THE GRADUATE SCHOOL
THE UNIVERSITY OF NORTH DAKOTA

Aerospace Sciences

Doctor of Philosophy

The mission of the Aerospace Sciences PhD program is to provide interdisciplinary teaching and research at the highest academic levels. The goal is to provide highly educated scholars and leaders with the skills necessary to mix technology and science with an understanding of the politics and economics of the aerospace fields.

Program Goals

1. Students will develop a thorough knowledge of the aerospace elements specifically related to the Aviation and Space Studies disciplines that will allow them to be successful leaders in the industry by applying solutions gained through theory and applied research.
2. Students will enhance their analytical, technical, research and communication skills through classroom and research activities to further develop an ability to carry out independent, original and applied research.
3. Students will further develop the critical skill set needed to enable them to fill leadership roles within government and research agencies, educational institutions or private aerospace and aviation sector companies.

Admission Requirements

The applicant must meet The Graduate School's current minimum general admission requirements as published in the graduate catalog. The additional requirements for admission to the Aerospace Sciences PhD program are as follows:

1. A Master's or graduate degree from an accredited institution with a GPA of at least 3.25/4.0
2. Submission of a statement of personal goals
3. Professional resume
4. Satisfy The Graduate School's English Language Proficiency requirements as published in the graduate catalog.
5. The Graduate Record Examination (GRE) General Exam
6. Industry experience preferred

Degree Requirements

- 90 credits beyond a baccalaureate degree. With approval of the Aerospace Sciences PhD Program and the UND Graduate School, up to 30 credits from a master's degree from an accredited institution can be applied toward the requirements of the doctoral degree.
- Successful completion of 60 semester credits beyond the master's degree
- Successful completion of qualifying exam prior to advancement to candidacy
- 12 to 18 semester credits of dissertation (Avit 999 or SpSt 999) and successful defense of the dissertation
- Required core courses Avit 501, SpSt 501, Avit 521 and Avit/SpSt 590
- Six to 12 semester credits of Scholarly Tools beyond the Master's degree requirements

- Remaining coursework from Aviation/Space Studies or other UND approved Graduate Courses
- Residency requirement: as determined by student's advisor and/or committee, at a minimum the student will be required to be on campus for one week per year.

The required core courses, in addition to the Scholarly Tools component, are four. These courses may have been part of the student's MS program and cannot be counted twice.

- Avit 501: General issues in Aviation/Aerospace
- SpSt 501 – Survey of Space Studies I
- Avit 521 – Ethics in Aerospace
- Avit/SpSt 590 – Aviation Seminar/Space Studies Colloquium (2 semesters, 2-4 credits total)

Scholarly Tools requirement is 6 to 12 semester credits, to be determined by the student's advisor and/or committee, from the courses listed below. These courses are in addition to what may transfer as part of the student's Master's degree program. Therefore, a minimum of six credits will be required as part of the PhD program.

- Avit 503 (or equivalent): Statistics
- Avit 504: Research Methods
- SpSt 504: Research Methods in Space Studies
- Avit 505: Qualitative Research Methods
- Avit 506: Quantitative Research Methods
- Avit 507: Advanced Research Methods

Faculty and Areas of Expertise

The PhD in Aerospace Sciences is a joint program between the Departments of Aviation and Space Studies. The combined departments have over twenty graduate faculty members with earned terminal degrees in geology, engineering, astronomy, business, political science, mathematics, biophysics, education, medicine and law.

Research interests include: asteroids, near-earth objects, remote sensing, long-term life support, planetary colonization, space history, space policy, human space flight, space suits, orbital mechanics, human factors, regulation, FAA training standards, pilot performance, strategic planning, safety, and decision making under risk.

We recommend prospective students browse the department websites below, to learn more about aerospace programs, faculty and their areas of expertise.

Contact Information

Department of Aviation
Joe Vacek, J.D.
Graduate Program Director
Dept. Phone: 701-777-3336
Web: www.aviation.und.edu
Email: flyund@aero.und.edu
jjvacek@aero.und.edu

Department of Space Studies
Michael Dodge, J.D., LL.M.
Graduate Program Director
Dept. Phone: 701-777-3558
Web : www.space.edu
Email: info@space.edu
mdodge@space.edu

Apply online: http://graduateschool.und.edu

Application deadline is February 1st.
Please visit The Graduate School website for the most current information.