

Bachelor of Science in Economics

The Bachelor of Science in Economics is an alternative to the Bachelor of Arts, designed to include a more extensive natural science curriculum that better prepares students for employment in technical and research jobs, and for graduate study in economics and related disciplines.

Students interested in areas of economics that heavily utilize mathematics, statistics, data science, and computation have the opportunity to develop breadth and depth in fields that complement their areas of interest within economics. To accomplish this goal, the curriculum for the Bachelor of Science in Economics incorporates substantial emphasis on mathematics, statistics, and computer science courses.

A student may not earn both the Bachelor of Arts with a major in Economics and the Bachelor of Science in Economics.

A total of 120 semester hours is required. Thirty-nine hours must be in upper-division courses. At least 60 hours, including 24 hours of upper-division coursework, must be completed in residence at the University. Provided these residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to 16 semester hours of classroom and/or correspondence coursework may be taken on a pass/fail basis; coursework taken on a pass/fail basis may count toward electives.

Students in this degree program may pursue any of the honors programs available to Bachelor of Arts, Plan I, students. These programs are described in the section Liberal Arts Honors Programs, Plan I. All students must complete the University's Core Curriculum. All students also must complete the following Skills and Experience flags required by the College of Liberal Arts:

- a. Writing: Two flagged courses beyond Rhetoric and Writing 306 or its equivalent. One must be upper-division.
- b. Quantitative Reasoning: one flagged course
- c. Global Cultures: one flagged course
- d. Cultural Diversity in the United States: one flagged course
- e. Ethics: one flagged course
- f. Independent Inquiry: one flagged course

Courses that may be used to fulfill core curriculum and flag requirements are identified in the Course Schedule. Courses that fulfill core curriculum and flag requirements may be used simultaneously to fulfill other requirements, unless otherwise specified. Students may not earn the cultural diversity and global cultures flags from the same course.

Generally, flag requirements must be satisfied with in-residence courses. See an Economics advisor for details. A list of approved courses satisfying the University core curriculum and Liberal Arts requirements is available on the College of Liberal Arts web site. The specific requirements for the Bachelor of Science in Economics consist of prescribed coursework, coursework in the major, and electives. Only in the following cases may a single course be counted toward more than one requirement:

- a. A course that fulfills a core curriculum requirement may also be counted toward any specific requirement of the Bachelor of Science in Economics unless otherwise stated.
- b. A course that fulfills another requirement may also be used to fulfill a flag requirement.

- c. Up to three hours of coursework counted toward prescribed work or toward the core curriculum may also be counted toward a minor or certificate. Completion of a transcript-recognized minor or certificate is not a requirement of the Bachelor of Science in Economics, but may be earned.

The student must fulfill the University's General Requirements for graduation and the requirements given in the sections Special Requirements of the College of Liberal Arts and Applicability of Certain Courses. University requirements for graduation include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded. The student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward major requirements. More information about grades and the grade point average is given in the General Information Catalog.

Prescribed Work

- a. Humanities and writing: English 316L, 316M, 316N, or 316P. Two courses beyond Rhetoric and Writing 306 that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the Course Schedule. Courses that carry a writing flag may be used simultaneously to fulfill the core curriculum and the major.
- b. Foreign language and culture: Students must attain beginning proficiency by completing one of the following options:
 - i. Second-semester-level proficiency, or the equivalent, in a foreign language.
 - ii. First-semester-level proficiency, or the equivalent, in a foreign language and a three-hour course in the culture of the same language area.
 - iii. Two three-hour foreign culture courses chosen from the same category. Courses taken to attain the required level of proficiency in a foreign language are not electives and may not be taken on a pass/fail basis.
- c. Social science: Three semester credit hours in a social science field, in addition to the course taken to satisfy the Social and Behavioral Science requirement of the core curriculum. This course may count toward the major.
- d. Cultural expression, human experience, and thought: Three semester hours of approved coursework. This course must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement. A course counted toward the foreign language and culture requirement may not also be counted toward this requirement. A list of approved courses is available on the College of Liberal Arts web site.
- e. Mathematics, statistics, computer science, and advanced applications: At least 24 semester hours of coursework as outlined below.
 - i. One of the following combinations of courses is required, with a grade of at least a C- in each course: Mathematics 408K and 408L, Mathematics 408C and 408D, Mathematics 408C and 408L, Mathematics 408Q and 408L, Mathematics 408N and 408S, Mathematics 408K and 408S, Mathematics 408C and 408S, Mathematics 408Q and 408S, or Mathematics 408N and 408L. Mathematics 408K (or other accepted first semester of calculus) satisfies the University core and the Liberal Arts mathematics requirement. Mathematics 403K and 403L (and transfer equivalents) may not be substituted for required mathematics courses.

