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 pages 103-104 of the 2007-2008 UK Bulletin.

University Studies Program Requirements

I. Math (completed by Premajor Requirement) .............................................. 0-8
II. Foreign Language (placement exam recommended) .............................. 0-8
III. Written Communication ........................................................................... 0-4
IV. Oral Communication* (can be partially completed by Major Requirement) ......................................................... 0-4
V. Inference–Logic (completed by Premajor Requirement) ............................... 1
VI. Natural Sciences .......................................................................................... 6
VII. Social Sciences (partially completed by Major Requirement) ................. 3
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 72 of the 2007-2008 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) ............... 4
   b. Social Science (completed by Major Requirements) .......................... 4
   c. Humanities (completed by USP Cross-Cultural Requirement) ............ 4
III. Laboratory or Field Work ......................................................................... 1
IV. Electives ..................................................................................................... 6

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

Pre-major Requirements

^MA 113 Calculus I (MA 113 or MT 175) ......................................................... 4
MA 114 Calculus II (MA 114 or MT 185) ......................................................... 4
Pre-major hours: ............................................................................................. 8

Major Requirements

Mathematics Core Requirements

MA 213 Calculus III (MA 213) ................................................................. 1
MA 214 Calculus IV (MA 214) ................................................................. 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 (ECO 201) ............................................ 3
ECO 202 Principles of Economics II (ECO 202) .......................................... 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 (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.