Aerospace Engineering - MS, PhD

Program Degrees:

- Aerospace Engineering (MS)
- Aerospace Engineering (PhD)

Graduate studies in aerospace engineering lead to the degrees of master of science and doctor of philosophy. The graduate program prepares students for careers in the aerospace industry, in government laboratories and in academia. Doctoral studies are also designed to produce research scholars.

Applicants should have a bachelor’s degree in aerospace or mechanical engineering or its equivalent from an institution of recognized standing, plus satisfactory GRE scores. Degrees in mathematics, physics and other related engineering disciplines may also be appropriate for entrance into the graduate program. Applications will be evaluated on an individual basis by the department’s graduate committee.

The master of science may be earned under either thesis or non-thesis options. For both options, a total of 30 semester graduate credits of 6000-7000 level courses are necessary and at least 21 credits must be in aerospace engineering or the AERO category. Substitution of up to six (of the 21) credit hours from other engineering and science disciplines is permitted with prior approval by the graduate programs committee when appropriate courses are unavailable in aerospace engineering. The remaining nine graduate credits can be earned through technical courses in engineering, science or mathematics.

Students pursuing a master of science degree under the thesis option should include six hours of AERO 7990 (or 7996 for online students): Research and Thesis as part of their 30 hours. After the completion of thesis research supervised by a major professor, the student must submit a written thesis to a committee of at least three faculty members and pass a final oral examination that includes defending the thesis.

Students pursuing a master of science degree under the non-thesis option will have a plan of study supervised by their graduate committee. The non-thesis master of science degree option does not have a residency, research or final oral examination requirement. The non-thesis degree can be earned entirely through the Engineering Online Graduate Program or though on-campus instruction.

For the doctor of philosophy degree, the student must complete a minimum of 60 credit hours beyond the bachelor’s degree. A plan of study will be arranged on an individual basis and students may elect to specialize in the general areas of aerodynamics, computational fluid dynamics, control theory, flight dynamics, orbital mechanics, propulsion, structures or structural dynamics. A written qualifying examination and a general doctoral examination, with both written and oral parts, are required of all doctoral candidates. An oral defense of the doctoral dissertation is also required of each student.

There is no language requirement for the master of science or PhD degree.