

# Engineering Science

## Concentrations

- Environmental Engineering
- Systems Engineering

## About the Major

Department of Computer Science, Mathematics, and Engineering at Shepherd University offers engineering science degree programs that targets students with **an aptitude in research in engineering, applied mathematics, and environmental science, and how the research is used in solving industrial problems**. Students will enhance the understanding of the courses through the capstone course, where research project will focus on the application of the coursework to solving problems that arise in the field of applied sciences. Cooperative learning and internship opportunities are also available.

- **Environmental engineering** is one of the fastest growing professions in the United States. The environmental engineering concentration is designed to prepare the student to apply engineering technology, science, and mathematics to environmental issues and problems. Numerous employment opportunities show the need for trained environmental engineers in industry, at state and federal agencies, and with environmental consulting firms.
- **Systems engineering** is an interdisciplinary approach in understanding technical aspects in engineering process and design. System engineering is a key component in systems implementation and management that enables the realization of successful systems. Improving business strategies of integrated systems requires solid foundations in mathematical tools, computer modeling and networking, and operation research.

## Careers

The industry has shown **a high demand of potential employees who are well versed in the applied sciences**.

Graduates of the engineering science degree have the flexibility to enter in the field engineering or the sciences due to the dual exposure in the courses and undergraduate research.

## 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

- Our **proximity to the Washington ,D.C., area provides career opportunities** in a variety of federal agencies and private industries that require employees with a background in engineering science.
- The department has integrated to include faculty in the areas of computer science, mathematics, and engineering, making it easier to **coordinate interdisciplinary coursework.**

## Contact

For more information about the program, contact:

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