

ANDREW P. LEONARD

CURRICULUM VITAE 2020

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EDUCATION

University of North Dakota – Grand Forks, ND (2018)
PhD. in Aerospace Science

University of North Dakota – Grand Forks, ND (2011)
M.S. in Aviation

St. John's University – Collegeville, MN (2006)
Bachelor of Arts in Political Science & Communications

AVIATION LICENSURE

Certified Flight Instructor

- CFI, CFII, MEI

Commercial Pilots Certificate

- ASEL, AMEL, Instrument Airplane

PROFESSIONAL EXPERIENCE

Assistant Professor – University of North Dakota (2018 – Present)

- Develop and teach multiple aviation courses
- Advise and mentor students
- Provide service for the university, college, and department

Lecturer – University of North Dakota (2017 – 2018)

- Develop and teach multiple aviation courses
- Advise and mentor students
- Provide service for the university, college, and department

Aviation Consultant – Self Employed (2013 – Present)

- Provide flight training at multiple levels
- Provide consulting for small to medium sized businesses
- Evaluate training curriculum for flight schools
- Review and advise international contracts
- Assist in aircraft utilization, including fractional ownership

Instructor – South Dakota State University (2011 – 2017)

- Develop and teach multiple aviation courses
- Act as a 141 check instructor
- Advise and mentor students
- Provide service for the university, college, department, and program
- Oversee airport operations, including the programs safety management plan
- In charge of program assessment and compliance with AABI standards

Flight Instructor – UND Aerospace (2010 – 2011)

- Organize and develop lessons
- Provide training and endorsements for private and commercial licenses
- Provide training and endorsements for instrument ratings/ instrument instructor ratings
- Provide pilot supervision and evaluate piloting skills
- Ensure the highest level of safety possible

Air China Instructor - UND Aerospace (2010)

- Develop and organize teaching materials and lessons
- Teach private pilot knowledge to students of varying levels
- Teach Technical Aviation Communication
- Work with international students
 - Future pilots for Air China Airlines
- Evaluate student performance
 - Adjust curriculum as needed

Graduate Research Assistant - University of North Dakota (2008 – 2011)

- Collect and organize data from aircraft and aircraft simulators
- Issue surveys and exams to research subjects
- Research and summarize previous articles and studies
- Run statistical analysis of research data
- Assist in drafting research analysis

Graduate Teaching Assistant - University of North Dakota (2008 – 2011)

- Teach multiple subjects to a range of students
 - Long Range Navigation
 - University Life
 - Issues in Aviation
 - Airline Ops & Management
 - FAR 141 Flight Courses
- Evaluate student work and make suggestions for improvement

Altitude Chamber Operator – University of North Dakota (2008 – 2011)

- Manipulate altitudes for training & research
- Monitor individuals for safety
- Monitor the chamber for safe operations
- Collect and organize data
- Instruct individuals on chamber procedures

Teaching

Teaching Interests

- Aviation management
- Human factors
- Instrument flight training
- Multi-engine flight training
- Aviation law
- Ethics in aviation
- Aviation weather
- Teaching methods

Courses Taught

Undergraduate

College of Education and Human Science, South Dakota State University (2011 – 2017)

- Introduction to Meteorology (AVIA 150) (1 time per year)
 - Fall: 2011, 2012, 2013, 2014, 2015, 2016
- Attitude Instrument Theory (AVIA 180) (1 time per year)
 - Spring: 2012, 2013, 2014, 2015
- Introductory Flight II (AVIA 181) (1 time per year)
 - Spring: 2013, 2014
- Aviation Weather (AVIA 201) (1 time per year)
 - Spring: 2012, 2013, 2014, 2015
- Human Factors (AVIA 300) (1 time per year)
 - Spring: 2013, 2015
- Aviation Law (AVIA 302) (1 time per year)
 - Fall: 2011, 2012, 2014, 2015, 2016

