

# MAJOR IN ELECTRICAL ENGINEERING, AEROSPACE CONCENTRATION

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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 by applying principles of engineering, science, and mathematics.
2. Apply the engineering design process to produce solutions that meet specified needs with consideration for public health and safety, 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.