



# SKYWARD



## Welcome Back!

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### [ Upcoming Events ]

<b>ATC “Best Practices” Conference</b>	<b>Sep. 24</b>
<b>UND Career Fair</b>	<b>Oct. 1-3</b>
<b>Veteran’s Day</b>	<b>Nov. 11</b>
<b>Last day to drop</b>	<b>Nov. 15</b>
<b>Thanksgiving Recess</b>	<b>Nov. 28-29</b>
<b>Finals Week</b>	<b>Dec. 16-20</b>

Welcome to the Fall 2013 semester! There are many new and exciting initiatives underway within the Department of Aviation this academic year.

- Last year we said good-bye to just over 200 of our students as they successfully graduated with their desired degrees and this year we welcome just over 300 new students to our aviation program.
- The new academic catalog that was published this summer includes two new aviation specializations in Aviation Safety and Business Aviation. These specializations can be completed by any aviation student wishing to expand their knowledge in those topics.
- We have also set up a new Aviation Safety and Data Analysis Lab on the third floor of Odegard Hall to provide a space for hands-on safety learning.
- In September, UND will host the FAA’s ATC -CTI Best Practices Conference. This brings together FAA managers and educators to discuss the future of ATC training.
- Lastly, this summer UND was the first institution to be granted authority to certify our graduates for the Restricted Airline Transport Pilot Certificate with reduced aeronautical experience. This recognition by the FAA and industry comes at a time when pilot hiring is expected to increase dramatically.



*Dr. Kent Lovelace, Chair*

We will be hosting three airlines this fall, which are coming to recruit future pilots for their respective companies. ExpressJet Airlines will be here Sept. 9 to hold information session about their company and the ExpressJet/Delta Airlines Pathway program. Cape Air Airlines will be here Sept. 24-25 to hold information sessions about their company and the Cape Air/JetBlue Airlines Gateway Program. Finally, Horizon Air will be here the week of Oct. 7 to conduct job interviews for pilot hiring. The industry is looking for qualified, enthusiastic, responsible individuals to become a part of their teams. Take the time to attend these information sessions to educate yourselves about what opportunities exist within the aviation industry.

Have a productive, safe and enjoyable semester.

*Kent Lovelace*

## Safety Hot Topic | SMS and You: Part 2

In the March 4 issue of SAAC Skyward we talked about the first component of SMS, Safety Policy. As we mentioned, Safety Policy deals with both organizational and personal responsibilities for ensuring safety. In this issue let's look at the second SMS component, Safety Risk Management (SRM). This is where we start applying the principles of SMS. Safety Risk Management is just what it implies---the management of risk. In aviation as in any other endeavor we accept the fact that there is an element of risk in everything we do. If we want a risk free environment then we better leave the aircraft in the hangar, park the car, and stay in bed. If, however, we want to be productive and accomplish something worthwhile, then we accept that there are risks involved and look for ways to mitigate them to an acceptable level.



So, you might ask yourself "How do I know there is a risk, and if there is one how am I supposed to mitigate it?" Section 2.1.2 of your SMS document talks about identifying hazards. Once you identify a hazard then you can determine how much risk is involved. Hazards come in all shapes and sizes. For example, ice on the road is a hazard. When you plan your drive to the airport you would probably ask yourself what could be the result of driving on ice. You could slide in the ditch, or possibly collide with another vehicle. Then you weigh your options. You could stay home. Or, you know you have snow tires with studs, and you could drive 35 MPH rather than 65. This would be a very simple hazard identification and risk assessment---the type of thing you do on a daily basis without even thinking about it. Once you get to the airport and start your flight planning, however, the process becomes a little more formal.

When you fill out your solo cross country request form you also complete the pre-flight risk assessment on the back side. The form contains 14 questions about your flight, weather, experience and your physical condition, and is graded on a scale of 1 to 5. The form is based on years of flight training experience and is designed to help you assess risk, so you can make a go/no go decision.

"In aviation as in any other endeavor we accept the fact that there is an element of risk in everything we do."