- Professional Pilot Theory I (AVIA 370) (1 time per year)
 - Fall: 2011, 2012, 2013, 2014, 2015, 2016
- Professional Flight I (AVIA 372) (1 time per year)
 - Fall: 2011, 2012, 2013, 2014
- Air Transportation Systems (AVIA 400) (1 time per year)
 - Spring: 2012
- Methods of Teaching in Aviation (AVIA 450) (1 time per year)
 - Spring: 2012, 2013, 2014, 2015, 2016, 2017
- Student Flight Instruction (AVIA 488) (2 – 3 times per year)
 - Spring: 2012, 2013, 2014, Summer: 2012, 2013
- Senior Capstone (AVIA 489) (1 time per year)
 - Spring: 2014, 2015, 2016, 2017
- Internship (AVIA 494) (2 times per year)
 - Spring: 2012, 2013, 2014, 2015, 2016 Summer: 2012, 2013, 2014, 2015, 2016

John D. Odegard College of Aerospace Science, University of North Dakota (2017 – Present)

- Introduction to Aviation (AVIT 102)
 - Fall: 2017 -Present
- Basic Attitude Instrument Flying (AVIT 221)
 - Fall: 2017
- IFR Regulations and Procedures (AVIT 222)
 - Fall: 2017
- Methods and Materials (AVIT 490)
 - Fall: 2017 -Present
- Instrument Flight Instructor (AVIT 415)
 - Spring: 2017 - Present
- Methods and Materials II (AVIT 491)
 - Spring: 2017 - Present

International

Civil Aviation University of China, Tianjin China (2010)

- Introduction to Aviation (AVIT 102)
 - Fall: 2010
- Technical Aviation Communication
 - Fall: 2010

RESEARCH

Research Interests

- ADS-B Training in Colligate Aviation
- Impact of International Training
- Meyers- Briggs and Pilot Selection
- Physical Fitness and Flying
- Student Success and Retention in Colligate Aviation

Refereed Journal Articles (Published)

Leonard, A. (2013). ADS-B Training: Does it Exist in Collegiate Aviation. *Collegiate Aviation Review*, 31(1), 79-89.

Leonard, A., Christensen, C., & Hendricks, J. (2020). Needs Based Assessment of Agricultural Pilots in the Upper Midwest. *International Journal of Aviation, Aeronautics, and Aerospace*, 7(1). Retrieved from <https://commons.erau.edu/ijaaa/vol7/iss1/9>

Book Chapter (Published)

Leonard, A., & Bjerke, E. (2019). Collegiate Flight Programs: How Student Experiences Impact Student Retention and Successful Completions. In Kearns, S. K., Mavin, T. J., Hodge, S. (Eds.), *Engaging the Next Generation of Aviation Professionals*. Abingdon: Routledge

Refereed Presentations

Leonard, A. (2019). The Impact of Experiences on Student Success. *University Aviation Association Fall Conference*, Memphis, TN

Leonard, A. & Christensen, C. (2016). Millennials: Training this Unique generation. *University Aviation Association Fall Conference*, Omaha, NE

Leonard, A. & Christensen, C. (2015). Needs Based Assessment of Agricultural Pilots in the Upper Midwest. *University Aviation Association Fall Conference*, Snow Bird, UT.

Leonard, A. & Christensen, C. (2014). Benefits of Early Alert Systems on Flight Training. *University Aviation Association Fall Conference*, Daytona Beach, FL

Leonard, A. (2013). ADS-B Training: Does it Exist in Colligate Aviation. *University Aviation Association Fall Conference*, San Juan, Puerto Rico

Leonard, A. & Christensen, C. (2013). Integrating a Mobile Training Lab into a Colligate Aviation Program. *University Aviation Association Fall Conference*, San Juan, Puerto Rico

Invited Presentations

Leonard, A. (2014). IFR Procedures. *Eastern SD Aviation Maintenance Conference*, Brookings, SD

Leonard, A. (2014). Maintaining a safe attitude. *Federal Aviation Administration Safety Seminar*, Brookings, SD

Leonard, A. (2014). Technology in Flight. *Federal Aviation Administration Safety Seminar*, Brookings, SD

