AEROSPACE ENGINEERING SCIENCES - DOCTOR OF PHILOSOPHY (PHD)

Students typically complete their PhD in aerospace engineering sciences within 4 to 6 years, depending on whether they enter the program with a master’s degree. It is possible for highly qualified students to enter the PhD program without a master’s degree.

The primary focus of a PhD student is to perform novel research guided by their faculty advisor. At the time of admission, PhD students must have a faculty advisor who agrees to accept the student into their research program and mentor their academic progress. PhD students are supported through research and teaching assistantships and are also encouraged to apply for their own source of funding.

For more information, visit the department's Prospective Graduate Students webpage.

Requirements

Course Requirements

- A minimum of 30 credit hours of courses numbered 5000 or above (at least 15 of these must be in ASEN) with a minimum of 3.25 GPA.
- 30 credit hours of dissertation credit are required for the degree.
- A maximum of 21 credit hours may be transferred from another accredited institution and applied toward a PhD degree if approved by the graduate committee of the department and the Graduate School.
- All courses taken for the master’s degree at the 5000 level or above at the University of Colorado may be applied toward the doctoral degree at the university.
- The formal coursework must include a minimum of 15 credit hours of courses or their equivalent in aerospace engineering sciences.

Preliminary Examination

Students must pass a preliminary examination by no later than the end of the third semester if the student already has an aerospace master’s degree upon entry to the program, or the fifth semester if the student does not have an aerospace master’s degree. The preliminary exam is composed of an oral exam in front of a committee of three graduate teaching faculty members that focuses upon both research preparation and fundamental knowledge in key subject areas.

The oral exam will be composed of three components:

1. A presentation summarizing the literature review conducted by the student followed by an examination of the presented concepts
2. Two subject area exams based on approved courses

Comprehensive Examination

By no later than the fifth or seventh semester, students must also pass an oral examination before the student’s doctoral committee of five or more graduate faculty members chosen by the student and approved by the department and the Graduate School. This should be preceded by individual examinations or interviews, either written or oral or both, by every committee member. The oral examination before the committee is based primarily on a written proposal for the thesis research provided by the student to committee members in advance.

PhD Dissertation

Students must write a dissertation based on original research conducted under the supervision of a graduate faculty member. The dissertation must fulfill all Graduate School requirements. After the dissertation is completed, an oral final examination on the dissertation and related topics is conducted by the student’s doctoral committee.

Time Limit

All degree requirements must be completed within six years of the date of commencing coursework.