Summary/Rationale for proposal*(required)*

Give a summary of the proposal(s), including a rationale and evidence for each. Please also explain the big picture, reasons for the proposal (e.g. alignment with other institutions, accreditation, etc.) and the students/programs affected.

The Economics & Mathematics program provides students with an opportunity to acquire a solid foundation in both fields during their undergraduate studies. This program combines the quantitative methods of mathematics with an applied science in order to solve real world problems. The skills and knowledge acquired by students in this program are increasingly vital in the ever increasing importance of the service sector in the current economy. Students in this major not only gain valuable skills but also study a fascinating set of ideas that will help them with a career in the changing job market.

Program or Requirement Title*(required)*
Economics & Mathematics, B.S.

Description*(required)*

Include the catalog-ready description as it currently appears (modifications) or should appear (new proposal) in the catalog or online listing of courses. If you are submitting a program, please include the catalog-ready listing of courses for your program.

Mission

Provides students with a solid foundation in the mathematical disciplines necessary to develop a deeper understanding of domestic and international economic and social problems. The program aims to prepare a student to enter directly into the business sector equipped with skills that are in high demand.

Learning Outcomes

1. Demonstrate the effective use of mathematical skills to solve quantitative problems from a wide array of authentic contexts. (Q)
2. Apply relevant theoretical models to explore microeconomic and macroeconomic issues (IA).
3. Demonstrate effective communications of economic and mathematical concepts. (W)

Core Courses

Economics

- EC 201 Introduction to Microeconomics Credits: 4
- EC 202 Introduction to Macroeconomics Credits: 4
- EC 311 Intermediate Microeconomics I Credits: 4
- EC 312 Intermediate Microeconomics II Credits: 4
- EC 313 Intermediate Macroeconomics Credits: 4
- EC 315 Econometric Analysis and Report Writing Credits: 4

Mathematics

- MTH 251 Calculus I* Credits: 4

- MTH 252 Calculus II Credits: 4
- MTH 254 Multivariate Calculus Credits: 4
- MTH 280 Introduction to Proof Credits: 4
- MTH 341 Linear Algebra I Credits: 4
- MTH 365 Mathematical Probability Credits: 4
- MTH 366 Mathematical Statistics Credits: 4

Economics Electives Credits 8

- Approved upper division economics electives

Choose Two Mathematics Electives

- MTH 314 Differential Equations Credits: 4
- MTH 351 Introduction to Numerical Analysis Credits: 4
- MTH 354 Applied Discrete Mathematics Credits: 4
- MTH 358 Mathematical Modeling Credits: 4
- MTH 363 Operations Research Credits: 4

Economics / Mathematics Capstone Project

- EC 413/MTH 413 Economics and Mathematics Capstone I Credits: 2
- EC 414/MTH 414 Economics and Mathematics Capstone II Credits: 2

Total Credits: 72

Notes

*MTH 112 is the prerequisite for MTH 251

Economics & Mathematics majors must have a grade of C- or better in courses that are used to satisfy the major requirements.

Degree Type*(required)*

Select the type of degree that this major will provide

BS