Aerospace Engineering

Graduate students in the Aerospace Engineering program focus on aircraft and space systems design, analysis, and manufacturing. Students can select course offerings and research programs in aerodynamics and applied aerodynamics; aerospace propulsion; computational fluid dynamics; dynamics and design of spacecraft and space systems; flight dynamics and control; and multifunctional materials and smart structures. Sub-areas include acoustics, sprays, composite materials, reactive and multiphase flows, stability, and transition to turbulence.

Admission Requirements

An applicant to the master's program must be a graduate of an accredited undergraduate program with a B.S. degree in either mechanical or aerospace engineering. Graduates of other accredited programs in engineering, physical sciences and mathematics may be considered but may be required to make up undergraduate deficiencies without graduate credit. Provisional admissions, as well as exceptions, are sometimes granted under special circumstances. The most qualified applicants are accepted first. Applicants to the Ph.D. program must have met the M.S. admission requirements and additionally must satisfy the Ph.D. admissions requirements. Applicants to the online, distance education M.S. program in mechanical or aerospace engineering are not required to take the GRE exam.

Master's Degree Requirements

The thesis-option M.S. degree program in aerospace engineering requires 21 hours of course credit and nine hours of thesis research. The non-thesis M.S. degree requires 27 hours of course credit and a three credit-hour project and is offered on campus as well as off campus, through distance education.

Ph.D. Degree Requirements

A minimum of 72 hours of credit are required to obtain the Ph.D. degree. A direct path to the Ph.D. from the B.S. is also available with which the student is granted the M.S. degree “enroute” to the Ph.D. The enroute Ph.D. (direct to Ph.D. path) requires a minimum of 3.5 undergraduate GPA.

Student Financial Support

Financial aid is offered to all admitted Ph.D. students.

Degrees

- Aerospace Engineering (MS) (http://catalog.ncsu.edu/graduate/engineering/aerospace-engineering/aerospace-engineering-ms/)
- Aerospace Engineering (PhD) (http://catalog.ncsu.edu/graduate/engineering/aerospace-engineering/aerospace-engineering-phd/)
- Aerospace Engineering (Minor) (http://catalog.ncsu.edu/graduate/engineering/aerospace-engineering/aerospace-engineering-minor/)

Faculty

Full Professors

Gregory D. Buckner

Associate Professors

Michael A. Boles
Matthew Bryant
Jeffrey W. Eischen
Scott M. Ferguson
Su Hao
Charles Edward Hall Jr.
Hsiao-Ying Shadow Huang
Andre P. Mazzoleni
Marie Muller  
Venkateswaran Narayanaswamy  
Brendan Timothy O’Connor  
Mark R. Pankow  
Katherine Saul  
Alexei V. Saveliev  
Rohan A. Shirwalker  
Hooman Vahedi Tafreshi  
Christopher Raymond Vermillion  
Chengying Xu  

**Assistant Professors**

James Braun  
Darius Carter  
Mingtai Chen  
Chuyi Chen  
Landon Grace  
Kenneth Granlund  
Veeraraghava Raju Hasti  
Mohammad Heiranian  
Timothy Joseph Horn  
Jingjie Hu  
Arun Kumar Kota  
Andrew Jeungahn Lee  
Donggun Lee  
Jun Liu  
Jason F. Patrick  
Pramod Kumar Veera Subbareddy  
Henry Oliver Tenadoohah Ware  
Chi-An Yi  
Jie Yin  

**Emeritus Faculty**

Thomas A. Dow  
Herbert Martin Eckerlin