These are the simplest forms of risk assessment and are used on a personal level. On an organizational level the process becomes much more formal. Section 2.1.1 talks about System and Task Analysis and three instances in which the organization must conduct a safety assessment. These include introducing a new system, a system change, or a new operational procedure. What does that mean? A new system could mean we are opening a flight training operation in Grafton. A system change could involve replacing all the Cessnas with Pipers. A new operational procedure might include requiring all 102 students to solo in 5 flight hours of training. Because there could be a significant negative safety impact on the organization if any changes are not properly instituted, this type risk assessment requires individuals with the necessary knowledge and experience, as well as the ability to think objectively. For example: what risks might there be by requiring a 102 student to solo in 5 hours? One might be a higher chance of loss of directional control; because the student is unable to adequately manage radio communication, is overwhelmed by pattern traffic, and hasn't mastered crosswind landings, etc. If we identified this as the risk we now need to look at likelihood and severity.

This is where our subject matter experts come in. With years of flight training experience they know what happens when changes are made in a course. In addition they may have FDM data and safety reports to draw upon. They may determine, using figure 3 p 2-7, that the likelihood of a runway departure ranks as 'Frequent' (likely to occur within 30 days). Under severity it may rank as 'Major' (injury to persons and/or damage to equipment). Looking at your SRM Matrix the risk is in the red at 5C. If you refer to page 2-8 you will note that the risk is unacceptable, and shall not be commenced until it has been mitigated to an acceptable level.

The final task is to control or mitigate the risk (section 2.2.3, p 2-4). Again, the intent is to find solutions that will reduce the risk to its lowest practical level. Maybe it can't be accomplished safely and we decide not to decrease the solo time to 5 hours. Maybe it can be reduced for some extraordinarily sharp students, in which case we have to develop risk assessment criteria to determine that. And finally, when we make these changes everyone involved must be notified so that our training results remain consistent and measurable.

Next time we'll discuss the third SMS component, Safety Assurance (SA). In the meantime fly safe.

Frank Argenziano

**If you have any safety related questions or concerns about flight operations please contact:**

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701-777-7897  
siewert@aero.und.edu

Frank Argenziano:  
701-777-7822  
argenzia@aero.und.edu

**If you would like to make a confidential safety report, visit:**  
[aims-asp.aero.und.edu/safety2](https://aims-asp.aero.und.edu/safety2)

## ATC Hiring for (Near) UND Grads

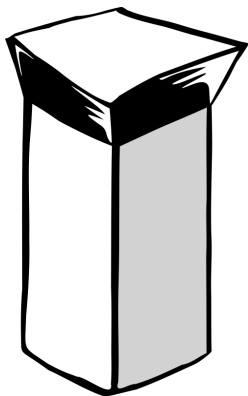
By Colt Iseminger and Paul Drechsel

**C**urrently in Fiscal Year 2013,

due to the US Federal Budget "Sequestration" law, FAA Human Resources is unable to hire any new Controllers. The FAA ATC Training Academy in Oklahoma City, which all new Air Traffic Control-

lers must attend, was closed to new training classes. After "Sequestration" took effect, the FAA was given additional funds to ensure Air Traffic Services were not inhibited by the cuts and furloughs were discontinued. This funding did not completely restore Fiscal Year 2012 or 2013 levels of funding and was not to be used for Training or hiring of new Employees.

The future hiring of Air Traffic Controllers is not definitive at this time due to the "Sequestration" law. The FAA does know the need based on retirements, which on average is around 1,000 per year as outlined in the Controller Workforce Plan as presented to Congress in 2012, but actual hires will be



based on appropriate funding to the FAA. On average, the FAA has only been able to hire a maximum of around 800 controllers a year due to Federal Budget allotment.

The FAA Air Traffic Collegiate Training Initiative Program (AT-CTI), of which UND is a part of, was designed to establish partnerships with higher educational institutions to broaden the employment opportunities in the aviation industry, including air traffic controllers. Per communication with the FAA's AT-CTI Manager, Fiscal Year 2014 budget has not yet been determined. The FAA anticipates that they may be able to bring on somewhere between 400-600 controllers to supplement some of the retirements although this is not yet finalized in Fiscal Year 2014, they hope they can double the number of new hires due to the lack of hiring in Fiscal Year 2013.

