

# Mathematical Economics - B.A.

College of  
Arts and Sciences

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 Arts (BA) degree must complete a minimum of 39 hours at the 300+ level. These hours are generally completed by the major requirements. However, keep this hour requirement in mind as you choose your course work for the requirements in the major. See the complete description of College requirements for a Bachelor of Arts degree in the *Arts and Sciences* section of the *2015-2016 Undergraduate Bulletin*.

## UK Core Requirements

See the *UK Core* section of the *2015-2016 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

Choose one course from approved list ..... 3

### II. Intellectual Inquiry in the Humanities

Choose one course from approved list ..... 3

### III. Intellectual Inquiry in the Social Sciences

Choose one course from approved list ..... 3

### IV. Intellectual Inquiry in the Natural, Physical, and Mathematical Sciences

Choose one course from approved list ..... 3

### V. Composition and Communication I

CIS/WRD 110 Composition and Communication I ..... 3

### VI. Composition and Communication II

CIS/WRD 111 Composition and Communication II ..... 3

### VII. Quantitative Foundations

Choose one course from approved list ..... 3

### VIII. Statistical Inferential Reasoning

Choose one course from approved list ..... 3

### IX. Community, Culture and Citizenship in the USA

Choose one course from approved list ..... 3

### X. Global Dynamics

Choose one course from approved list ..... 3

**UK Core hours** ..... **30**

## Graduation Composition and Communication Requirement (GCCR)

ECO 491G Applied Econometrics ..... 3

## Graduation Composition and Communication Requirement hours (GCCR)

..... **3**

## College Requirements

I. Foreign Language (*placement exam recommended*) ..... 0-14

### II. Disciplinary Requirements

a. Natural Science ..... 6

b. Social Science (*completed by Major Requirements*)

c. Humanities ..... 6

III. Laboratory or Field Work ..... 1

IV. Electives ..... 6

**College Requirement hours:** ..... **19-33**

## 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 nine 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

Choose electives to lead to the minimum total of 120 hours required for graduation ..... 9

## Total Minimum hours

**Required for Degree** ..... **120**

*\*Course used towards completion of a UK Core Requirement.*

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](http://www.sacscoc.org) for questions about the accreditation of University of Kentucky.

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## 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 2015-2016 *Undergraduate Bulletin*.

### UK Core Requirements

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#### X. Global Dynamics

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**UK Core hours** ..... **30**

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### Graduation Composition and Communication Requirement hours (GCCR)

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b. Social Science (*completed by Major Requirements*)

c. Humanities ..... 3

III. Laboratory or Field Work ..... 1

IV. Electives ..... 6

**College Requirement hours:** ..... **13-27**

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MA 114 Calculus II ..... 4

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

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

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