

MAJOR IN ELECTRICAL ENGINEERING, AEROSPACE CONCENTRATION

Aerospace engineering is a broad and dynamic field that centers on the design, construction, and science behind aircraft and spacecraft. Intended for undergraduate electrical engineering majors, the aerospace concentration offers students an electrical engineering degree foundation and specialized training in the aerospace discipline. Coursework will focus on applications of key electrical engineering principles in the areas of deep-space communications, robotics, embedded systems, flight avionics, and more. These courses will enable and encourage students to solve complex engineering problems in aerospace such as improved satellite communications, electric propulsion technologies, and remote sensing methods. Electrical engineering students concentrating in aerospace will experience first-hand the necessity of their major in innovating new solutions to support humanity's ascent to the stars.

Learning Objectives

Upon successful completion, students will be able to:

1. Identify, formulate, and solve engineering problems in aerospace systems by applying principles of electrical engineering, science, and mathematics.
2. Apply the engineering design process to develop electrical engineering solutions for aerospace systems, balancing technical objectives with broader considerations including 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 aerospace systems and make informed judgments, considering their impact in global, economic, environmental, and societal contexts.
5. Function effectively on teams, collaborating on tasks related to aerospace systems, to establish goals, task plans, and to meet task objectives.
6. Develop and conduct appropriate experimentation, analyze results, and use electrical engineering judgment to draw conclusions.
7. Acquire and apply new knowledge in advancing aerospace systems, leveraging appropriate electrical engineering learning strategies.