

# Aviation

## Master of Science

The Aviation Department offers a graduate program leading to the Master of Science degree. The M.S. in Aviation degree provides the necessary educational background for aviation industry professionals to solve problems within the field of aviation including the airlines, corporate aviation, general aviation, and airport management. You will gain an understanding of the various complexities facing the industry through a breadth of aviation industry related courses. In addition, you will have an understanding of statistics and research methods, and how they are applied to research and problem solving within the aviation industry. The graduate program will provide you with the knowledge and skills necessary for a successful career in the aviation industry, aviation related government jobs as well as for further research and development in the field of aviation. This degree can be completed on-campus or as a distance program via internet delivery methods.

### Admission Requirements

- Bachelor's degree from an accredited university in Aviation/Aeronautics or related field with a minimum of 20 semester credits of appropriate aviation related undergraduate work
- GRE exam — General Test
- Overall undergraduate GPA of 2.75 or a GPA of at least 3.00 for the last two years of undergraduate work.
- Hold a minimum of a Federal Aviation Administration Private Pilot Certificate or its foreign equivalent
- Students must submit a 2-3 page paper answering specific questions per departmental guidelines. One of the questions will address the potential thesis or independent study topic

### Degree Requirements

- A minimum of 30 credit hours for the thesis option or a minimum of 32 credit hours for the independent study option. Approval of the thesis option will be granted based upon alignment of research interests with departmental faculty's research interests and faculty availability.
- **Required Core Courses:** General Issues in Aviation/Aerospace; Aviation Economics Statistics, Research Methods; Capstone Course; Thesis or Independent Study
- **Elective Courses:** Aviation Public Policy and Regulations; Aviation Information Technology; Aviation Environmental Concerns; Advanced Aviation Safety Management; Aviation Management Theory; Human Factors: Human Perception in the Aerospace Environment; Human Factors: Memory, Learning and Judgment; Airline Labor Relations and Law; Aviation Seminar; Individual Research in Aviation

### Faculty

- **Bruce Smith, Ph.D., Dean and Professor:** A 1970 UND graduate with a Bachelor of Science in mathematics and education, Smith earned a Ph.D. in instructional design and development from Florida State University in 1984 and a Master of Arts in educational technology from Arizona State University in 1975. While at UND, he was named an NCAA football All American. As Director of Training at Delta Airlines in Atlanta, GA. He was responsible for ground training of Delta's pilots, initial recruitment and training of flight attendants, and a major portion of maintenance training for technical operations and management of day to day operations of Delta's training center. Before joining Delta, Smith was with Hughes/Raytheon Training Inc. (1991-98) as Program Manager responsible for the program management of new and ongoing Raytheon Programs at Boeing Commercial Airplane Group (1997-98). He was Senior Scientist responsible for technical direction, leadership and consultation within Hughes Training Inc. for all instructional design, education and training capabilities (1992-97). Smith is nationally known and recognized as a leading authority in the aviation training field. He is the author of more than 40 technical reports and refereed journal articles in the areas of human performance, aviation training, and aircrew training systems. He spent eight years as a flight instructor with the United States Air Force Academy in Colorado Springs, CO. and USAF Undergraduate Pilot Training at Williams Air Force Base, AZ.
- **Paul Lindseth, Ph.D., Associate Dean of Academics and Professor:** Dr. Lindseth, originally from North Dakota, began his flying career in 1973, earning his private pilot license through the Air Force ROTC program. While waiting to go on active duty after college graduation, Dr. Lindseth taught one year of high school. Upon graduation from Air Force pilot training, he was selected for Pilot Instructor Training and served as an Undergraduate Pilot Training T-37 Instructor Pilot and Check Pilot from 1976 to 1979. His expertise was recognized twice during this time as "top instructor" and "master instructor". In addition to Dr. Lindseth's desire to fly fixed wing aircraft, he always wanted to fly helicopters, and was given the opportunity in 1980. He flew H-1 helicopters for the Air Force's search and rescue missile site support operations from 1980 to 1984, serving as an instructor pilot and flight examiner. In 1983, he was selected as the Chief of Aircrew Standardization and Evaluation for Air Force light lift helicopters worldwide.

Throughout the time Dr. Lindseth was on active duty, he pursued his general aviation flying through FBOs. After receiving his Master's Degree in 1984, Dr. Lindseth returned to his home state and joined the UND Aerospace organization, flight instructing in helicopters at the airport. In 1988, he became a member of the Aviation Faculty.

