



## The School of Science

### BACHELOR OF SCIENCE IN BIOLOGY with an optional Concentration in Molecular Cell Physiology

Monmouth University's Bachelor of Science in Biology curriculum is designed to give students a basic, diversified background in the life sciences and prepare them for graduate work, professional school (medicine, dentistry, podiatry, chiropractic, etc.), laboratory work in government and industry, and careers in teaching. The biology curriculum is further designed to foster the development of critical thinking and scientific perspective. The department maintains an academic environment in which the potential of all biology students can be realized.

The aim of the biology program at Monmouth University is to provide students with breadth of knowledge in the biological sciences while equipping them with the technology, experience, and problem-solving skills to meet the challenges they will face after graduation. The Department of Biology is housed in the University's School of Science, Technology, and Engineering. Students may elect to concentrate their major in molecular cell physiology, while students interested in marine or environmental biology can elect to enroll in the B.S. Marine and Environmental Biology and Policy. All biology students take a common first year core of courses with options available starting in the second year.

New equipment acquisitions and specially designed lab exercises have made the molecular cell biology lab a capstone experience in the curriculum and begin to prepare students for the multitude of applications associated with biotechnology.

#### The Monmouth Advantage

Although the department has grown over the years, lecture and lab sizes remain small. Faculty members, not graduate assistants, teach, lecture, and conduct laboratories. Faculty specialties include plant sciences, marine biology, environmental science, computer modeling and simulation, molecular biology and genetics, developmental and reproductive biology, microbiology, neuroscience, biochemistry and cell biology, human anatomy and physiology, and public health. Research, internships, and cooperative education experiences are available in most of these areas.

Monmouth's location offers additional advantages to biology majors interested in marine biology and environmental science. The curriculum takes full advantage of nearby natural classrooms: the beaches of the Atlantic Ocean are only a mile from campus and New York Harbor's "urban estuary" is just 20 minutes away. Opportunities to explore the unique ecosystems of coastal New Jersey are abundant in field courses covering ecology, marine biology, and biological oceanography.

#### Career Preparation

Graduates of Monmouth University's biology program enjoy a spectrum of career choices from medicine and dentistry, to teaching and research, to environmental monitoring

and compliance. A variety of entry-level positions in biotechnology, pharmaceuticals, and environmental areas are available to baccalaureate graduates thanks, in part, to the level of hands-on, real-world experience built into the curriculum.

Opportunities for faculty-directed undergraduate research are important components to the programs. Biology majors have co-authored research publications with our faculty, and they have enjoyed award-winning success in presenting their research at regional, national, and international scientific conferences for ten consecutive years.

Monmouth's biology program also prepares students to continue their education pursuing graduate degrees for more advanced positions in research and development or careers in academia and related fields such as bioinformatics, forensics, and law. For the student who plans a further course of study in medicine, dentistry, veterinary science, or other health professions, biology provides the necessary foundation and offers relevant elective courses and special experiential programs to strengthen the student's application for professional school. A double major with education supports a career teaching in middle school and high school.

### valuable online resources

- Apply Online
- Curriculum Charts
- Department Faculty Members
- [www.monmouth.edu/biology](http://www.monmouth.edu/biology)

**For complete information on all undergraduate programs within the School of Science, please visit [www.monmouth.edu/science](http://www.monmouth.edu/science).**