Computer Engineering

Shepherd
UNIVERSITY

About the Major

Computing technology is moving more rapidly than ever before. **The computer engineering degree is a multidisciplinary program of study that promotes the integration of computer hardware, software, interfacing, and design through the computer science and engineering curriculum.** Computer engineering majors explore the design and analysis of modern computing systems. The major involves the design and development of future computing systems and the study of the theory and techniques used in designing hardware and software.

This program provides students with the knowledge to design and build computer systems that meet a wide range of information processing requirements. The course of study includes hardware design and software systems, theory and applications of computers, mathematics, physics, chemistry, electrical signals and circuits, logic design, computer architecture, operating systems, database systems, data communications, microprocessors, computer programming, and artificial intelligence.

Careers

The use of computers in our daily lives is increasing dramatically. Hardware and software technology changes rapidly and computer-related companies are always looking for computing professionals. Computer engineering is one of the hottest areas for job opportunities. According to the U.S. Department of Labor, **the need for computer engineers is projected to grow between 10-20 percent by 2020.** At the same time, data from the 2003 National Science Foundation's survey show that **the median salaries for computer engineering graduates are the highest at the bachelor's degree level**, and the National Association of Colleges and Employers (NACE) and CNN Money **repeatedly rank computer engineering among the top three "most lucrative college degrees."**

Get Involved

Security Intrusion and Detection Club
Also known as the "whitehat hacking club," the Security Intrusion and Detection Club was formed mid-2010 and its focus and goals are to learn about cyber security and exploitation as a way to improve club members' ability to make systems more secure.

The Institute of Electrical and Electronic Engineers (IEEE)
The Institute of Electrical and Electronic Engineers is the largest professional association focused on technological innovation and how it can benefit humanity. The Shepherd University branch was started in 2013 and continues to help provide innovation to the campus.

Robotics Club

Shepherd University's Robotics Club is an organization that focuses on the theory and process of creating robots, from the initial design process to the successful building of a functioning bot.

Annual ShepRobo Fest, hosted by Shepherd's Robotics Club.

Points of Pride

- Some computer engineering graduates have pursued graduate studies in computer engineering or related fields at **high-ranked universities**.

- Our graduates from the computer engineering program are currently holding **full-time positions** as system validation engineers, hardware engineers, and logic design engineers at hardware and semiconductor companies.

- Students have the opportunity to conduct research projects under the supervision of faculty advisors and to **present their research results at national conferences**. The research projects are supported by grants such as National Aeronautic and Space Administration (NASA), Shepherd Opportunities to Attract Research Students (SOARS), and National Science Foundation.

Contact

For more information about the program, contact:
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