MAJOR IN COMPUTER ENGINEERING

From self-driving cars to smart cities, we live in a hyper-connected world. As the smart thinkers behind today's smart devices and systems, computer engineers hold the key to understanding, advancing, and protecting the security of next generation technologies.

A degree in computer engineering from CSU will help you make an impact beyond your computer screen. Affording a big picture view of how technology works, computer engineers look at the interplay between hardware and software to create solutions that benefit society. Have an interest in robotics, artificial intelligence, machine learning, neural networks, or data science? With coursework designed to help you understand, advance, and protect the security of next generation technologies, our professors will arm you with knowledge to drive innovation, whether creating an elegant device that fits in the palm of your hand or optimizing a colossal system to manage and move data.

While our undergraduate program gives you the option to keep your studies broad, you may also specialize in one of the following concentrations:

• Aerospace Systems (http://catalog.colostate.edu/general-catalog/colleges/engineering/electrical-computer/computer-engineering-major-aerospace-systems-concentration/)
• Embedded and IoT Systems (http://catalog.colostate.edu/general-catalog/colleges/engineering/electrical-computer/computer-engineering-major-embedded-iot-systems-concentration/)
• Networks and Data (http://catalog.colostate.edu/general-catalog/colleges/engineering/electrical-computer/computer-engineering-major-networks-data-concentration/)

Career Opportunities

A field of endless possibilities, career paths for computer engineers are largely dependent on personal interests. Computer Engineering alumni hold positions such as software engineer for a tech giant, designer for a start-up company, and program manager for NASA. In addition to being one of the most lucrative college majors, Computer Engineering currently ranks among the top 10 majors in demand for bachelor's, master's, and doctoral degrees according to the National Association of Colleges and Employers. Almost every industry recruits computer engineering graduates, including aerospace, biomedical and healthcare, clean energy, robotics, climate science, manufacturing, agriculture, and transportation.

Learning Objectives

The Computer Engineering program educational objectives are designed and implemented around the following three principal attributes: mastery, innovation, and leadership.

Graduates of the Computer Engineering program will be able to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.