Leonard, A. (2013). Staying Safe During Cold Weather Flying. *Federal Aviation Administration Safety Seminar*, Brookings, SD

Leonard, A. & Christensen, C. (2012). Integrating Aviation Concepts into High school Curriculum. *South Dakota Education STEM Conference*, Sioux Falls, SD

Leonard, A. & Christensen, C. (2012). South Dakota Safety Initiative. *South Dakota Airport Conference*, Deadwood, SD

Leonard, A. (2012). Maintaining Safety in Colligate Aviation. *Federal Aviation Administration Safety Seminar*, Brookings, SD

Grants (Funded)

- Developing a well-educated STEM workforce in ND (2019 - 2024)
 - Co-primary investigator (Primary Investigator: Feng Xiao)
 - Amount of grant: \$649,780 – National Science Foundation
- Project Initiative Grant for mobile simulator (2016)
 - Co-primary investigator (Primary Investigator: Cody Christensen)
 - Amount of grant: \$11,000 – South Dakota Space Grant
- Funding for scholarly dissemination (2014)
 - Primary investigator
 - Amount of grant: \$600 – SDSU Scholarly Excellence Fund
- Funding to support aviation accreditation (2012 – 2013)
 - Co-primary investigator (Primary Investigator: Cody Christensen)
 - Amount of grant: \$6,400 – SDSU Office of Academic Affairs
- Funding for scholarly dissemination (2013)
 - Primary investigator
 - Amount of grant: \$500 – SDSU Scholarly Excellence Fund

HONORS & AWARDS

Nominated for the Excellence Award in Outstanding Undergraduate Teaching (2019)

- University wide award presented annually to an individual who demonstrates strong abilities in the area of teaching, and a commitment to student success

Outstanding Service Award (2015)

- College of Education and Human Sciences (South Dakota State University)
- Presented to a faculty member who goes above and beyond in the area of service at all levels.

DOT/FAA Center of Excellence Student of the Year (2009)

- This award recognizes one student nationally for his or her research in the field of aviation. I received this honor for my work involving helicopter flight accuracy with GPS and ADS-B.

Cum Laude (2006)

- St. John's University, Collegeville, MN

Siehl Scholarship (2002 – 2006)

- St. John's University, Collegeville, MN

Matt Mullford Personal Achievement Award (2002)

- Presented to an individual who exemplifies excellence in education and service

SERVICE CONTRIBUTIONS**University-Level Service**

- UND Move-In Day Volunteer, 2017 - Present

College-Level Service

- UND Aerospace Open House Volunteer, 2017 – Present

Department-Level Service

- Aviation Living Learning Community Faculty Advisor, 2018 – Present
- Aerospace Learning Center Faculty Manager, 2017 – Present
- Member of the Aviation Department Curriculum Committee
- Member of the Aviation Department Admissions Committee

Other Notable Contributions

- Federal Aviation Administration Certification for Restricted Air Transport Pilot
 - In the spring of 2014, the SDSU Aviation Program received certification for its graduates to qualify for the reduced ATP certificate. My colleagues and I revamped curriculum and course requirements in order to receive this initial certification.
- Initial Program Accreditation
 - In the spring of 2013, the Aviation Program at SDSU received initial accreditation from the Aviation Accreditation Board International (AABI). I played a significant role in all aspects the self-assessment process, including development of an assessment plan and safety plan.

- Development and Integration of New Training Course Outline
 - In the fall of 2013, the Aviation Program at SDSU developed and implemented a new training course outline for student flight training. This new course was approved by the FAA to be more efficient, allowing students to complete their training in less time. I worked closely with the FAA and the university to insure that all requirements were being met while simultaneously finding ways to better utilize aircraft simulators and stream line lesson sequence.

Academic/Professional Affiliations and Development

- Alice T. Clark Program Participant (2018 - Present)
- Aircraft Owners and Pilots Association (AOPA), 2007 – Present
- University Aviation Association (UAA), 2011 – Present

Community Outreach & Engagement

- Airport Liaison for Fergus Falls Economic Development Committee 2018 - Present