

The Joint NC State College of Engineering - UNC Asheville Bachelor of Science in Engineering with a Concentration in Mechatronics Degree

The Mission

The Mechatronics Program provides engineering students with the knowledge and skills necessary to integrate principles of electrical, mechanical and computer engineering into the design of complex machines.

The program, which is offered jointly by UNC Asheville and NC State College of Engineering on the campus of UNC Asheville, utilizes both live instruction and distance education technology, and blends a rich liberal arts tradition with cutting-edge engineering preparation.

The goal of the program is to produce broadly educated engineers who contribute effectively in the diverse and global modern world.

Program Educational Objectives

Within a few years of graduation, successful alumni of the Joint NC State - UNC Asheville BSE – Mechatronics Concentration degree should

1. Attain productive professional careers in mechatronics engineering or related fields.
2. Function in the workplace with appropriate professional and ethical responsibilities.
3. Make decisions with accountability for the social and environmental impact of their engineering practices.
4. Interact effectively with a diversity of individuals while viewing their own work in the broader context of our global society.
5. Attain technical excellence by engaging in life-long learning.

Student Outcomes

Upon graduation, Joint NC State - UNC Asheville BSE - Mechatronics Concentration students will have attained the following outcomes:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.