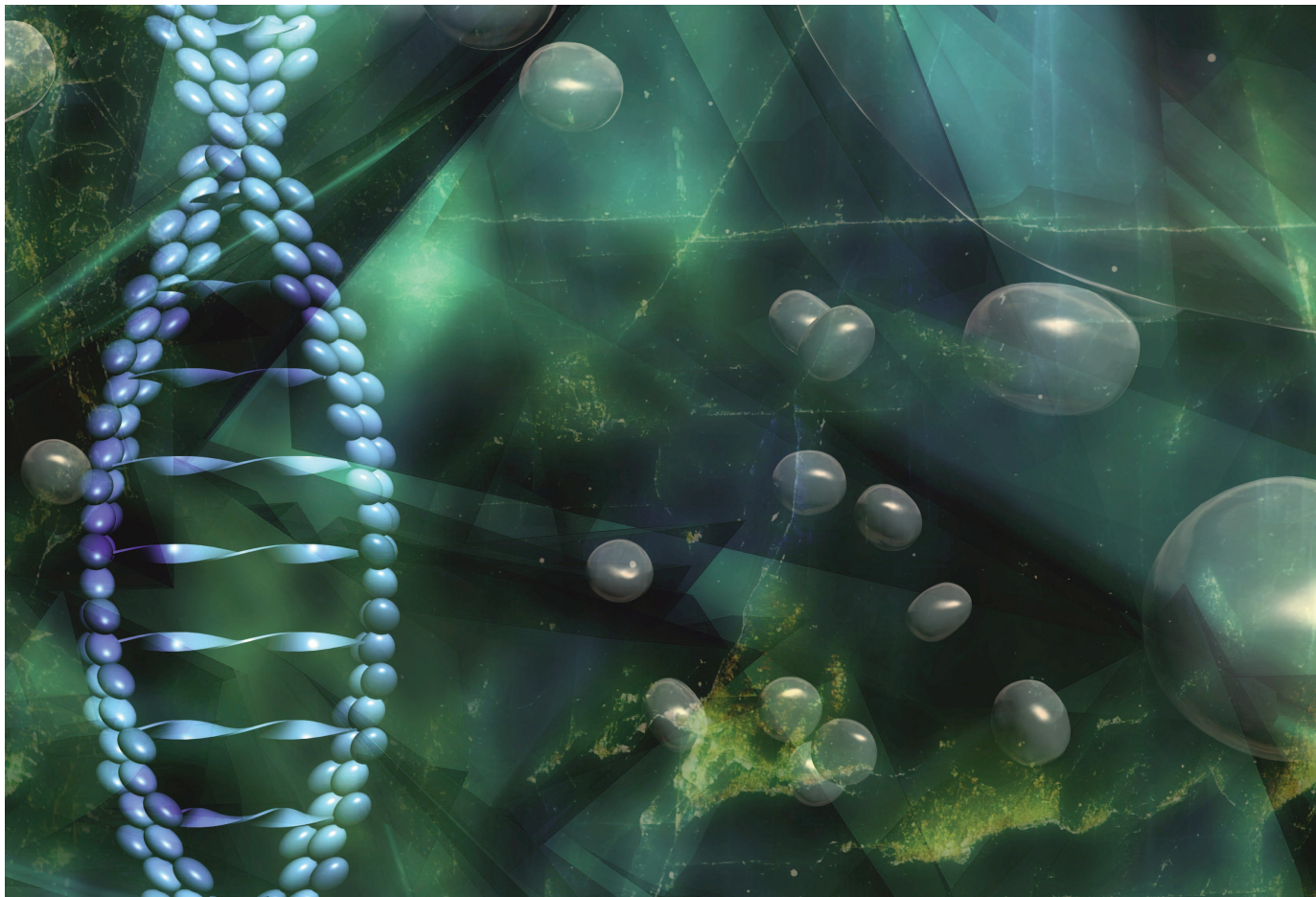


The Bachelor of Science in Bioinformatics



Department of Computer Science
College of Computing Sciences

New Jersey Institute of Technology

WHY STUDY BIOINFORMATICS?

