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 96 of the 2004-2005 UK Bulletin.

Mathematical Economics - B.S.  

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University Studies Program Requirements
I. Math (completed by Premajor Requirement) ........................................ 0-8
II. Foreign Language (placement exam recommended) .................. 0-8
III. Inference–Logic (completed by Premajor Requirement) .............. 3-6
IV. Written Communication ................................................................. 3-6
V. Oral Communication* (can be partially completed by Major Requirement) ................................................................. 3-6
VI. Natural Sciences .............................................................................. 6
VII. Social Sciences (partially completed by Major Requirement) ........ 3
VIII. Humanities .................................................................................... 3
IX. Cross-Cultural (choose a Humanities course) ............................ 3
X. Electives (choose two Natural Science courses) ........................ 3
USP hours: ............................................................................................ 28-39

College Requirements
I. Foreign Language (placement exam recommended) .................. 0-8
II. Disciplinary Requirements
   a. Natural Science (completed by USP Elective Requirement)........ 0-8
   b. Social Science (completed by Major Requirements) ............ 0-8
   c. Humanities (completed by USP Cross-Cultural Requirement) ... 0-8
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 .................................................................................. 4
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 USP Oral Communication Requirement.