The candidates with Temporary Offer letters (TOL's) awaiting further review before assignment of an Academy Training Class will have to have medical and drug tests updated before we can offer Firm Offer letters (FOL's) with Academy Class dates. Since the FAA does not currently have the funding to do this they will have to wait until Fiscal Year 2014 (October 1, 2013) to start them, thus the FAA will not begin training at the Academy until sometime

between mid-November and January.

As for "State Selections" (where new hires will be working after the Academy), those in the CTI community are aware that the FAA is working towards a better method to select and place new hires based on performance at the Academy. This will help them to place those strong candidates at higher-level facilities and at the type of facilities where they excel in training at the Academy. Again, this is part of the FAA future vision and was part of the FAA Independent Review Panel (IRP) recommendations.

The need for Controllers is not decreasing, only increasing every year with retirements, and transfers. The lack of a full FAA budget allotment for Training and hiring will only be compounding annually to the already needed new hires.

For more information visit:

[www.faa.gov](http://www.faa.gov) and use the search function to locate information on the [Air Traffic Collegiate Training Initiative](#) and the [FAA Controller Workforce Plan](#)

## New Restricted ATP



By James Higgins

**A**s you may have heard, there have been some significant changes in the airline industry regarding how future airline pilots will become eligible for employment. In short, Congress passed Public Law 111-216 which mandated that any pilot operating an aircraft at an airline (either regional or major) would be required to obtain an Airline Transport Pilot (ATP) certificate. This law was passed in 2010, but the ATP requirement for airlines became effective in August of this year.

Traditionally, a pilot could obtain their ATP certificate after accumulating 1,500 of total time as well as 500 hours of cross-country time (among other requirements). While these requirements are still in place for the issuance of an ATP, the FAA recently enacted a rule which allows for some reduced flight time requirements and the creation of a new type of certificate known as a Restricted ATP (R-ATP). Pilots who obtain an R-ATP are also allowed to operate as pilots at an airline.

So, how does one become eligible for reduced flight time and an R-ATP? The answer is to

attend, train, take certain prescribed classes, and graduate with an approved degree from an approved university. UND was the first university to receive authorization from the FAA to certify its graduates for this reduced flight time requirement. So long as you graduate with a degree in Commercial Aviation, Aviation Management, Flight Education, or Unmanned Aircraft Systems, you have an approved degree.

What are the new reduced flight time requirements for graduates with these degrees? That depends on how many credits you have accumulated from the list of approved courses while in residence at UND. If you have at least 30 credits from the list of approved courses, you are eligible to obtain your R-ATP with a total time of 1,250. If you have taken 60 or more credits, you will be eligible for a reduced flight time of 1,000. In all cases, the new cross country time requirement for an R-ATP is 200 hours.

Those planning an airline career should take the ATP written examination prior to August 1, 2014. After that time, anyone who wants to

take the ATP written will have to complete an ATP Certified Training Program (CTP) which entails among other items, 30 hours of specialized academic ground instruction, four hours of specialized training in a Level 4 or higher Flight Training Device (FTD), and six hours of training in a full-motion Level C or higher flight simulator. If you take the written before August 1, 2014, you will have 24 calendar months after the completion of your exam to obtain your ATP without having to complete an ATP CTP.

**For more information, or to see the list of approved courses, visit the department's ATP information website at [www.avit.und.edu/atp](http://www.avit.und.edu/atp) or visit with your Advisor.**

# A Lesson from the Wright Brothers

By Christi Ecrivian



**T**here is truth to the idea that with great reward comes great challenges. The aviation industry is a prime example of this virtue.

We were all drawn to the aviation industry in some way. For some of us, it was the desire and passion to be airborne. For others it was the excitement of the industry itself. Aviation has a special magic to it that offers a sense of grandiose involvement and achievement – but not without challenge.

We are all working towards our dream career in aviation, but there are times when we feel our dreams are unreachable. Often times the work, energy and money we invest in our dream aviation career seems to go to waste.

