

## THE FIELD

Working at the intersection between people, data, and technologies, informatics finds ways to use computing and data to solve problems in a wide range of human endeavors. Computing is everywhere, with application areas in fields as diverse as economics, health, advertising, communication, biology, finance, and environmental science. Informatics applies the “computational lens” to these fields to help predict the spread of diseases, discover new treatments, understand social phenomena, analyze business trends, and more.

*There is no minor available in informatics.*

## THE MAJOR

The College of Information and Computer Sciences at UMass Amherst offers a bachelor of science (BS) degree in informatics. The major combines a strong grounding in computing with a program of study in another field. Informatics majors benefit from an interdisciplinary curriculum drawing on computer science, information science, and data science, in addition to gaining knowledge in another domain by choosing a concentration. Data science is currently the only concentration offered, and it is designed to teach students about ways to analyze, visualize, and reason about enormous quantities of information. A health and life sciences concentration that focuses on the applications of computing to healthcare is under review for approval in the 2021-2022 academic year. More concentration options are expected to be added as the program continues to expand.

## CURRICULUM

The BS informatics curriculum promotes the development of the following competencies: analytical thinking, logical reasoning, problem solving, and the explanation of complex information. Requirements for the major include nine core courses within four broad areas: two introductory courses on “big ideas” and mathematical foundations, two courses on human factors and societal aspects, two courses on statistics and data analysis, and three courses on problem solving and programming. One of the core courses also satisfies the Integrative Experience (IE) requirement of the university. Upon completing the core courses, students take three additional courses in the chosen concentration, and four electives from a pre-approved list.

## ADMISSION TO THE MAJOR

Some first-year students and transfers are admitted directly into the informatics major when they apply to the university.

Once on campus, students in exploratory tracks or in other majors can apply to enter the informatics program by deadlines posted on the college’s website. To be eligible for consideration, applicants must have a cumulative GPA of 2.5 at the time of application, and they must have earned a C or better (or equivalent) in COMPSCI 121 and INFO 150. Re-applications are welcome. For more information on how to get into the major after admission to the university, visit: [cics.umass.edu/ugrad-education/joining-informatics-major](https://cics.umass.edu/ugrad-education/joining-informatics-major).

## HONORS

Many informatics students are in Commonwealth Honors College and a number of informatics courses offer honors components. Students in the honors track can gain research experience by completing an honors thesis or project under the supervision of a faculty member. For more information, email: [askcshonors@cs.umass.edu](mailto:askcshonors@cs.umass.edu).

## STUDY ABROAD

Majors may choose to study abroad if it supports their academic and career goals. Students can choose from a pre-approved study abroad program specially designed for informatics majors or complete the college’s Transfer Credit Evaluation process for approval to participate in another program. For more information, students should contact the International Programs Office (413-545-2710, [umass.edu/ipo](https://umass.edu/ipo)).

## **CAREER OPPORTUNITIES**

Students graduating with a BS in informatics are well prepared to help any organization that uses computing and data in critical ways in their products and operations. Many of our graduates have started their professional careers as data scientists or analysts in a wide variety of sectors—from finance and healthcare to insurance and defense. Informatics graduates are highly sought after by the many businesses and nonprofits who use data to better respond to their customers or improve the social condition.

The informatics major also provides strong preparation for graduate studies in areas such as health informatics, biostatistics, information science, data analytics, and business intelligence.

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