UNDAEROSPACE
UNIVERSITY OF NORTH DAKOTA
SAAC
Student Aviation Advisory Council

Volume 1 Issue 6 February 4, 2013

PREDICTING AN AIRCRAFT ACCIDENT

WHAT: Spring Safety Presentation
WHEN: Tuesday, February 12th – 7:00PM
WHERE: Chester Fritz Auditorium

UND Aerospace welcomes Captain Michael Schilz as our Spring 2013 Safety Presenter. Captain Schilz graduated from the United States Air Force Academy with a B.S. in Behavioral Science and Leadership. After graduation, Captain Schilz was commissioned a Second Lieutenant and served as Squadron Safety Officer for the 28th Air Refueling Squadron, later transferring to the 38th Strategic Reconnaissance Squadron. In 1989, Captain Schilz was hired by Northwest Airlines where he flew the B-727, B-757, DC-9, DC-10, and A-320. He is currently a Line Check Airman on the A-320 for Delta Air Lines, and works as a gatekeeper in the company’s Flight Operational Quality Assurance (FOQA) Program. He is also currently the Director of Safety Information and Analysis Programs for the Air Line Pilots Association (ALPA).

Flight Data Monitoring (FDM) is becoming more common in general aviation as the technology becomes more accessible. FDM and FOQA share many things in common, including the goal of PREDICTING aircraft accidents BEFORE they happen. Historically, post-accident investigation led to the identification of operational hazards and thus a reactionary shift in safety actions to prevent similar accidents. FDM/FOQA enables operators to identify unsafe trends and institute procedures to increase safety and avoid the accident before it ever happens. Captain Schilz will share his experience with FOQA, how it has helped prevent accidents, protected pilots, and increased safety for all aviation users.

Doors open at 6:30 PM. Registration to win an iPad Mini will be from 6:30 PM – 6:55 PM. Tickets will be handed out upon entry. Additionally, registration for FAASTeam Wings credit will be available prior to the presentation. If you have any questions please contact any of the following:

Paula Carlson
0 – 701-777-7851
E – pcarlson@aero.und.edu

Seth Hardley
O – 701-777-7952
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Sam Wagener
O – 701-777-7965
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FAA Knowledge Test Practice

Answers are on the next page

Private:

What is one purpose of wing flaps?

A) To enable the pilot to make steeper approaches to a landing without increasing the airspeed.

B) To relieve the pilot of maintaining continuous pressure on the controls.

C) To decrease wing area to vary the lift.

Instrument:

Which instrument provides the most pertinent information (primary) for bank control in straight-and-level flight?

A) Turn and Slip Indicator

B) Attitude Indicator

C) Heading Indicator

Commercial:

At high altitudes, an excessively rich mixture will cause the engine to:

A) Overheat.

B) Fouling of spark plugs.

C) Operate smoother even though fuel consumption is increased.
Are You Security Minded?

In November of 2012, the Transportation Security Administration (TSA) conducted an in-depth inspection of the Grand Forks International Airport’s security program. This inspection included UND Aerospace Flight Operations, as well as all of the other airport tenants. In addition to those required by the Grand Forks Airport Authority, Flight Operations has its own security policies and procedures, covered in detail in section 11 of the Aviation Safety Policies and Procedures document. The TSA inspection noted both pluses and minuses in their findings. On the plus side, students and instructors were good about having their ID badges displayed while in the hangar or on the apron. In effect the TSA confirmed what we already knew through daily observation. They also noted that security at the doors leading to the apron was effective. The TSA inspector was challenged when attempting to exit, and there was no tailgating (student or instructor following someone out without swiping their card) observed.

On the minus side they noted a need for improvement in challenging while on the apron. While several individuals did challenge the TSA inspector, there were also several that did not. This weakness was not unknown to us. If you are familiar with our Sneaky Pete program, you know that periodically we have an individual without an ID out on the ramp, with the sole purpose of seeing if anyone will challenge him/her. We even offer $25 cash for catching Sneaky Pete. Last week Sneaky Pete was finally challenged AFTER ALMOST A MONTH ON THE LOOSE. The TSA regulations are very specific, as are the penalties for violations. If you recall from your security training when you applied for your ID badge, failure to challenge someone without an ID card displayed can have a significant monetary penalty. Also, for the privilege of having access to a secure area you required to ensure security by challenging, or reporting suspicious activity.