The Wright Brothers didn't achieve their first manned flight without much trial and error – and hardship. Surely, there were times when they felt that all their time, energy and money

was pointless.

Before their first powered flight, the Wright brothers spent years developing and testing gliders. As they began to plan a power flight they faced the challenge of developing the first propeller for use in the air (propellers up to this point had only been developed for marine purposes). After much research and debate, the brothers finally developed a usable propeller.

Once they had designed and built their powered aircraft, they began to plan their first flight at Kill Devil Hills. For weeks the Wright Brothers' first flight was delayed due to broken propeller shafts. On December 14, 1903 Wilbur won by coin toss the chance to conduct the first powered flight. That flight however, was only a partial success as the aircraft stalled after takeoff and suffered damage.

Following the accident, the brothers made

repairs and finally achieved their first flight on December 17, 1903. As historic of a day this was, at the time, the Wright Brothers received very little attention for the achievement. After that day, the Wright Brothers still faced a large amount of work to continue the development of a more stable and powerful aircraft. It wasn't until several years later that the brothers had convinced enough people that their designs were actually usable as in powered flight.

We are fortunate to be in an industry as exciting and full of potential as aviation. The Wright Brothers faced an incredible challenge of achieving their dream by their own hard work and elbow grease. So the next time you begin to feel as though learning to fly, control airplanes or managing an airport is overwhelming, all your hard work will pay off – just as it did for the Wright Brothers.

## Air Race Classic 2013—The Story

By Juan Miguel Pedraza, Division of University and Public Affairs writer

**U**niversity of North Dakota aviation student and flight instructor Amy Warbalow and her teammate Katrina Kugler, a CFI and Supervisor of Flight, were the first UND team to compete in the historic June 18-21 [Air Race Classic](#), a globally renowned women-only event pioneered by legendary aviator [Amelia Earhart](#) and others.

The 2,400 mile VFR, daytime-only race started in Pasco, Wash., and ended at Fayetteville, Ark.

The UND women's team finished 18th among 30 teams overall and 6th among the 13 collegiate teams; Kugler and Warbalow also won the Collegiate Ester Lowery Stafford Scholarship, the first time this was awarded. They were among the seven teams that flew a "clean"—that is, no errors—race.

Kugler is from Yuma, Ariz.; Warbalow, also majoring in aviation education, is from Minocqua, Wisc. The two tracked their race prep and progress on their [blog](#). They also carried a stuffed animal given to Amy by her students at the North Dakota Vision Services School for the Blind, where she works part-time.

To prepare for the race, Kugler—whose husband Andrew also is a UND CFI—and Warbalow met regularly with UND Director of Aviation Safety Dana Siewert, with UND meteorologist Fred Remer, with faculty men-

tor Elizabeth Bjerke, and with UND Director of Extension Programs and aircraft fleet manager Don Dubuque to discuss the special requirements for mountain flying.

Both women started their flying careers real early.

"My first plane ride was when I was only 10 days old and I have been flying with my



Amy Warbalow (Left) and Katrina Kugler (Right)

dad—an airline captain—ever since," said Warbalow.

Kugler went up with her and his flight instructor a couple of times when she was nine.

"I thought it was really cool, so I said, 'I'm going to do this!'" Kugler said. She flew regu-

larly in high school and led her local Civil Air Patrol squadron in her hometown.

The University's, families' and friends' support counted big for both women.

"Katrina's parents flew up to Pasco, Wash., to see us takeoff and my parents flew their own Beechcraft Skipper into Fayetteville to see us at the end," Warbalow said. And UND alumna and Wal-Mart corporate pilot Julie Hall met the women at race's end.

In addition to all the faculty support and the use of a University aircraft and facilities, the team received financial support from the UND Aerospace Foundation, which provided money to cover registration fees, fuel costs, and hotel room stays.

Kugler and Warbalow staged a cookout at UND Flight Operations after the race.

"We used our scholarship money that we got to say 'thank you' to the school and the (Aerospace Foundation) and everybody that really helped us out," said Warbalow.

