2009 has been another year of successes for the Odegard School. It began with the award of our first National Championship for our Aerobatic Flying Team. This was followed by our Flying Team winning its 15th NIFA National Championship in the past 25 years. This was followed by a major contract award from the Kingdom of Saudi Arabia, expansion of the international programs, an asteroid named North Dakota, after our state, and return of the Norwegian Air Traffic Control training.

We continue to strengthen our academic reputation. Over the course of the past nine years we have grown from four academic departments with three offering Master’s Degrees to five departments all offering Masters Degrees and four offering Ph. Ds. We now offer a Bachelor of Science Degree with a major in Unmanned Aerial Systems and are building an undergraduate degree program in Environmental Studies. Our grants and contracts for research have grown to over $10 million each year and lead all academic colleges at UND. We now have three standing Chester Fritz Outstanding Professors; Leon Osborne, Mike Poellot, and Mike Gaffey, the highest academic honor that the University can bestow on one of its faculty members. Our core focus, as always, is on the undergraduate student population across the entire Odegard School which continues to grow.

The flight line continues to flourish. The US Military Academy Cadets from West Point are here this summer along with a national contingent of Army ROTC Cadets; the first of three classes of 26 helicopter pilots from the Kingdom of Saudi Arabia are enrolled in language courses here at UND as a lead into their flight training. Our Air Traffic Control Program remains #1 of all collegiate training as rated by the FAA.

The International Programs also contribute to our success. Although we sign contracts with their sponsors in order to assist in long term planning, these students are tuition paying, full time, registered students at the University of North Dakota. They are not unlike any undergraduate student at UND including living in university apartments and residence halls, exercising at the Student Wellness Center, and eating on a campus food service contract. They are in every respect UND students. These students not only bring cultural diversity to our campus, but they also get a true picture of life in the United States. They represent a very special part of a very large applicant pool. They are the future leaders of their companies and countries. They return with a lasting positive impression of the Odegard School, North Dakota, and the University.

Please plan to visit. There is a lot to see.

Bruce A. Smith, Ph.D.
Dean, John D. Odegard School of Aerospace Sciences
The University of North Dakota is home to a large number of nationally recognized departments, but few can truly compare to the John D. Odegard School of Aerospace Sciences. Consistently rated as one of the top aviation programs in the nation, UND Aerospace houses the largest non-military fleet of aircraft. Because of its access to a multitude of resources, the college is also a leader in aeronautics and space.

UAVs, contrary to popular belief, are not a new technology. Their use commercially, as well as militarily, has increased dramatically in the past decade. “UAVs are being used more than ever, especially in the commercial industry,” said Cooper.

Some of the key uses of UAVs include weather prediction, firefighting, improving law enforcement and homeland security, and conducting tracking missions in areas that are extremely volatile and dangerous. According to Bearfield, a member of the North Dakota Army National Guard, “UAVs are an important resource for the military because you can send UAVs on missions that are just too dangerous to send in any personnel. There are also important implications for intelligence gathering.” Because the use of UAVs is increasing so rapidly in the United States, questions have started to arise about the legal statutes and regulations that govern aeronautics and space.

“The statutes and laws that apply to a piloted aircraft don’t exactly apply to UAVs,” said Nisbet. This is where Cooper, Nisbet, and Bearfield are putting their legal education into practice.

Recently, UND Aerospace was selected by the Federal Aviation Administration (FAA) to review the legal statutes and regulations under Title 14, regulating aeronautics and space, as they would apply to the use of UAVs. The task assigned to Cooper, Nisbet, and Bearfield is to review the current statutes and regulations governing piloted aircraft and decide whether the law does, or does not, apply to UAVs. All three feel their legal education has given them a solid foundation for conducting this research. “Anyone without a legal education would look at the law and probably think that the law is crystal clear. But, having a legal education causes you to see that actually the law is not clear at all in some cases,” said Bearfield. Cooper feels that being involved in this type of research is useful, practical experience. “Obviously we can’t just say what applies and what doesn’t. We have to offer detailed explanations. You do a lot of research in your classes, but this is new research. It is great experience for the future,” said Cooper.

