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 in the Arts and Sciences section of the 2022-2023 Undergraduate Bulletin.

UK Core Requirements

See the UK Core section of the 2022-2023 Undergraduate Bulletin for the complete UK Core requirements. The courses listed below are (a) recommended by the college, or (b) required courses that also fulfill UK Core areas. Students should work closely with their advisor to complete the UK Core requirements.

| I. Intellectual Inquiry in Arts and Creativity | I. Foreign Language (placement exam recommended) | 0-14 |
| II. Intellectual Inquiry in the Humanities | II. Disciplinary Requirements | 3 |
| III. Intellectual Inquiry in the Social Sciences | a. Natural Science | 3 |
| IV. Intellectual Inquiry in the Natural, Physical, and Mathematical Sciences | b. Social Science (completed by Major Requirements) | 3 |
| V. Composition and Communication I | c. Humanities | 3 |
| VI. Composition and Communication II | III. Laboratory or Field Work | 1 |
| VII. Quantitative Foundations | IV. Race and Ethnicity Requirement | 0-3 |
| VIII. Statistical Inferential Reasoning | V. Electives | 6 |
| IX. Community, Culture and Citizenship in the USA | College Requirement hours: | 13-30 |

Premajor Requirements

Choose one of the following two sequences:

- MA 113 Calculus I
- MA 114 Calculus II

or

- MA 137 Calculus I with Life Science Applications
- MA 138 Calculus II with Life Science Applications

Premajor hours: 8

Major Requirements

Mathematics Core Requirements

- MA 213 Calculus III
- MA 214 Calculus IV

- MA 320 Introductory Probability

or

- STA 524 Probability

- MA 322 Matrix Algebra and its Applications

Mathematics Core hours: 13

Economics Core Requirements

- ECO 201 Principles of Economics I
- ECO 202 Principles of Economics II
- ECO 391 Economic and Business Statistics
- ECO 401 Intermediate Microeconomic Theory
- ECO 402 Intermediate Macroeconomic Theory

Economics Core hours: 15

Other Course Work Required for the Major

For the Mathematics Component:

Choose one of the following two sequences:

- MA 416G Introduction to Optimization
- MA 417G Decision Making Under Uncertainty

OR

- MA 471G Advanced Calculus I
- MA 472G Advanced Calculus II
- MA 417G Decision Making Under Uncertainty

For the Economics Component

- ECO 491G Applied Econometrics
- One 300+ level economics course
- One 400+ level economics course

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University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at www.sacscoc.org for questions about the accreditation of University of Kentucky.
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For the Statistics Component
Choose STA 296 or a higher level statistics course .................................................. 3

Other Major hours: …………………………………………………………………………………. 21

Electives
Choose electives to lead to the minimum total of 120 hours required for graduation…6

Total Minimum hours
Required for Degree …………………………………………………………………………….. 120

*Course used towards completion of a UK Core Requirement.