UND Aerospace has reached another milestone in Unmanned Aircraft Systems (UAS). On October 9th 2014 the University of North Dakota and the UND Aerospace Foundation broke ground onsite of the newly planned Robin Hall. The University will soon boast with a new 66,000-square-foot aerospace research facility, which will house a training and education center, offices, classrooms, simulators and designated spaces for UAS research. Named after major contributor Si Robin who has continuously supported UND Aerospace over the years, Robin Hall will be located on the corner of James Ray Drive and University Avenue (west of Ryan Hall). The latest built UND Aerospace campus building was Clifford Hall constructed in 1991. This is a much needed and anticipated addition to the John D Odegard school and legacy. In August, the State Board of Higher Education (SBHE) Challenge Fund Committee approved a state grant of $1 million for the proposed UAS research building which when combined with the $24.9 million in private donations made this construction project possible.

The groundbreaking ceremony was well attended by UND faculty, staff, students and other guests. Among the many speakers were President Kelly, Dean Bruce Smith, UND Aerospace Foundation (UNDAF) Board President Larry Martin, Lt. Governor of North Dakota Drew Wrigley and Senior Senator John Hoeven who all expressed excitement for the project and gratitude towards Mr. Si Robin. A very humble Si also shared some words of appreciation, passion and admiration toward the Aerospace department and committed to another visit when the building is up and running.

By: John Dalfred
SAAC President

FAA Knowledge Test Practice
Answers are on the next page

Private:
What causes variations in altimeter settings between weather reporting points?

A) unequal heating of the earth surface.
B) variation of terrain elevation
C) coriolis force

Instrument:
Should you experience buffeting or vibrations after flap extension when icing conditions are possible, the most likely reason is

A) incipient tailplane stall
B) aerodynamic stall due to increased AOA
C) aerodynamic instability due ice forward of the ailerons

Commercial:
The performance tables of an aircraft for takeoff and climb are based on

A) pressure / density altitude
B) cabin altitude
C) true altitude
Stabilized Approaches

Back to basics

A review of Fatal Accident, Loss of Control data for the past 14 years has shown that Maneuvering followed by Approach are the top critical phase of flight killers.

At UND, we have embraced stabilized approach concepts as a means to ensure safe operations during critical phases of flight. Every training flight should provide emphasis on stabilized approach criteria as well as every stage check. The “Zero Tolerance” policy requiring a Go-Around if stabilized approach criteria has not been met by 200’ AGL has led to a dramatic decrease in approach and landing mishaps. General aviation pilots can also increase the safety of their approach and landing operations by adhering to stabilized approach criteria.

As an Airman:
- Practice maintaining a stabilized approach to the runway
- Always plan for the missed approach or go-around maneuver.
- Manage distractions – MAINTAIN A STERILE COCKPIT
- Establish personal minimums and set personal standards higher than those in the PTS.
- Train Often, train for the not so normal, be ready for anything.

Flight Instructors:
- Teach and enforce personal criteria for a stabilized approach
- Emphasize the effects of wind on traffic pattern operations during flight review and transition training
- Utilize Scenario Based Plans of Action every time you work with a student

Know your Aircraft, Practice and develop your Airmanship skills:

Resources:

- www.UNDaerocast.com (youtube)
- Stabilized Approach
- Faulty Approaches (Part I & II)
- UND Standardization Manual
  - C172: Pg. 1-20
  - Seminole: Pg. 1-22
- FAA
  - AC 120-108 “Stabilized Approach”
  - Airplane Flying Handbook
  - PHAK

GFK Clearance Delivery - 135.725

“We have Clearance … Clarence!”

G FK is currently testing out a Clearance Delivery frequency for IFR and VFI clearances. After meeting with FAA Air Traffic Manager, David Shoup, he mentioned this change has come about for 2 main reasons. 1st being the FAA tower observation this past month. The FAA noticed due to volume, the ground controller spent much time looking inside at the computer for clearances which takes away from the controllers main priority, ground control! Our controllers do an outstanding job, this change in operations should allow them to focus even more on avoiding runway & taxiway incursions.

The second reason comes out of automation! Currently when an aircraft contacts GFK TRACON inbound to grand forks, approach then calls GFK tower on the phone to give them information on that plane. This information normally includes the type of aircraft, tail number, inbound reporting point, ATIS information, and VFR landing information / approach for IFR traffic. With the high volume of inbound aircraft, there is normally a controller in the tower who has the responsibility of organizing this information on a “slip”.

That can now be replaced by a STARS (standard terminal automation replacement) system. This system will track and display all of the information mentioned above electronically from TRACON to the tower controller. This automation frees up the data processor controller to now monitor the STARS automation as well as run the new clearance delivery frequency. (135.725).

David was very excited of the changes coming to our ATC tower and hopes the frequency will be fully operational by February 2015.

By: Nic Pelletier
GLIDE SPEED and DISTANCE

With a glide speed of 68 knots and no wind the Cessna 172 will travel one and one half miles per 1000 foot of altitude loss. Assuming a person is the local practice area at 3,500 MSL (approx. 2,500 AGL) distance to ground contact is expected in 3.8 miles.

