

# THE SCHOOL OF SCIENCE

Interim Dean: Joseph Coyle, Ph.D.

Associate Dean: Catherine N. Duckett, Ph.D.

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Monmouth University's School of Science is a community of teacher-scholars actively fostering learning, quantitative reasoning, and scientific inquiry among its majors and among all students. A goal of the School is to lead in the innovative development and delivery of curricula and in providing creative solutions to problems that include significant technical components. Educational programs provide a student-centered learning environment that builds a foundation for lifelong learning, critical thinking, and collaborative, technical problem solving. Faculty scholarship interests include: original basic and applied research in a range of disciplines and scholarly work on science education and pedagogy. Undergraduate and graduate students are encouraged to participate in student-faculty collaborative research projects leading to the acquisition and dissemination of new knowledge in the sciences.

## The School of Science offers:

### Master's Degree Programs

- Computer Science (<https://catalog.monmouth.edu/graduate-catalog/science/computer-science-software-engineering/#programstext>),
- Data Science (<https://catalog.monmouth.edu/graduate-catalog/science/computer-science-software-engineering/ms-data-science/>),
- Information Systems (<https://catalog.monmouth.edu/graduate-catalog/science/computer-science-software-engineering/#programstext>), and
- Software Engineering (<https://catalog.monmouth.edu/graduate-catalog/science/computer-science-software-engineering/#programstext>).

### Undergraduate Degree Programs

- Biology (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/>),
- Chemistry (<https://catalog.monmouth.edu/undergraduate-catalog/science/chemistry-physics/>),
- Computer Science (<https://catalog.monmouth.edu/undergraduate-catalog/science/computer-science-software-engineering/>),
- Marine and Environmental Biology and Policy (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/marine-environmental-biology-policy-bs/>),
- Mathematics (<https://catalog.monmouth.edu/undergraduate-catalog/science/mathematics/>),
- Medical Laboratory Science (<https://catalog.monmouth.edu/undergraduate-catalog/science/medical-laboratory-sciences-clinical-laboratory-sciences/>),
- Clinical Laboratory Sciences (<https://catalog.monmouth.edu/undergraduate-catalog/science/medical-laboratory-sciences-clinical-laboratory-sciences/>),
- Software Engineering (<https://catalog.monmouth.edu/undergraduate-catalog/science/computer-science-software-engineering/>)

### Undergraduate Certificates

- Information Technology (<https://catalog.monmouth.edu/undergraduate-catalog/science/computer-science-software-engineering/information-technology-certificate/>)

### Minors

- Biology (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/biology-minor/>),
- Chemistry (<https://catalog.monmouth.edu/undergraduate-catalog/science/chemistry-physics/chemistry-minor/>),
- Computer Science (<https://catalog.monmouth.edu/undergraduate-catalog/science/computer-science-software-engineering/computer-science-minor/>),
- Environmental Biology (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/environmental-biology-minor/>),
- Global Sustainability (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/global-sustainability-minor/>),
- Information Technology (<https://catalog.monmouth.edu/undergraduate-catalog/science/computer-science-software-engineering/information-technology-minor/>),
- Mathematics (<https://catalog.monmouth.edu/undergraduate-catalog/science/mathematics/mathematics-minor/>),
- Statistics (<https://catalog.monmouth.edu/undergraduate-catalog/science/mathematics/statistics-minor/>),
- Physics (<https://catalog.monmouth.edu/undergraduate-catalog/science/physics/physics-minor/>)

### Concentrations

- Molecular Cell Physiology (<https://catalog.monmouth.edu/undergraduate-catalog/science/biology/biology-bs-concentration-molecular-cell-physiology/>),
- Advanced Chemistry (<https://catalog.monmouth.edu/undergraduate-catalog/science/chemistry-physics/chemistry-bs-concentration-advanced-chemistry-acs-approved/>),
- Medical Laboratory Science (<https://catalog.monmouth.edu/undergraduate-catalog/science/medical-laboratory-sciences-clinical-laboratory-sciences/clinical-laboratory-sciences-bs-concentration-medical-laboratory-science/>),
- Statistics (<https://catalog.monmouth.edu/undergraduate-catalog/science/mathematics/mathematics-bs-concentration-statistics/>)

The undergraduate Bachelor of Science in Computer Science program is accredited by the Computing Accreditation Commission of ABET (<http://www.abet.org>). The undergraduate Bachelor of Science in Software Engineering program is accredited by the Engineering Accreditation Commission of ABET (<http://www.abet.org>). The Chemistry and Physics Department is approved by the American Chemical Society (ACS). All qualified advanced chemistry, biochemistry, and chemical physics degree recipients may receive ACS certification of their degrees. All programs of study are directed toward preparing students for working and living in a multicultural, technologically complex, global environment.

Studies in the School of Science provide students with a solid background in the technical aspects of their chosen scientific or engineering field, sufficient to prepare them for further study in graduate or professional programs, or to compete for access to employment opportunities in industry or education. Core courses for the non-major stress the nature of the scientific enterprise and the benefits and risks that scientific advances present to society rather than the digestion of

large doses of content from the discipline. Both major and non-major courses emphasize the importance of critical thinking and cooperative learning, clarify working to the scientific method in posing and answering questions concerning the natural world, and explore the nature of human problems for which technology may provide solutions.