- **Warren C. Jensen, M.D., Professor:** Dr. Jensen currently holds faculty appointments at both the UND School of Medicine and the John D. Odegard School of Aerospace Sciences, where his current position is the Director of Aeromedical Research and Associate Professor. Dr. Jensen is involved in teaching and advising students in the Aviation and Space Studies departments. He also serves as a flight surgeon with the 119th Fighter Group of the North Dakota Air National Guard, as well as an FAA-designated senior medical examiner, and an active pilot.
- **Douglas Marshall, J.D., Associate Professor:** Prof. Marshall graduated from the University of California, Santa Barbara, with a B.S. in Political Science in 1969, and University of California, Hastings College of the Law, Juris Doctor 1972. He practiced law continuously in California from 1972 until he joined the UND faculty in 1998. His career in the law included representation of major airlines in labor/employment and personal injury litigation; he served as General Counsel and later President of Pacific Coast Airlines, formerly based in Newport Beach, California; and he also represented the airline and its employees in various regulatory, enforcement and contractual matters before the FAA, NTSB and local airport authorities. He was admitted to the bar associations of the U.S. Supreme Court, Ninth Circuit Court of Appeals, all California state appellate courts and all California federal District Courts.
- **Charles L. Robertson, Ph.D., Associate Professor** and Academic Instructor of the Spectrum Airline Training Program in the John D. Odegard School of Aerospace Sciences, University of North Dakota. Dr. Robertson holds a multi-engine ATP certificate. He joined the faculty at UND after retiring for the Air Force in 1988. He has worked as the Manager of Contract Training, Assistant Chair of the Aviation Department, and as the lead instructor in the Advanced Spectrum. Dr. Robertson has over 37 years of flight and instructor experience. He has accumulated over 4,000 hours as a military and civilian pilot. Dr. Robertson holds type ratings in the Boeing 707/720, 727, and the Beechcraft 1900 Air Liner. He has served as a PI on the Federal Aviation Administration (FAA)/Industry Training Standards (FITS) research project since its inception in 2002. Dr. Robertson has also published several papers and articles on teaching pilots thinking skills including judgment and aeronautical decision-making
- **Kim Kenville, Ph.D., C.M., Associate Professor:** Kim is a **certified member** of AAAE and sits on several committees in the organization on the national and regional level in the Great Lakes chapter of AAAE. While in her undergraduate studies, Kim interned for the Metropolitan Airports Commission (MAC) for the Minneapolis-St. Paul International Airport. She was selected to supervise 7 other noise interns, coordinate and compile various noise abatement studies, and attend weekly noise abatement meetings with the public. Upon graduation, Kim spent 5 years working for the Detroit Metropolitan Wayne County Airport (DTW) in Detroit, Michigan. She started as an Airport Operations Agent working airside, landside, and terminal operations. The last year and half she was assigned exclusively to supervise the operations of the International Terminal. The International Terminal (IT) houses 16 air carriers utilizing 6 county-owned gates. The terminal also houses US Immigration, US Customs, and US Agriculture. After leaving DTW, Kim went to work for Milwaukee County at General Mitchell International Airport (MKE) as an Airport Control Center Operator. She spent just short of a year at General Mitchell until returning to North Dakota.
- **Ernest Anderson, J.D., Assistant Professor:** Ernest comes to the University of North Dakota from the Federal Aviation Administration where he has served as an attorney for the last twelve years. He spent six years on active duty with the Marine Corps as a helicopter pilot, and eighteen years in the Marine and Army Reserve. He holds a commercial helicopter rating and commercial privileges in single and multiengine airplanes. After brief careers in private, state and with the Department of the Interior, he joined the FAA's Office of the Chief Counsel, Washington, DC working on legislative matters. Most recently he was with the Southwest Regional Counsel's Office in Ft. Worth, TX, representing the FAA's Flight Standards, Medical and Security program offices in litigation with the National Transportation Safety Board and Department of Transportation. He has provided legal counsel, regulatory interpretations, and represented the FAA's interests with other Federal agencies, various States entities and the private sector.
- **Joseph J. Vacek, J.D., Assistant Professor:** Joe teaches in the areas of aviation law, space law, air transportation policy, aviation environmental issues, and transportation policy, in addition to teaching aerobatic flight at the airport. Professor Vacek researches in the areas of aviation environmental issues and transportation policy. When he is not teaching in the classroom or the aircraft, he practices law and advises various governmental agencies on transportation law and policy. He has been a practicing mediator for five years, and enjoys commuting to work by bicycle.
- **William Watson, J.D., Assistant Professor**

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