Distance to a downwind position abeam the planned touchdown point at 1,000 AGL would be approx. 2.3 miles. Initially fly the best glide speed for aircraft weight to achieve the maximum range. With a tailwind of 10 kts decrease glide speed by 4 kts; 20 kts decrease glide speed by 6 kts. With headwinds increase glide speed by 50% of the headwind velocity. Reduce the glide speed by 5% for each 10% decrease in gross weight below the maximum. A non-wind milling propeller will increase glide distance between 8.5% and 10.2%.

“Happy flying & Safe Skies”

By: Jim King
Will Young  
**Education:** Commercial Aviation and Business Management, UND 2012  
**Company:** SkyWest Airlines, MSP  

After graduating in 2012, I transferred to UND’s flight training center in Phoenix, Arizona to flight instruct. Flying in the desert southwest provided a wonderful compliment to all that I had learned in Grand Forks. New challenges arose like complex airspace, mountainous terrain, and high density altitude airports. The new experiences helped me become more well-rounded and confident going forward towards an airline interview. As a previous intern with SkyWest, I had done my best to stay properly networked in the years following my internship, and it paid off big time. While the FAA was finalizing their restricted ATP minimums throughout 2013, I patiently continued to instruct until all of the dust settled and the new guidelines were in place. A few emails to HR later, and my number was finally called in December of 2013. An all-day interview in Salt Lake City culminated to an offer to start class at the end of the month. Since joining SkyWest I have moved to Minneapolis and begun flying the CRJ all over the country. The 121 world comes with new challenges you never faced flight instructing, but if you can handle working odd hours, the opportunities are endless and the experiences are unforgettable. Paralleling an A380 going into San Francisco or flying the River Visual into Washington National are small reminders of why you worked so hard. For me, that moment came a few months back when I landed the CRJ on 35L in Grand Forks for the first time. Suddenly my aviation career had come full circle and I felt as happy as the day of my first solo. Beyond the excellent education I received from UND, I still believe that the keys to success in any field are hard work and a great attitude.  

“Stay motivated, stay humble, and we’ll see ya up there.”

Kelly Koss  
**Education:** Commercial Aviation, UND 2011  
**Company:** Allegiant Air, Ft Lauderdale, FL  

As a recent graduate of UND, I’ve been lucky enough to experience a wide range of aviation positions that have confirmed the passion and excitement that I’ve always had for flying. Life after graduation has been very fast paced. Immediately after I graduated in May 2011, I started flight instructing for the University. I graduated with just over 250 flight hours and after only two short years of instructing at UND, I had 1,550 flight hours.  

Once I achieved ATP requirements, the interviews for regionals started immediately. I interviewed with TransState, Republic, American Eagle, and Express Jet; pretty much every regional that was hiring at the time. I weighed such factors as base locations, work rules, wages, equipment, and recommendations from others in the industry. It was a tough decision, but after weighing the options, I accepted the position at Express Jet and, started class in June 2013.  

Walking into ground school on the first day, I was both excited and nervous. Not sure what to expect now that I was out of the academic environment, but I can tell you that UND did an excellent job of preparing me for the airline industry. Ground school takes about a month and you learn a lot! It truly is like drinking from a fire hose. About another month of simulators and then I was typed on an ERJ145. Flying across the country and seeing new cities was a thrill. Sometimes the schedule was difficult, however it was all new and exciting. A few months after working with Express Jet, a family friend from Allegiant Air called me and informed me the company was hiring pilots, asked me to update my resume and send him a copy. A couple days later, I met the chief pilot at Allegiant Air, received an interview, and since January 2014 I have been with Allegiant Air. Currently am a First Officer based out of Ft. Lauderdale, FL on the MD80. One of the most thrilling experiences I had in my current job is getting to fly into GFK where I first started my career. The future looks positive for me at Allegiant Air. Once I receive the required time, I look forward to upgrading to captain and having the option to switch to the Airbus or even the 757. In the end, I am very happy with my career and grateful for the knowledge and experience that I gained during my time at UND. My advice to future aviators, work hard and don’t ever give up on your dreams, because if you do, you may never know what you can achieve!
UNIVERSITY OF NORTH DAKOTA

**UNIVERSITY AIRLINES Co-op**

For the past 45 days, I have served as an Intern at United Airlines. It has been an outstanding experience and given me the opportunity to work on projects that I may not get to do again for a very long time. Projects include:

- Updating checklists the captain upgrade course.
- Developing an examination for basic Indoc training
- Working with executive leadership building biography presentations for guest speakers
- Working with a team to advance the CRM/TEM (Threat Error Management) guidelines
- As well as working on projects, I have had the opportunity to fly the 737-300 simulator, sit in on B777 lessons and overall have learned a great deal about the basics of flying airline jets. Probably the most important thing I have gotten from this internship is the friends and contacts I have made. This gives me almost an unfair access to so much knowledge that will give me an edge on getting into and eventually helping to revolutionize the industry in the future. Through friends and networking, I have learned more in the past month and a half than I have in two and a half years at school. I would venture to say this is the best internship anyone can get their hands on in this industry.