Their research recommendations are forwarded for review to UND Aerospace professors Doug Marshall, Ernest Anderson, Joe Vacch, and Bill Watson. After the advising faculty review the recommendations, the information is sent directly to the FAA for final revisions and reforms.

“The research we are doing is important because there haven’t been many legal challenges to use of UAVs. The FAA, and other entities involved, want to make sure the regulations are clear before any legal actions are taken,” said Cooper. All three agree there is potential for legal challenges to emerge after the statutes and regulations are refined. “With UAV use you face a lot of privacy issues, as well as more technical questions about control or just use in general,” said Nisbet.

The connection between UND Aerospace and the law school is a perfect match. Cooper feels the connection is not only positive, but smart. He said, “Given the fact the aerospace school is so well established, and there are a lot of students at UND interested in aviation, it only makes sense the two work together.” Bearfield hopes the connection between the two continues to grow. She said, “There is a lot of potential for a strong relationship between the two. The law school does a great job preparing you for legal research, and the aerospace school can offer students a chance to get involved in real, legal research in a field popular on campus.”

Cooper and Nisbet have aspirations to work in aviation law, so this experience has been invaluable. “I received my undergraduate degree from UND in aviation and now that (continued on page 6)
I have my J.D., I am planning on a career in aviation law. It is always something that I wanted to do,” said Cooper. Bearfield was never primarily interested in aviation, but as a member of the North Dakota Army National Guard she has become more interested in UAV technology. “The military is what got me interested in UAVs, and being involved in this research is really interesting from that perspective.”

The future is bright for a continued relationship between the law school and UND Aerospace. Cooper, Nisbet, and Bearfield all feel the partnership brings together two of the University of North Dakota’s best assets, even if the two seem like opposites at the surface level. “Aviation law is something that students at UND are interested in, and hopefully this will allow UND to be a leader in aviation law someday,” said Cooper.

Although the connection between the UND School of Law and the College of Aerospace Sciences is an unlikely match, it has provided opportunities for law students to be national leaders in UAV legal research.

(continued from page 5)

Since this article ran in the UND School of Law’s Law Review, there have been new developments in the Unmanned Aircraft Systems program at UND. In May 2009, the North Dakota Board of Higher Education approved the coursework for a Bachelor’s degree in unmanned aircraft systems. In October, the North Dakota Law Review and John D. Odegard School of Aerospace Sciences are facilitating a symposium titled “Legal and Technical Issues Related to Operating Unmanned Aerial Vehicles in Law Enforcement.”

UND is home to the state of North Dakota’s Center of Excellence for UAS. This center includes the School of Engineering and Mines, Center for Innovation, Northern Plains Center for Behavioral Research, and the John D. Odegard School of Aerospace Sciences. These campus entities are working together to foster economic development in UAVs and simulation applications.

For more information on the UAS program at UND visit www.uasresearch.org.

**UAV Update**

This year marks the 15th time the UND Flying Team has captured the NIFA National Championship title. The team posted an all-time National Intercollegiate Flying Association record total of 469 points. The previous scoring record was 466 points set by Embry-Riddle Aeronautical University – Prescott in 2005.

“The NIFA National Championship is equivalent to the NCAA Championships for athletes,” said Bruce Smith, dean of the Odegard School. “It is a benchmark for measuring the overall excellence of our college’s academic and flight operations activities.”

In addition to bringing home the overall title, the team received individual honors. Co-captain Ryan Guthridge placed first in the Short Field Landing Accuracy event and was named the National Top Pilot. William Gardner took first place in the Simulated Comprehensive Aircraft Navigation event. Ryan Perrin, also a co-captain, was second in overall team scoring with 69 points.

The competition is comprised of several events that include both flying and ground events. The flying events are: Power-Off Landings, Short Field Landings, Navigation, Message Drop, IFR Precision Flight and IFR Simulated Flight. The ground events are: SCAN (Simulated Comprehensive Aircraft Navigation), Computer Accuracy, Electronic Flight Computer, Aircraft Recognition, Pre-flight Inspection, and Ground Trainer (simulator). This competition is an opportunity for the students to practice and hone their skills academically and in flight events.

