Graduate Programs in Aerospace Engineering

The Department of Aerospace Engineering offers programs leading to Master of Science (MS) and Doctor of Philosophy (PhD) degrees. Current research topics include acoustics, aerothermodynamics, flight loads, aircraft flight dynamics and control, aircraft icing, airfoil design, rotor aerodynamics, artificial neural networks, composite materials, computational fluid dynamics and solid mechanics, damage tolerance, design, experimental aerodynamics, finite element analysis, intelligent control, structural dynamics, theoretical and applied aerodynamics.

The department's research and instructional facilities are among the finest in the nation. They include several wind tunnels, a water tunnel, a small aircraft prototype lab, a flight simulation lab, a controls lab, and a structural testing lab. Graduate students have opportunities to use the equipment in all labs for their research projects. Students also may use the research facilities in the National Institute for Aviation Research (NIAR), including the Walter Beech Memorial wind tunnel, a composite materials lab and impact dynamics lab.

The department's programs are enhanced by Wichita's aviation heritage and the presence of major aerospace companies in the city, including Airbus, Spirit Aerosystems, Bombardier/ Learjet, and Textron Aviation consisting of Beechcraft, Cessna, and Hawker.

Graduate course work is scheduled so that engineers employed in the local industry may conveniently pursue graduate degrees.

Doctor of Philosophy

Courses of study leading to the Doctor of Philosophy (PhD) degree are available with specializations in the same fields as listed above for the MS degree. The doctor of philosophy program requires a minimum of 60 credit hours of course work, including those of the Master of Science degree, plus a minimum of 24 credit hours of dissertation.

Faculty Experience

Faculty members have received local, regional and national recognition for excellence in teaching, excellence in research, significant contributions to teaching and student development, and leadership in the advancement of teaching. The faculty members have a wide breadth of expertise spanning all areas of aerospace engineering.

MS AE Admission Requirements

For admission to the MSAE program, applicants must have completed the equivalent of an undergraduate degree in aerospace engineering or a closely related field. Students with deficiency in certain areas will be required to take additional courses. For full-standing admission, a minimum GPA of 3.0 on a 4.0 scale is required for domestic applicants over the last 60 hours (or two years) of undergraduate work.

Official scores from the General Test of the Graduate Record Examination (GRE) are recommended, but not required.

PhD AE Admission Requirements

Admission to the PhD AE program requires the completion of a master's degree in engineering or physical sciences with a graduate grade point average (GPA) of at least 3.25 on a 4.00 scale. Students with deficiency in certain areas will be required to take additional courses.

Official scores from the General Test of the Graduate Record Examination (GRE) are recommended, but not required. Evidence of the ability to carry out independent research and present it in written English is highly desirable.
**Assistantships**
Assistantships are awarded to select students. Almost all full-time graduate students receive some form of assistantship.

**Faculty**

**Brandon T. Buerge**, Engineering Educator; PhD, Washington University in Saint Louis, 2008. Experimental aerodynamics, lighter-than-air systems design and analysis, and engineering pedagogy.

**Animesh Chakravarthy**, Assistant Professor; PhD, Massachusetts Institute of Technology, 2007. Flight dynamics and control.

**Atri Dutta**, Assistant Professor; PhD, Georgia Institute of Technology, 2009. Space dynamics, spacecraft control, and optimization.

**Klaus A. Hoffmann**, Gordon Distinguished Professor and PhD Graduate Coordinator; PhD, University of Texas at Austin, 1983. Computational fluid dynamics, bio-fluid mechanics, aero thermodynamics, and hypersonics.

**Suresh Keshavanarayana**, Associate Professor; PhD, Wichita State University, 2001. Solid mechanics, structures, and composites.

**Linda K. Kliment**, Assistant Professor; PhD, Wichita State University, 2009. Experimental and applied aerodynamics, and flight loads.

**L. Scott Miller**, Professor and Chair; PhD, Texas A & M University, 1988. Experimental aerodynamics, velocimetry, airfoil and aircraft design and rotor aerodynamics.

**Roy Y. Myose**, Professor; PhD, University of Southern California, 1991. Aerodynamics, propulsion, astronautics, and engineering pedagogy.

**Michael Papadakis**, H. Russell Bomhoff Endowed Professor; PhD, Wichita State University, 1986. Computational, experimental and theoretical aerodynamics, and airframe icing.


**Kamran Rokhsaz**, Professor and Masters Graduate Coordinator; PhD, Missouri University of Science and Technology, 1988. Applied aerodynamics, flight dynamics, and flight loads.

**Elizabeth Rollins**, Engineering Educator, PhD, Texas A&M University, 2013. Flight dynamics and control.

**Nicholas A. Smith**, Assistant Professor; PhD Purdue University, 2015. Composites, manufacturing and simulation.

**James E. Steck**, Professor; PhD, Missouri University of Science and Technology, 1989. Intelligent control, artificial neural networks, flight dynamics and control, and quantum computing.

**John S. Tomblin**, Vice President for Research and Technology Transfer, Executive Director, National Institute of Aviation Research, and Bloomfield Distinguished Professor; PhD, University of West Virginia, 1994. Solid mechanics, structures, and composites.

**C. Charles Yang**, Professor; PhD, Louisiana State University 1993. Solid mechanics, composites, and finite element analysis.

**Anthony J. Vizzini**, Provost and Senior Vice President; PhD, PE, Massachusetts Institute of Technology, 1986. Crashworthiness and composites.

**For More Information**
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