MASTER OF SCIENCE IN COMPUTER ENGINEERING, PLAN A

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 and data networks. The Master of Science in Computer Engineering, Plan A produces professionals capable of applying in-depth knowledge, creativity, and research experience to drive innovation in virtually any field. This program creates professionals with depth and breadth of knowledge to keep pace with a rapidly evolving high-tech field. Offering a highly customizable curriculum, this program specializes in the following focus areas: biomedical engineering, communications and signal processing, computer engineering, controls and robotics, electromagnetics and remote sensing, and lasers and photonics.

Students pursuing the Plan A degree complete a research-orientated plan of study involving a thesis and coursework. Students interested in graduate work should refer to CSU's Graduate and Professional Bulletin (http://catalog.colostate.edu/general-catalog/graduate-bulletin/) and the Electrical and Computer Engineering Department (http://www.engr.colostate.edu/ece/) website.

Program Learning Objectives

1. Identify, formulate, and solve advanced engineering problems using fundamental computer engineering principles, methodologies, and tools.
2. Apply in-depth knowledge and creativity in a variety of contexts to achieve a significant research objective.
3. Demonstrate effective oral and written communication to convey technical concepts to both engineers and non-engineers.
4. Demonstrate professional behavior and understand the ethical, economic, environmental, and societal impacts of their work.

Institutional Learning Objectives

Program Learning Objectives (PLOs) align with and support the University's Institutional Learning Objectives (ILOs), which are Creativity, Reasoning, Communication, Responsibility, and Collaboration.

Creativity: PLOs 1 and 2 ensure that students can creatively apply their disciplinary expertise to solve complex problems using fundamental computer engineering principles and methods.

Reasoning: PLOs 1 and 2 ensure that students can apply reasoning skills to solve complex problems using fundamental computer engineering principles and methods.

Communication: PLO 3 ensures that students demonstrate effective communication to a variety of audiences.

Responsibility: PLO 4 ensures that students exhibit responsible behavior according to professional standards.

Collaboration: PLOs 3 and 4 ensure that students demonstrate professional skills to engage collaboratively to solve problems in a societal context.