John D. Odegard School of Aerospace Sciences

Department of Aviation
Aviation Degree Programs

B.S.A. - Bachelor of Science in Aeronautics
- Commercial Aviation
- Flight Education
- ATC
- Aviation Systems Management
- Unmanned Aircraft Systems Operations

B.B.A. – Bachelor in Business Administration
- Aviation Management
- Airport Management

M.S. – Master’s of Science
- Aviation (online degree)

PhD. Aerospace Sciences
- Aviation and Space Studies (on/off campus) – 2 students

Fall ‘12
Aviation Department - Students

1,267 Undergraduate Aviation Majors
- 55% Professional flight
- 25% Air Traffic Control
- 13% Aviation/Airport Management
- 7% UAS

40 Graduate Students (masters/PhD)

275 International Students
- Norwegian ATC contract
- Saudi MOI Helicopter Training
- Saudi MOI Fixed Wing Training
- Tokai University/ANA
- EVA
- Air China
  - Air China Cargo
  - Shangdong
Aviation Faculty – Full Time

- Professional Experience – 47 and 19 TA’s
  - 9 general aviation
  - 4 military
  - 6 airline
  - 1 corporate
  - 1 military/law, 2 gen. aviation/law, 1 FAA/law
  - 1 Law Enforcement
  - 18 ATC
  - 1 airport
  - 3 physiology, including 1 M.D.
  - 19 ATC Lab Instructors
UND Aerospace
CRJ-200 Level-6 FTD
UND Aircraft Fleet Status

- Seminoles – 15
- C-172s - 62
- Arrow – 5
- Schweizer 300 – 10
- Bell 206 – 3
- King Air C90B – 2
- C-150 – 3
- Decathlon – 2
- Top Cub – 1
- Citation II - 1

- UAS
  - Crop Cam – 3
  - Telemaster – 1
  - Scan Eagle – 2
  - Raven - 2
  - DraganFlyer – 1

- FTD/AATD
  - SEL – 5 C-172, 1 Warrior
  - MEL – 4 Seminole
  - Helo – 2 S300/B206
  - UAS – 1 Scan eagle, 1 Predator, 2 Reaper
  - CRJ - 1
Safety Programs

- **SMS**
  - FAA pilot project for FAR Part 141

- **FOQA**
  - Currently FDM project

- **ASAP**
  - Safety reporting program currently
Aviation Research Efforts

• Unmanned Aerial Systems (UAS)
  – Sense and Avoid
  – Education of UAS operators
  – Law Enforcement Applications
Aviation Research Efforts

• Center for General Aviation Research (COE) - FAA
  – Automatic Detection Surveillance Broadcast (ADS-B)
    • Helicopter and fixed wing applications
    • How can it increase safety?
    • How can it be used to increase airspace capacity efficiency?
Aviation Research Efforts

• Remote Runway Lighting
  – How can it be developed to improve the use of runways in remote/isolated areas?

• FAA/Industry Training Standards (FITS)
  – Scenario based flight training vs. maneuver based flight training

• Enhanced visual systems (EVS) and terrain avoidance warning systems (TAWS) in helicopter
  – Increase safety of EMS helicopter operations
Helipad Lighting Research – finding the minimum lighting required for landing helicopters.
This helipad was placed at Altru Hospital in Grand Forks.
Aviation Research Efforts

• Runway Braking Action
  – Braking action index numbers = practical information for pilots

• General Aviation Flight Data Monitoring
  – Seeking First GA FOQA program

• Weather in the cockpit
  – How technology should be used

• ASIAS (Aviation Safety Information Analysis and Sharing System)
  – How can GA Safety information be stored and shared