

ECONOMICS AND MATHEMATICS

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The Economics and Mathematics major is intended for students with a strong interest in both mathematics and economics, and for students who may pursue a graduate degree in economics.

PREREQUISITES

The major has prerequisites in both mathematics and economics: MATH 120; ECON 110 or 115; and ECON 111 or 116. Upper level economics courses may be substituted for prerequisite economics courses. With Math DUS permission, students familiar with multivariable calculus may substitute an upper level mathematics course in the same area for MATH 120. Upper-level courses substituted for prerequisites do not count toward the total of twelve term courses (beyond the introductory level in economics and mathematics) required for the major.

REQUIREMENTS OF THE MAJOR

A total of twelve term courses is required beyond the introductory level in economics and in mathematics: seven term courses in economics numbered above 120, and five term courses in mathematics numbered above 200 (except MATH 470). These courses must include:

1. One intermediate microeconomics course (ECON 125 is preferred, but ECON 121 is also acceptable) and one intermediate macroeconomics course (ECON 126 is preferred, but ECON 122 is also acceptable).
2. Two mathematical economics courses, ECON 351 or 425 and one of ECON 350, 417, or 433.
3. Two courses in econometrics, ECON 135 (or equivalent) and 136. ECON 135 can be replaced by S&DS 241 and 242, in which case they count as one economics course and not as mathematics courses. Neither S&DS 241 nor 242 can be counted toward the major in parallel to ECON 135.
4. One proof-based linear algebra course (MATH 225 or 226) and one real analysis course (MATH 255 or 256).
5. A senior seminar as described in the "Senior requirement" section below. MATH 480 or 481 counts toward the required mathematics courses; an Economic theory seminar counts toward the required economics courses.

A course must be listed with a MATH number to count toward the mathematics requirements—substitutions from other departments are not permitted.

Distinction in the Major To be considered for Distinction in the Major, students must meet minimum grade standards, as specified under "Honors" in The Undergraduate Curriculum, and submit a senior essay in Economics that earns a grade of A or A-. One-term essays may be written in either an Economics department senior seminar or in ECON 491. Two-term senior essays may be written in either an Economics senior

seminar and ECON 492 or in ECON 491 and 492. (The paper must be written in a course or courses taken in the senior year.) For details see Economics. All courses beyond the introductory level in Mathematics and Economics are counted in the computation of grades for Distinction.

Credit/D/Fail Courses taken Credit/D/Fail may not be counted toward the requirements of the major.

SENIOR REQUIREMENT

Students must take either a senior seminar in mathematics, MATH 480 or 481, or an Economic theory seminar, designated as YC ECON: Theory Seminar. A senior essay in Economics is optional.

ADVISING

Students interested in the major should consult both DUSs, and verify with each that their proposed program meets the relevant guidelines.

SUMMARY OF MAJOR REQUIREMENTS

Prerequisites MATH 120; ECON 110 or 115; ECON 111 or 116

Number of courses 12 term courses beyond prerequisites (incl senior req)

Distribution of courses 7 economic courses above 120 and 5 math courses above 200, excluding MATH 470

Specific courses required ECON 125 or 121; ECON 126 or 122; ECON 135; ECON 136; ECON 350 or 417 or 433; ECON 351 or 425; MATH 225 or MATH 226; MATH 255 or MATH 256, as specified

Substitution permitted S&DS 241 and 242 for ECON 135, with permission of Economics DUS

Senior requirement Senior sem in math (MATH 480 or MATH 481) or an ECON theory seminar; optional senior essay in economics