MAJOR IN MECHANICAL ENGINEERING, AEROSPACE ENGINEERING CONCENTRATION

Aerospace engineering covers the design, construction, and science of aircraft and spacecraft. Designed for undergraduate mechanical engineering majors, the aerospace concentration offers students a mechanical engineering degree foundation and specialized training in the aerospace discipline. Coursework will focus on aerospace fundamentals, including fluid flow mechanics, propulsion, materials, and manufacturing. The required courses will provide an introduction to the processing steps required in aerospace development, with a focus on the design, manufacturing, and life cycle costs of a specific product.

Learning Objectives

Students will:

1. Apply knowledge of mathematics, science, and engineering;
2. Design and conduct experiments, as well as analyze and interpret data;
3. 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 arenas;
4. Function on multidisciplinary teams;
5. Identify, formulate, and solve engineering problems;
6. Model professional and ethical responsibility;
7. Communicate effectively;
8. Understand the impact of engineering solutions in a global, economic, environmental, and societal context;
9. Recognize the need for and engage in life-long learning;
10. Utilize the techniques, skills, and modern engineering tools necessary for engineering practice.