There are several reasons that people do not challenge—and none are valid. These are some we have heard:

“Why? Because their access may have been revoked; they are required to display their ID while in a secured area (11.1.4.A); and, as a person authorized to access these areas, you are required to challenge and report any unbadged individual (11.3.2).

“I don’t want to challenge an instructor, because later on they might hold that against me on a stage check.”

All of the reasons for challenging from the previous paragraph apply, plus, how would you feel if that instructor failed your stage check because you DIDN’T challenge?

“I feel really uncomfortable challenging people.”

Get over it! You are going to be aviation professionals, and your future jobs as pilot, airport manager, FBO operator, air traffic controller, military professional, etc., will require your full participation in security issues.

Frank Argenziano
Assistant Director of Aviation Safety & Security

ATTENTION AVIATION STUDENTS!

2012 1098-T Information

Effective 2012, Aviation flight costs will now be included in Box 2 of the 1098T with other tuition and fee charges. Aviation Students will no longer need to obtain this information from Aerospace.

If you have questions on your 1098T information, call Student Account Services at 701-777-3911
December Winners

Instructor of the Month
Ryan Wilson

“I had Ryan for 221 during the Summer semester, and he still hasn’t stopped teaching me. During the time when he was my instructor, Ryan immediately recognized a problem that I had—fear and lack of confidence when landing in winds greater than 9kts. Numerous times Ryan made a point to expand my comfort zone—never letting me feel any fear because he always told me “he knew I could handle it.” Not only did he teach me to land precisely, he taught me not to be afraid of anything less than the aircraft could handle. Even though we were assigned to each other a week into the summer semester, Ryan helped me finish the course in an expedient amount of time, while also stuffing me full of extra knowledge to help 222 run more smoothly. During 222, he talked me into more confidence going into the stage checks, and he was a huge contributing factor to me passing the instrument written on the first try.”

Student of the Month
David Essink

“I think David Essink should be student of the month. He was my 112 student and he worked hard the entire semester. He had to drive home to take care of his family who got in a very bad car accident, was not brought down by bad weather, worked his own job full time, took on 18 credits, and moved here by himself. He is a hard worker with a great attitude.”

Helicopter Flight Instructor of the Quarter
Annie Pepper

“I would like to nominated helicopter CFII Annie Pepper. She works great with her students and strives to fly as much as possible. She is new to UND but is learning fast and even sitting in ground courses to better herself as a flight instructor. Overall she is hardworking and continually strives to be a better CFII.”

Helicopter Student of the Quarter
Keevan Schimmel

“Less than a month after finishing 244, Keevan took the initiative to ask me for suggestions to help him prepare for 245. I invited him to observe lessons with my new 245 student. Subsequently, Keevan has observed 2 ground briefings and 2 simulator lessons. He didn’t just observe the lessons; he completed the reading and homework assignments as well, just as if he was conducting the observations as his own lessons. He has even started studying for his FAA instrument written exam, even though he hasn’t even enrolled in 245 yet. He is an individual who truly takes ownership over his flight training responsibilities, and makes my job very easy as a flight instructor.”
### Add a Space Studies Minor to Your Aviation degree!

A minor in Space Studies is available to introduce students to the complexities of research, development and operations of a wide array of space ventures. The multi-disciplinary nature of space activity immediately becomes evident, allowing the student to correlate the space experience with high-tech areas in a major field of study.

Political, legal and scientific aspects are dealt with and key technologies are introduced. Students majoring in aviation have found the space studies minor to be a unique and exciting opportunity offered at UND.

Visit the Space Studies Department for more info - Clifford Hall, 5th floor, or call 777-2480. Check out [www.space.edu](http://www.space.edu).

### Aviation 221 Accelerated Course

**Class Specifics:**
- Class will run from March 3, 2013 through May 10, 2013
- Class will meet on Monday, Wednesday and Friday from 1:00-2:50pm
- Students will still be expected to complete their flight training for Avit. 221 in the Spring semester.
- Students must have the schedule availability for a flight lab that meets 5 to 6 times a week.
- Class will be limited to the first 30 students

**Class Registration:**
- Registration into the class can only be accomplished by meeting with Elizabeth Bjerke or Bob Laux in person.
- Students MUST be done with the Avit. 102 stage 28 prior to registration.
- Students MUST have above a 2.50 GPA

If you are interested in registering for this class, and/or have more questions, please contact me either via phone (777-3922), email (ebjerke@aero.und.edu) or in person (Odegard Hall room 205).

