Mathematical Economics - B.S.  

The mathematical economics major offers students a degree program that combines mathematics, statistics, and economics. In today’s increasingly complicated international business world, a strong preparation in the fundamentals of both economics and mathematics is crucial to success. This degree program is designed to prepare a student to go directly into the business world with skills that are in high demand, or to go on to graduate study in economics or finance. A degree in mathematical economics would, for example, prepare a student for the beginning of a career in operations research or actuarial science.

120 hours (minimum)

Any student earning a Bachelor of Science (BS) degree must complete a minimum of 60 hours in natural, physical, mathematical, and computer science. Please note: courses with an ECO prefix are generally not accepted towards fulfilling this 60-hour requirement. Therefore, be sure to keep this requirement in mind as you choose your course work for the requirements in the major. A complete description of College requirements for a Bachelor of Science degree, including a specific listing of courses applicable to the 60-hour requirement, can be found on page 95 of the 2005-2006 UK Bulletin.

University Studies Program Requirements

I. Math (completed by Premajor Requirement) ................................................................... 0-8
II. Foreign Language (placement exam recommended) ....................................................... 0-4
III. Inference–Logic (completed by Premajor Requirement) ................................................ 1
IV. Written Communication .................................................................................................. 0-4
V. Oral Communication* (can be partially completed by Major Requirement) .............. 0-4
VI. Natural Sciences ........................................................................................................... 6
VII. Social Sciences (partially completed by Major Requirement) ..................................... 6
VIII. Humanities .................................................................................................................. 6
IX. Cross-Cultural (choose a Humanities course) ............................................................... 3
X. Electives (choose two Natural Science courses) ............................................................ 6

USP hours: ................................................................................................................................ 25-37

Graduation Writing Requirement

After attaining sophomore status, students must complete a Graduation Writing Requirement course. See “University Writing Requirement” on page 66 of the 2005-2006 UK Bulletin.

Graduation Writing Requirement Hours: ............................................................................... 3

College Requirements

I. Foreign Language (placement exam recommended) ....................................................... 0-8
II. Disciplinary Requirements
   a. Natural Science (completed by USP Elective Requirement) ........................................ 6
   b. Social Science (completed by Major Requirements) ....................................................... 3
   c. Humanities (completed by USP Cross-Cultural Requirement) ..................................... 1
III. Laboratory or Field Work ............................................................................................... 1
IV. Electives ........................................................................................................................... 6

College Requirement hours: ............................................................................................... 7-15

Premajor Requirements

^MA 113 Calculus I ............................................................................................................. 4
MA 114 Calculus II ............................................................................................................. 4

Premajor hours: .................................................................................................................... 8

Major Requirements

Mathematics Core Requirements
MA 213 Calculus III ........................................................................................................... 4
MA 214 Calculus IV ............................................................................................................. 3
MA 320 Introductory Probability .......................................................................................... 3
MA 322 Matrix Algebra and Its Applications ...................................................................... 3

Mathematics Core hours: .................................................................................................... 13

Economics Core Requirements
^ECO 201 Principles of Economics I ................................................................................ 3
ECO 202 Principles of Economics II ................................................................................ 3
ECO 391 Economic and Business Statistics ....................................................................... 3
ECO 401 Intermediate Microeconomic Theory .................................................................. 3
ECO 402 Intermediate Macroeconomic Theory ................................................................ 3

Economics Core hours: ....................................................................................................... 15

Other Course Work Required for the Major

For the Mathematics Component:
Choose one of the following sequences: MA 416G and MA 417G, MA 471G and MA 472G, or STA 524 and STA 525 ................................................................. 6

For the Economics Component
*Choose 9 hours of 300+ level economics courses ...................................................... 9

For the Statistics Component
Choose STA 291 or a higher level statistics course ......................................................... 3

Other Major hours: .............................................................................................................. 18

Electives

Electives should be selected by the student to lead to the minimum total of 120 hours required for graduation ................................................................. 12

Total Minimum Hours Required for Degree ................................................................... 120

^Course used towards completion of a USP Requirement.

*COM 199 + ECO 499 satisfy the Oral Communication Requirement.