

Graduate Projects

Welcome to CU-Boulder's Ann and H.J. Smead Aerospace Engineering Sciences Graduate Projects!

Background

Master's students in the CU-Boulder Ann and H.J. Smead Aerospace Engineering Sciences (AES) Department may take a two-semester project course to satisfy their degree requirement rather than write a thesis. The course is also open to Ph.D. students and students from departments other than AES who desire a hands-on team experience. This course gives students the opportunity to study and work on a variety of aerospace systems, some so complex that the project may last longer than two semesters. Students are allowed to enter the course in either the fall or spring semester, whichever best meets their academic needs. Your company's sponsored project may also start in either the fall or spring semester and may last for two or more semesters.

Educational Purpose

The purpose of the Graduate Projects course is for students to learn project management and systems engineering processes and to experience the full project cycle of requirements definition, decision-gate presentations, design, manufacturing, integration, and testing. Emphasis is placed on producing a usable product that meets sponsor (customer) requirements. Alumni who have completed the two-semester course, and their employers, say they are better prepared to be immediately productive in the work environment having had the Graduate Projects experience. Learning outcomes include:

- Project management experience
- Systems engineering
- Problem identification
- Requirements definition
- Engineering design
- Manufacturing to specifications
- System test and analysis
- Working effectively in a team environment
- Oral and written communication skills
- Professional-level responsibility and accountability
- Customer interaction

Sponsor Benefits

Exploratory, proof-of-concept, as well as more complex projects can be quite successful as a Graduate Project. Company sponsors may participate with the team as much or as little as desired. The many benefits to the customer include:

- Faculty-mentored student teams work on targeted company problems
- Opportunity to interact with and assess potential future employees
- On-the-job training for potential future employees
- Professional mentoring of the next generation of aerospace employees
- Support of hands-on, project-based education

Contact:

Rick Hieb

rick.hieb@colorado.edu

Get Involved

Senior Projects

Dale Lawrence, Professor & Coordinator
Undergraduate Senior Projects Course
dale.lawrence@colorado.edu

Graduate Projects

Rick Hieb, Instructor & Coordinator
Graduate Projects Course
rick.hieb@colorado.edu

Research Partnerships

Brian Argrow, Chair
Ann and H.J. Smead Aerospace Engineering Sciences
brian.argrow@colorado.edu