Developments in the field of computing, such as the World Wide Web and wireless networks, have completely changed the way we live. Other advances—like the mapping of the human genome—would not have been possible without collaboration between computer scientists and biologists. Future innovations will be made by people who have the knowledge of computation needed to develop the techniques to solve problems in a variety of areas. Our Bachelor of Science in Computer Science (BSCS) with a Concentration in Advanced Computing and our Bachelor of Science in Computer Science (BSCS) with a Concentration in Applied Computing programs will prepare our graduates to participate in these future innovations.

Programs in our Department of Computer Science and Software Engineering offer integrated curricula that prepare students for graduate studies or for immediate employment. The concentration in Advanced Computing is recommended for students who plan to specialize in scientific computing or who want to consider pursuing a graduate degree in computer science. The concentration in Applied Computing gives students the flexibility to earn a minor degree in a field other than science or mathematics, such as business administration, criminal justice, communication, or political science.

Employment opportunities are many and varied since information management, system design, product development, and decision support are critical elements of nearly every business, including high technology companies, financial institutions, government services, healthcare, and educational institutions. Additionally, graduates who go on to another profession (e.g., medicine, law, or business) have the unique skills required to apply computing techniques there.

The Bachelor of Science in Computer Science with a Concentration in Advanced Computing is accredited by ABET, http://www.abet.org.

The Monmouth Advantage

The computer science programs at Monmouth provide a good balance between theory and practice. Students are given a firm foundation in the fundamentals of computing so that they can adapt to future developments in the field. Yet they are given enough practical skills to qualify for employment immediately after graduation. Currently, all of our graduates are receiving multiple job offers.

All students at Monmouth University must participate in learning both inside and outside of the classroom. A computer science major can take courses at Monmouth with an experiential component or find an internship with local industry. Students not only gain practical experience, but they also obtain insights into the career paths that are available after graduation.

Well-qualified students who are participating in the Advanced Computing concentration can choose to enter a five-year combined undergraduate/graduate program. This allows students to obtain a master’s degree with only one additional year of full-time study. Alternatively, those students in the traditional four-year program often decide to continue at Monmouth on a part-time basis, while working, and obtain an MS degree.

Facilities

The department’s computing facilities include a Linux lab, a MAC lab, and a networking lab. These laboratories are used for classes and are also available for student research projects. Current opportunities for student research include topics in artificial intelligence, natural language processing, advanced search techniques, network modeling and simulation, databases, data mining, Web programming, and information assurance. Students also have the opportunity to work on homeland security and first responder projects at the University’s Rapid Response Institute.

The Bachelor of Science in Computer Science program prepares graduates to achieve the following objectives within a few years after graduating:

1. Work as effective team members or team leaders in the development of computer and software systems covering a wide range of business, educational, and scientific applications.
2. Enter professional careers in positions including, computer programmer, software tester, systems analyst, network administrator, software systems designer, database manager, software security analyst, game developer and software applications developer.
3. Undertake graduate studies and develop the knowledge and expertise to complete advanced studies or do research in computer science, engineering, or other scientific fields.*
4. Work in teams, communicating effectively, and meeting the social and ethical responsibilities of their profession.
5. Explore, synthesize, and implement ideas in their areas of interest and activity.
6. Adapt to new technologies and methodologies with the skills required to react to a changing world.

*This objective applies only to the BSCS with a Concentration in Advanced Computing program.

valuable online resources

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• www.monmouth.edu/csse

For complete information on all undergraduate programs within the School of Science, please visit www.monmouth.edu/science.

FOR MORE INFORMATION, CALL THE OFFICE OF UNDERGRADUATE ADMISSION AT 732-571-3456, OR VISIT WWW.MONMOUTH.EDU/INQUIRE.