematics (fall semester)
- ECON 5360 Data-Driven Strategic Insights (fall semester)

Applied Mathematics with Emphasis Area in

	Actuarial Science	Algebra/Discrete Mathematics	Computational Mathematics	Data Science and Statistics
STAT 5353			✓	
STAT 5346			✓	
STAT 5643	✓	✓		✓
STAT 5644	✓	✓		✓
COMP SCI 1570 (ECON 3333)	✓	✓	✓	✓
ECON 1100	✓	✓	✓	✓
ECON 1200	✓	Add	Add	Add
ECON 2100	Add	Add	Add	Add
ECON 2200	✓	Add	Add	Add
ECON 3300	Add	Add	Add	Add
MATH 5737 (ECON 5337)	✓			

Checkmark (✓) identifies the course required by the applied mathematics degree program.

Economics courses approved by an advisor qualify as Elective-Technical courses in the mathematics degree programs.

RECOMMENDATIONS:

W/O AN EMPHASIS AREA -

For Actuarial Science students to earn a BS Economics degree without an emphasis area, add one (1) course [among STAT 5755, ECON 4383, ECON 5360, and ECON 5380]; for all other students, add two (2) courses [among MATH 5737, STAT 5755, ECON 4383, ECON 5360, and ECON 5380].

W THE FINANCIAL ECONOMICS & TECHNOLOGY EMPHASIS AREA -

For Actuarial Science students to earn a BS Economics degree with an emphasis area in Financial Economics & Technology, add two (2) courses - ECON 4383 and ECON 5360. For all other students, add three (3) courses - MATH 5737, ECON 4383, and ECON 5360.

W THE DECISION DATA ANALYTICS EMPHASIS AREA -

All students must add two (2) courses - ECON 5360 and ECON 5380.