Bioinformatics is a new and exciting field that stands at the intersection of biology, computer science and information technology. Computation is doing for biology today what the microscope did four centuries ago—allowing scientists to peer deeper into the fundamental processes of life and to extract, and ultimately to utilize tremendous quantities of information for medical and other practical purposes. Decoding the human genome, for example, which contains three billion “letters” organized into 25,000 genes, would have been impossible without the contribution of this young field. The next steps—understanding the human genome and developing its future applications—will also require bioinformatics.

WHY STUDY BIOINFORMATICS AT NJIT?

NJIT is one of the first schools in the region to offer a bioinformatics degree. It has an exceptional concentration of faculty in this field, all active researchers who involve students in their work. As a science and technology university, NJIT also offers many possibilities for combining the study of bioinformatics with study of a related area, such as biomedical engineering or biology. The university works to place bioinformatics students in coop and internship programs in one of the many biotechnology, pharmaceutical and medical companies in the New York/ New Jersey area.

WHAT DOES THE PROGRAM COVER?

New Jersey Institute of Technology’s new Bachelor’s Degree in Bioinformatics was designed to address the growing need for professionals with an educational background that blends biology with computer science. This combination of skills is needed both in the pharmaceutical and biotechnology industries and in biomedical research. Work in the life sciences increasingly involves the design, construction and use of computer programs, from the very simple to the very complex. These programs may, for example, record or analyze data or present results visually. The BS in Bioinformatics teaches you to be comfortable both in the concepts of biology and in the language of computing.

WHAT WILL YOU LEARN?

You will take a mix of courses, including bioinformatics, biology, computing, chemistry and mathematics. You will study the design, construction and use of software tools that model living things. You will learn to search databases of biological, genetic and medical information that are available on the web. You will learn to design and maintain biodatabases and to mine them to detect underlying patterns and relationships across the vast web of life. You will acquire expertise in the use of software tools that are used to detect cancer, discover new drugs and diagnose disease.

WHAT CAREER OPPORTUNITIES EXIST?

A BS in Bioinformatics prepares you to work in a biotechnology, pharmaceutical, medical research or medical institution. New Jersey is home to the largest concentration of pharmaceutical laboratories in the United States, and the New York metropolitan area has the largest number of medical institutions. A BS in Bioinformatics is an ideal foundation for professional studies in medicine or law or for graduate studies.

WHAT CAREER TRACKERS SAY ...

Industry’s demand for scientists with skills in bioinformatics far exceeds the supply of qualified specialists in the field.

Science Magazine
recruit.sciencemag.org

Because of the need for a background in biology and computer science, bioinformatics specialists can expect to receive salaries that exceed those of individuals in comparable computer careers.

Madison Magazine
madisonmagazine.com

The fusion of biology and computer science is the hottest of the hot in science right now, and it’s going to heat up even more.

Smart Money Magazine
smartmoney.com

IS FINANCIAL AID AVAILABLE?

The Office of Student Financial Aid Services helps to provide NJIT students with every opportunity to obtain funding to support their educational costs. The university encourages all students to apply for financial aid.

www.njit.edu/admissions/financialaid/index.php

NJIT undergraduates can also offset educational costs by participating in the Cooperative Education Program, which provides a student with the opportunity to gain practical work experience in a professional environment. A co-op student works on a full-time or part-time basis for a company that has agreed to hire, train, and pay the student during a specific co-op work cycle. www.njit.edu/admissions/undergrad/coop.php

NJIT AT A GLANCE

- New Jersey’s Science and Technology University, founded in 1881.
- Enrollment of just over 8,200 undergraduate and graduate students in six schools allows small-college intimacy with big university resources.
- 45-acre campus with a recently-completed \$83-million construction program featuring a new Campus Center.
- A *U.S. News and World Report* “Top National University” and a *Princeton Review* “Best College.”

FOR FURTHER INFORMATION, CONTACT:

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cs.njit.edu/academics/undergraduate/bsbnfo.php

TO APPLY, CONTACT:

<http://www.njit.edu/admissions/undergraduate/applying/index.php>