

NJIT

New Jersey's Science &
Technology University

THE EDGE IN KNOWLEDGE

The Bachelor of Science in Biophysics



Department of Physics

College of Science and Liberal Arts

New Jersey Institute of Technology

WHY STUDY BIOPHYSICS?

Biophysics is a new, exciting interdisciplinary area with expanding career opportunities. The past 20 years have witnessed a revolution in biophysical sciences.

Biology studies life in its variety and complexity. It describes how organisms go about getting food, communicating, sensing the environment, and reproducing. On the other hand, physics looks for mathematical laws of nature and makes detailed predictions about the forces that drive idealized systems. Spanning the distance between the complexity of life and the simplicity of physical laws is the challenge of biophysics. Looking for the patterns in life and analyzing them with math and physics is a powerful way to gain insights. Biophysics looks for principles that describe patterns. If the principles are powerful, they make detailed predictions that can be tested.

WHY STUDY TECHNOLOGY EDUCATION AT NJIT?

The Biophysics faculty at NJIT, led by Professors Camelia Prodan and Gordon Thomas, are committed to helping students succeed in their course work and launch their careers – and even enjoy the time together. Biophysics majors can work part time with faculty, and summer research experiences can be particularly rewarding. In some projects our researchers work hand in hand with physicians and medical scientists at the University of Medicine and Dentistry of New Jersey, a short walk from campus.

WHAT DOES THE PROGRAM COVER?

The B.S. in Biophysics provides excellent training for careers in medicine and related fields. A large part of the MCAT and similar exams are devoted to this interdisciplinary area because it is so important. The biophysics courses use physics as a foundation and integrate biomedical science such as medical devices, cellular electronics, genetic engineering, microbiology, molecular biology and radiology.

WHAT WILL I LEARN?

You will learn and apply the simple, basic principles that allow us to understand all parts of biomedical science.

WHAT KINDS OF RESEARCH DO BIOPHYSICISTS PERFORM AT NJIT?

Our faculty and researchers invent and discover new medicines, microsensors, nanoscale probes of cells, devices to prevent blindness and ways to protect the lives of soldiers.

WHAT EMPLOYMENT OPPORTUNITIES ARE AVAILABLE?

We help our students to get jobs directly from college or to go on to further study as they like. Biophysics offers an excellent preparation for medical school exams and for professional fields such as medicine, patent law, medical technology, secondary school teaching, and medical physics as traditionally defined in radiology and imaging, as well as for graduate studies in such specialties as biotechnology or nanobiology.

IS FINANCIAL AID AVAILABLE?

The physics department has a scholarship, the biophysics faculty have paying research positions and the Office of Student Financial Aid Services helps with other support. We encourage all students to apply for financial aid. www.njit.edu/admissions/financialaid/index.php

Also, the Cooperative Education Program provides students 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. <http://www.njit.edu/beyond/coopsandinternships.php>

NJIT AT A GLANCE

- New Jersey's Science and Technology University, founded in 1881.
- Enrollment of nearly 9,000 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."
- Ranks 4th in the nation in diversity with students from more than 100 countries.
- 14:1 faculty-student ratio.

FOR FURTHER INFORMATION

Professor Gordon Thomas, program co-director
973-596-3558
gordon.a.thomas@njit.edu

Professor N.M. Ravindra, chair of physics
973-596-3278
n.m.ravindra@njit.edu

TO APPLY

Office of Undergraduate Admissions, 1-800-925-NJIT
Or apply on line:
www.njit.edu/admissions/undergraduate/applying/index.php