Elizabeth Bjerke, Ph.D.
Associate Chair, Department of Aviation

### Lessons from the King

**Aerodynamic braking/Airplane brakes**

1) The use of aerodynamic braking is most effective down to 60-70% of the touchdown speed. If the touchdown speed is 50 knots, effective aerodynamic braking is down to 30-35 knots.

2) At speeds less than that, aerodynamic braking is minor. Therefore aircraft brakes must be used to produce effective deceleration.

**When taking off/landing on ice-covered runways**, (braking action reported POOR) the crosswind component must not exceed 50% of the airplane’s demonstrated crosswind component.

*For example* - if demonstrated crosswind is 17 knots, the crosswind limit for an icy runway is 7.5 knots.

**If your POH does not have a correction factor for runway slope**, consider this:

1) For each 1 degree uphill slope on takeoff add 10% to the computed takeoff ground roll.

2) For each 1 degree of downhill slope reduce the computed ground roll by 5%.

(SAFER – for downhill, use the computed ground roll)
Early last spring, I got a typical bulk email from student services with a few different internships being offered. Being an ATC major, internships are somewhat hard to come by, with most being offered to commercial aviation majors. However, when I saw one being offered at Chicago Executive Airport for airport operations, I stopped to read it. I wasn’t 100% sure what it entailed, but I lived only 20 minutes from the airport so I figured I’d give the application process a shot. The whole interview process was pretty straightforward, and I found out it’d be a lot of cutting grass and maintaining the airfield. One of the cool parts was that I found out they had a UND grad currently working for them and they were familiar with our program; a definite plus for me.

There were three other interns working alongside me; two from the University of Dubuque, and one from the University of Southern Illinois. Within minutes of showing up on my first day, one of the guys from Dubuque started asking about UND, which I found pretty cool. They were all interested in the size of our fleet, the fact that all of our C172’s are G1000 equipped, and the winters of course.

Day-to-day assignments we had included field inspections, cutting grass, and attending operations meetings. Part of our training was to be “airfield certified” so we could drive on taxiways and runways, because it was a towered airport. One of the coolest aspects of the whole internship was being in such close proximity to arriving and departing jets. We would be within feet of Gulfstreams or Global Expresses taking off and right under jets landing while we edged around ILS lights. A major highlight was when a B17, B24 and P51 Mustang flew in for the weekend, and we got to tour them before the public had access. We also got to watch the filming of a scene for the TV show “The Boss” that took place at an airport and worked crowd control for that.

One major advantage I got from all of this was the networking. I’m told over and over again it’s all about who you know, and I saw the advantage of that this summer. During one of our control tower visits, I met the supervisor who is also a UND grad and is good friends with my academic advisor (small world). Not thinking I’d get much knowledge pertaining to my major, I ended up making relationships with the controllers at this airport as well as Chicago’s Midway airport.

I really learned to appreciate all of the opportunities that UND has to offer, as well the education we receive here. It puts everything into perspective to actually work in an aviation environment, and see why it’s important to make the most out of my 4 years here.

-Jack Foley
The Student Aviation Advisory Council is already having one busy semester with a bunch of projects that we are working on. We are currently trying to get a printing kiosk installed in either Odegard Hall or the Link that all aerospace students will have access to. Also, we are looking into the feasibility starting a coffee stand, similar to the one put on by the Management Club in Gamble Hall.

SAAC is also putting together another Aerospace Involvement Expo to include all of the student organizations, so that students can find opportunities to get involved. One of our goals this semester is to see more collaboration among all of the majors within the aerospace college. Have an awesome idea that you’d like to see put into action? Let us know!

How can you get involved with SAAC? Students are always welcome to join us during our weekly meetings. Stop by our office and chat with us as well. You can also submit suggestions either on our website dropbox, or in the box outside our office!

Amanda Pearson
Public Relations