- ii. Economics 329 or an approved substitute. See the Economics advisors for a list of approved substitutes. This course counts toward the major.
- iii. Either five or six of the following, totaling 16 to 21 hours: Computer Science 303E and 313E, or 312; Computer Science 323E or Statistics and Data Sciences 335 or Mathematics 348; Computer Science 327E; Electrical and Computer Engineering 422C; Mathematics 340L or 341; Mathematics 368K; Mathematics 427L; Mathematics 427J or 427K; Mathematics 372K or 374M; Mathematics 362K; Mathematics 378P; Mathematics 362M or Electrical and Computer Engineering 351K; Mathematics 361K or 365C; Mathematics 365D; Mathematics 358K or 378K; Mathematics 378N; Statistics and Data Sciences 323; Statistics and Data Sciences 353; Statistics and Data Sciences 374E; Statistics and Data Sciences 322E; Economics 342L; courses on a substitute list (see the Economics Advisors). See the Economics Advisors for information about clusters of complementary courses within this list. Courses satisfying 5c of prescribed work may be used to satisfy university core requirements, but they may not count toward major requirements.

Major Requirements

At least 32 semester hours of Economics are required, consisting of Economics 304K, 304L, 420S, 320L, 329, 341K or 441K, and 101S, and at least 12 additional hours of upper-division coursework. At least 9 of the additional hours of upper-division coursework must be in courses for which a grade of at least C- in Economics 420K or Economics 420S is a prerequisite, and at least 6 hours must be chosen from Economics 342L, 350L, 354K, 336M, or from a list of advanced Economics courses can be obtained from the Economics advisors. Economics 420S, 320L, 329, and 341K or 441K must be completed in residence. A student must take Economics 420S at least two semesters prior to completion of the degree. A student in the Bachelor of Science in Economics program must earn a grade of at least C- in each course counted toward fulfillment of the major requirements, except Economics 329, in which a grade of at least C is required. Economics 329 with a grade of at least C is a prerequisite for Economics 420S. A minimum grade point average of at least 2.00 in all courses taken at the University and counted toward the major is required. A course satisfying the major requirements may not also satisfy the requirement for prescribed work in Mathematics, statistics, computer science, and advanced applications (5c above). A course satisfying the major requirements may satisfy university core and Liberal Arts requirements, including requirements for flagged courses. No student may register for more than 11 semester hours of economics in any one semester without approval of an undergraduate advisor in the Department of Economics.

Electives

In addition to the core curriculum, prescribed work, minor requirements, and major requirements, the student must complete enough elective coursework to provide the 120 semester hours required for the degree.

These 120 hours may include no more than 12 hours of conference courses and internship courses combined as described in Conference Courses and Internship Courses; 12 hours of Bible courses; nine hours of designated coursework in air force science, military science, or naval science, except for students enrolled in the Military Leadership minor; 16 hours completed on a pass/fail basis; 39 hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences (including Economics); and 36 hours in any other single college or school of the University. Mathematics courses at the level of college algebra may not count toward elective hours.