By: William Hughes

**DELTA FLIGHT SAFETY**

I am currently spending this semester as a Flight Safety Intern for Delta Air Lines in Atlanta, Georgia. I work closely with 3 groups that make up the flight safety team. FOQA (flight data), ASAP (pilot and work crew safety reports), and investigations. Together, we work daily to improve the overall safety and quality of the airline.

With FOQA, I monitor the efficiency of collecting flight data and hold meetings on the future use of wireless data collection. I have also attended a meeting with the NTSB in Washington D.C. for a discussion on better airplane tracking and steps we’re taking toward the future. We also had a fun day on the lake called AQUA FOQA where the 3 coworkers on the FOQA team, a few ALPA Gatekeepers, and several others went for a day out on speed boats tubing and waterskiing.

With the ASAP team, I regularly read safety reports from the pilots and flight attendants. I also attend weekly meetings with the General Manager of Investigations as well as the Director of Flight Safety to discuss current events within the airline and appropriate steps to take forward.

For investigations, I have gotten to investigate an engine fire with the NTSB as well as view operations in Atlanta’s ramp tower control. Next month I travel with Delta to Seattle and Wyoming to further experience safety within firefighting and winter operations.

This internship has given me so many opportunities I could have only dreamed of; I’ve flown a B777 simulator and can sit jump seat on any domestic or international flight. This internship has opened so many doors for me and I would like to thank Professor Brandon Wild for introducing me to aviation safety and supporting me 100%.

By: Joseph Rolfes

**UNITED FLIGHT OPERATIONS**

My name is Christian Smith; I’m a Junior this year majoring in Aviation Management. After running the SAMA Career Fair in 2014, I was offered the opportunity to interview with United Airlines as a Flight Operations intern. We were flown down to Houston in early August to interview in front of three United Representatives. They called about a week later saying I’d be one of fourteen interns chosen for a base anywhere in the country. I was placed in Denver, CO at the Chief Pilots Office inside Denver International Airport’s B Concourse.

Captain Bebe (Beeb) O’Neil is the only female Chief Pilot in the United system and is regarded as one of the most respected Chief’s in the company. Her office manages pilots in many regards: from retirements to medical and general LOA’s to furloughs and disciplinary actions, they see and do it all. My job in the works is to support as necessary and take on various projects to keep the office running smoothly. One of my most memorable jobs was being the right hand man for our United Pink Program Fundraiser to support October Breast Cancer Awareness. I worked with many companies to donate items for our “raffle” rising close to $4000 in just one month.

My direct supervisor Matt Spensks and Bebe told me on the first day I would not be working on projects daily, as another large portion of my job will be getting out in the field to build a full understanding for day-to-day airline operations. Over the next few months I’ll be on jumpseats for revenue and ferry flights, Line Maintenance calls, Customer Service, Airport Fire & Rescue, and Flight Attendant training and ops. It will be an unparalleled experience not attainable in any classroom environment. I have fully enjoyed my time as an Intern so far and can’t wait to see what the next few months will hold. This experience has proven limitless, not to mention unlimited flight benefits to anywhere in the world every single weekend! I would encourage every student in the Odegard School to keep an open mind about internships. They take a small amount of time from your schooling now and provide a big return on time later. Please feel free to contact me if you have any questions about the application process.

By: Christian Smith

Find internships available at www.aviation.und.edu
The purpose of the Student Aviation Advisory Council (SAAC) is twofold:
1. To act as a line of communication between the student body and the administration at the aerospace college
2. To inform students about issues at UND Aerospace

**Get Involved!**

**November 12th**
United & Delta meet & greet in the Loading Dock
7PM - Everyone is welcome!

**November 14th**
12PM Odegard Hall

Meetings resume Spring 2015

**Student Aviation Advisor Council**

**APPLY TO JOIN SAAC!**

The SAAC application will soon open, look for ads in Odegard as well as visit saac.aero.und.edu for details.

Wonder if SAAC is for you? Join us for a meeting!
Every Sunday in the Streibel Hall Conference Room @4pm

**Interview Date:** December 7th @ 5:30 PM

**Fall 2014 SAAC Officers**
Dalfred John, President
Nick Rocci, Vice President
Chris Brauckman, Public Relations
Muhammad Aadhil, Treasurer
Tom Flanagan, Technology Chair
Michael Turner, Event Coordinator
Christian Smith, Internship
Kyle Koukol, Internship

As we continue to publish the Skyward, I would like to invite everyone to contribute articles for publication as well as voicing any ideas, concerns or questions about UND Aerospace school or operations to SAAC and SAAC Skyward.

Visit our website saac.aero.und.edu for a direct form linking your concerns to the Aviation Advisory Council, or stop by our office in Odegard anytime.

We wish you all a Happy Holiday & Safe Skies!

*Items for SAAC Skyward may be emailed to SAACSkyward@gmail.com*