

Biological Sciences

at Rutgers–Newark

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www.newark.rutgers.edu

With many experts hailing the 21st century as the Century of Biology, no field is more filled with potential and the excitement of groundbreaking discoveries than the biological sciences. From the unraveling of the human genome to using plants in toxic cleanup efforts, the biological sciences hold enormous promise to better human life and to protect our planet. This air of excitement and potential is palpable at Rutgers–Newark's Department of Biological Sciences, a truly outstanding place to pursue your interest in the life sciences. The department combines top faculty, excellent facilities, and hands-on research opportunities for undergraduates.

A Program with Depth

With over 20 core faculty members who participate in the undergraduate program, the department offers a strong foundation in the fundamentals with numerous opportunities for specialized concentrations as you advance. While the faculty are all active researchers, they are committed teachers (teaching assistants only manage labs), and as a prospective major you will have a personal faculty adviser from your sophomore year on to help you mold your program and monitor your progress.

Excellent Facilities

The department's facilities are top-notch, and include electron microscopes, a live cell imager, an animal research facility, and a greenhouse. In addition, the department is a joint enterprise with the adjacent New Jersey Institute of Technology (NJIT), making that school's excellent facilities, especially for computational biology, available to students.



For students planning medical and health care careers, the department's affiliation with the nearby University of Medicine and Dentistry of New Jersey (UMDNJ) opens further opportunities, such as a B.A./ M.D. program for entering first-year students.

Life Sciences Center This new \$18 million facility at Rutgers–Newark provides extensive, cutting-edge research laboratories dedicated to undergraduates. The building is also home to the cell biology wing of the department, which serves as the driving force behind the program in cellular biodynamics.

Research and Internships

Whether you are hoping to launch a career directly out of college or are thinking of graduate school, the opportunity for hands-on research and internship experience can make all the difference in deciding the best career path, and in standing out from the crowd at a job interview or on a graduate school application. Current undergraduates may participate in faculty research projects that delve into such topics as neuroimmunology,



Whether you live on campus or commute, you will find Rutgers–Newark is so much more than attending classes and studying. You can find your niche and make lifelong friends when you join any of the scores of clubs on campus. If staying fit and reducing stress is your thing, or if you're just a super spectator, the Golden Dome Athletic Center will be your favorite spot on campus, with its pool, fitness center, varsity teams, and more. Many students live on campus, with first-year students living in Woodward Hall. There is always something happening, from open mike night to the annual Thunderdome floor competition. And when you need to refuel, Woodward is attached to the main residence dining facility, Stonsby Commons.

Home to more than 35,000 students, Newark is a college town. Rutgers–Newark's location in a major metropolitan center is one of the university's great strengths. The city is home to world-class museums, the New Jersey Performing Arts Center, fine galleries and restaurants, University Science Park, leading corporations, two law schools, a medical school, an engineering college, a school of architecture, major hospitals, and a professional baseball stadium. And, with Penn Station–Newark within walking distance of campus, the unparalleled resources of New York City are just a train stop away.

molecular cell biology, the biology of pollution, and the physiological ecology of desert plants. Students interested in studying tropical biology also have opportunities to participate in field courses. Past locations have included trips to Puerto Rico and to Mexico.

The Details

The Department of Biological Sciences offers three majors: biology, botany, and zoology. Two additional majors—in allied health technologies and clinical lab sciences—are offered jointly with UMDNJ. All biological sciences students gain exposure to the broad and differing conceptual approaches to the life sciences: organismal grouping, functional mechanisms, molecular and cellular structure, and organism-environment interaction. They take both animal and plant systems labs and at least one field course.

Then, depending on your choice of major, you can select from upper-level courses in many specializations such as, but not limited to, the following:

- **Biology (B.A. or B.S.)** Biochemistry, biotechnology, food science and nutrition, genetics, marine biology, microbiology, or toxicology.
- **Botany (B.A.)** Agriculture, conservation, ecology, environmental quality, forestry, horticulture, limnology, natural resource management, pharmaceuticals, or plant pathology.
- **Zoology (B.A.)** Many of the above subjects and also animal ecology, endangered species, or wildlife management.
- **Allied Health Technologies (B.S.) and Clinical Lab Sciences (B.S.)** Cytotechnology, diagnostic medical sonography, nuclear medicine technology, respiratory care, toxicology, or vascular technology.

Careers Galore

Putting Your Degree to Work

Options for bachelor's degree holders range from careers in environmental consulting, botany, and resource management to a variety of lab technician positions in hospitals, government, industry, and academic settings. If you are good at communicating, consider a career in teaching. You can combine your science major with a teacher certification program at Rutgers–Newark. Whatever your career preferences, the Rutgers Career Services staff can help you enter the job market with professionalism and confidence. Services include choosing a career, interview skill development, résumé writing, access to an alumni mentoring network, and career fairs.

Setting Your Sights on Grad School

The biological sciences are an excellent preparation for medical, dental, graduate or veterinary school. The Rutgers faculty are experienced at helping you mold a well-rounded academic program, including internship and research experiences, that will prepare you to pursue an advanced degree. In addition, exceptional life science graduate programs are offered at Rutgers–Newark, so you may consider applying to your alma mater.

Master's and doctoral programs in any life science specialty can lead to a tremendous variety of careers in laboratory and field research. Alternatively, there are many nonresearch options to consider. Combining your undergraduate science degree with law school, urban planning and policy development, or journalism can lead to a career as an environmental lawyer, a smart-growth planner, or a science writer. Or with a master's or doctorate in a scientific field, you could become a naturalist, museum curator, horticulturalist, or wildlife manager.

To obtain further academic information, contact:

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<http://newarkbiosci.rutgers.edu>

To obtain further admissions information, contact:

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