The team's participation in this year's Air Race Classic "rejuvenates why we're all flying in the first place: so we can go fun places and do fun things," said Bjerke, associate chair of aviation. "Sometimes you lose sight of 'Wow, I have this certificate. I can go fly to Washington. I can do all these neat things with my pilot's license.'"

## Internship Spotlight | FedEx Express

By Sébastien Joubert

I have been working in the Flight Coordination Department at FedEx Express since June 2013. This co-op is a year-long paid position in the Air Operation—Flight Coordination department located in Memphis, TN at FedEx World Hub at KMEM (Memphis International Airport). My time so far at FedEx has been extremely gratifying and rewarding. This placement has allowed me to make so many connections and has also presented an opportunity for volunteer work, as well as ways to challenge myself both academically and in my flying.



*Sébastien Joubert seated in the cockpit of a MD-11. Sébastien is a senior Commercial Aviation student from Winnipeg, Canada.*

I obtained this co-op through the student center which had this position posted on the “Internships and Co-op” section of the aerospace website. The process was very typical to a job interview and airline application. First, a resume and cover letter were created and sent to FedEx. Next a representative from FedEx interviewed the selected candidates on campus at UND. After this, the rep from FedEx made his final decision and I was offered the position via a

phone call a few weeks following the interview. Each 6 months FedEx hires two individuals from around the country and the world. This means at any given time there are always 4 student co-op participants. Currently we have Keaton from Vancouver, WA (UND student), Nikita from Dubai, and Jen from Chicago. This position is highly sought after and therefore the process can be competitive, however, it has been very humbling to be given the opportunity to represent UND during my term here.

Our job as Flight Coordination is quiet multifaceted. We are the liaison for crewmembers to everything from Dispatchers to Gate Gourmet (Catering). We help choreography the daily launches and assist with dispatching, line support, and trip planning as necessary. We work side by side with full time staff and work shifts ranging from days, nights, and weekends... FedEx never sleeps! This position allows you to interact directly with pilots, dispatchers, and support crews every day.

During the course of the co-op I've been able to get tours of the FedEx Hub, Corporate offices, and Ramp Tower. I have also been inside every aircraft in the FedEx fleet and have been able to see the FedEx training facility. Furthermore, I have been lucky enough to get some simulator experience in the MD-11 and Boeing 757 (all of which can be logged!). I have also taken the opportunity to connect with various professional organizations that offer many volunteer opportunities. I have participated as a leader for the ACE Academy, a camp for inner city youths to get exposed to the

fields of aviation led by the Organization of Black Aerospace Professionals (OBAP.org). I have also been actively involved as a Flight Instructor for a local high school which hosts a National Flight Academy aviation program. These opportunities have allowed me to make connections and friends, and are a great way to give back to the community, something which FedEx places a lot of emphasize on!

I hope that my story has inspired you to pursue a co-op or internship position at some point during your studies. The experience and people you will meet during your time will be priceless and will certainly help you become a better and well-rounded individual. My word of advice for you is to take a chance, choose a company wisely and make the most of your experience!

Interested in an internship?  
Visit

[www.studentservices.aero.und.edu](http://www.studentservices.aero.und.edu) and click on the “Employment” link on the left and select “Co-op/Intern.”

You may also stop by Student Services on the second floor of Odegard Hall for further questions.

## Faculty Research at UND | IFR Flight Plans

Leslie Martin and Mark Dusenbury are conducting research in collaboration with Embry-Riddle Aeronautical University on accuracy of position-indicating systems and IFR flight plans. The project uses RADAR, ADS-B, Airport Surface Detection Equipment (ASDE-X) and Flight Data Monitoring (FDM) to compare various data points indicating location and the accuracy of those data points.

Phase one of the project compares location data from ADS-B and ASDE-X reports to the on-board GPS system (FDM) to study the differences between reported location and actual location during taxi operations.

Phase two of the project studies the completion of IFR flight plans as they were filed. The project focuses on flights conducted in the Minneapolis and Chicago Center areas (ARTCCs). The filed route for each IFR flight plan is compared to the actual route that was flown. Many areas of data, such as total distance flown versus planned, straight line distance and differences between filed and actual altitude, are compared and analyzed. After each flight, the pilot fills out a data form that supplements data retrieved from computers. By mid-August over 60 flights had been completed.

