

M.S. in Electrical and Computer Engineering

Introduction

The Master of Science in Electrical and Computer Engineering prepares students for advanced careers in the aerospace industry. Like its undergraduate counterparts, it focuses on developing engineers who possess not only technical mastery but also the knowledge and ability to execute systems-level design, whether in avionics systems, spacecraft electronics, or more earthbound computer design.

The program allows the student to focus either on electrical engineering or computer engineering. For each area of concentration, the program begins with a foundation of courses in linear systems, random processes, and systems engineering. Then, each area has its own core: digital communications plus avionics & radio navigation comprise the electrical engineering core; project management and computer systems safety, the computer engineering core. The student can tailor each area of concentration toward either professional practice or further graduate study. For those inclined toward research and later doctoral studies, the program offers a thesis option. For those more interested in entering or returning to the workplace, there is a non-thesis option.

Applicants must have an undergraduate degree in electrical and/or computer engineering, another engineering discipline, computer science, or the physical sciences. Any engineering degree earned in the United States must be from an ABET-accredited program. Students should possess a strong academic record, demonstrated by a 3.0 CGPA or better. Applicants may be admitted conditionally with the provision that they complete specific undergraduate courses prior to enrolling in graduate courses.

Each area of concentration consists of 15 credits of required courses, with 9 credits common to both areas. The thesis option requires 9 credits of thesis and allows 6 credits of restricted electives. The non-thesis option allows for 12 credits of restricted electives and requires completion of a 3-credit project. Restricted electives include core courses from the complementary area of concentration, advanced courses in both electrical engineering and computer engineering, and graduate subjects in software engineering, aerospace engineering, mechanical engineering, engineering physics, and mathematics.

Admissions Criteria