One of the goals of the research is to use the data to develop models of General Aviation air traffic behavior. The information gained during the research will be submitted to the FAA in March of 2014 and may be used as part of the development of NextGen technology.

# July Winners for CFI and Student of The Month

## Instructor: Beau Laniel

“I would like to nominate instructor Beau Laniel. I was very impressed with Mr. Laniel from the very first lesson I had with him. He was a great instructor who took extra unpaid time to help me make sure that I felt ready for my 112 stage check. His phone was always a means for which I could ask him questions and calm my nerves even when he was on bike rides or working out. He also had very creative ways of helping me remember things like wake turbulence avoidance. My one and only regret about Mr. Laniel is that he doesn't have his CFI because I would have loved to be able to take 221 with him this fall. I have had several different instructors throughout my private training, all of whom were alumni of UND and Beau was probably the best instructor I have had thus far.”

## Student: Jun Numata

“Jun is one of the most respectful and cordial person I have ever met. He always responds with a thank you and a yes sir. He has a very detailed and professional demeanor, and it is very obvious that he puts a lot of effort into becoming the best and to apply new skills and techniques to his repertoire. One of the most teachable students I have ever had, Jun is always taking notes and asking a multitude of questions to make sure he can understand and apply what you are teaching. I would highly recommend Jun for Student of the Month and am confident that he has a bright and successful career in aviation ahead of him.”

## Lessons from the King

By: Jim King

Summer and autumn bring exciting yet sometimes dangerous convective activity. Use these tips to avoid thunderstorms and fly safe this time of year

- 1) Do not takeoff or land in the face of an approaching thunderstorm. A sudden gust front of low level turbulence could cause loss of control.
- 2) Do not attempt to fly under a thunderstorm even if you can see through to the other side. Turbulence and wind shear under the storm could be disastrous.
- 3) Frequent lightning indicates the probability of a severe storm.
- 4) Do not fly IFR into any air mass containing embedded thunderstorms.

- 5) Minimum distance to maintain from thunderstorm cells are (a) 5 miles when flying below 10,000 feet MSL (b) 10 miles when flying between 10,000 and FL250 (c) 20 miles when flying above FL 250.
- 6) Cells with tops above 35,000 feet are extremely hazardous.

Use these three steps for thunderstorm flying:

- 1) AVOID
- 2) AVOID
- 3) STAY AWAY



## From the Editor

The Student Aviation Advisory Council (SAAC) would like to welcome every one back for the beginning of the fall semester. As we all look forward to this fall we see that every semester brings new challengers and with those challengers come great rewards.

This Fall SAAC Skyward is beginning its second year of publication. As we start out this semester, we would like to invite anybody in the Aerospace School to contribute articles for publication. Whether you are an undergraduate or graduate student (from all majors in aerospace), faculty member or CFI/Associate, we would love to make your contributions part of the SAAC Skyward monthly publication.

SAAC Skyward aims to help accomplish the two purposes of SAAC's existence: to act as line of communication between students and the administration and to inform students about issues at UND aerospace. Your contributions and input concerning this publication will help further these two goals.

Have a great semester!

Troy Merritt  
Public Relations

Items for SAAC Skyward may be e-mailed to Troy Merritt at [SAACSkyward@gmail.com](mailto:SAACSkyward@gmail.com)

### Fall 2013 Officers

President— Christopher Brauckman

Vice President— Aaron Olson

Secretary— Dalfred John

Treasurer— Miles Laffitte

Public Relations— Troy Merritt

Technology Chair— Nick Rocci

Student Outreach— Brent Eastes

Events Coordinator— Christian Smith

Special Projects— Kyle Koukol

Ex-Officio— Aadhil Niyas

**All Students are invited to our weekly meetings**

**Sundays at 4pm in Streibel Hall**



Visit us at:  
[saac.aero.und.edu](http://saac.aero.und.edu)