“This was one of those magical teams that seldom comes along,” said Jim Higgins, assistant professor and UND Flying Team head coach. “The team had extraordinary senior leadership, an abundance of natural talent, and a work ethic not often seen. I am very proud of our complete team effort.”

Space Studies student Brian Shiro has recently been selected by The Mars Society as one of six crew members for this summer’s expedition to the Flashline Mars Arctic Research Station (FMARS) on Devon Island in the Canadian arctic. He and his crew will conduct a one-month simulated Mars mission at the remote outpost in July 2009. The mission will provide the opportunity to conduct a range of research projects focused on understanding the technical and human factors which may be faced by the first human Mars explorers. With his crew-mates, Brian will execute an ambitious research program intended to provide improved understanding of how future human Mars explorers will search for resources via aerial, ground, and subsurface geophysical surveys.

Students in the Field and Sky

Kevin Broadway won this year’s University of North Dakota Student Employee of the Year award. Kevin’s unmatched 100 percent safety record working on the flight line also earned him state and regional honors: North Dakota Student Employee of the Year and the Midwest Association of Student Employment Administrators (MASEA) Student Employee of the Year. After commencement, Kevin will head to the Federal Aviation Administration air traffic control academy in Oklahoma City. He will then move on to the Des Moines airport where he has been hired as an air traffic controller.

Graduate student Gokhan Sever and undergraduate student Robert Mitchell accompanied Dr. David Delene to Saudi Arabia in March for a 30 day field project. David Delene is leading the airborne research project to measure aerosol and cloud properties to enable a better understand of the precipitation formation process in the region. Gokhan and Robert were able to fly on nine research flights, operating some of the most advanced atmospheric instruments, before returning for classes at the end of March. The field project concluded on April 14; however, data analysis will continue throughout the summer and fall.

For more information on supporting our programs and students contact Josh Christianson, Director of Development for UND Aerospace. Phone: (701) 777-4637 E-mail: joshc@aero.und.edu

We want to thank all of the donors who make the following scholarships possible.

Air Traffic Control Faculty Scholarship
Aircraft Owners and Pilots Association Scholarship
Maxie Anderson Memorial Scholarship
Rudy Andrews Aviation Endowment Scholarship
Lee Barnum Memorial Aviation Scholarship
BoldMethod LLC MEI Scholarship
Bombardier, Inc. Scholarship
Building Dreams Aviation Scholarship
Jim Bunke Aviation Award
Cessna Aircraft Award
P. Gail Clark Memorial Scholarship
Wing Aero Products, Inc. Scholarship
Wilderness Pilots Association Scholarship
Dwight Erik Widseth Memorial Scholarship
Weather Modification Aviation Award
UND Women in Aviation International Scholarship
JDO CRJ 200 Training Scholarship
Odegard School Faculty & Staff Scholarship
Odegard School Flight Operations Scholarship
JDO CRJ 200 Training Scholarship
JDO CRJ 200 Training Scholarship
Gerald K. Olson Memorial Scholarship
AI & Peg Palmer Scholarship
John R. Putt-login Memorial Scholarship
John L. Robertson, Jr. Memorial Scholarship
Schoen & Associates Scholarship
George J. Schroeder Memorial Scholarship
Paul E. Schwietz Memorial Scholarship
Less & Joyce Severence Aviation Scholarship
Jr. Simple Avion Memorial Scholarship
Donald I. Smith Aerospace Young Scholar
Martin & Doris Sparrow Aviation Award
Bryce & June Streibel Aviation Award
Student Air Traffic Control Association Scholarship
Lowell & Marjorie Swenson Aviation
David Tallichet Memorial Scholarship
Yuki Togo Aviation Scholarship
UPA, Inc. Air Traffic Control Scholarship
UND Flying Team Award
UND Women in Aviation International Scholarship
Weather Modification Aviation Award
Dwight Erik Widseth Memorial Scholarship
Wilderness Pilots Association Scholarship
Wing Aero Products, Inc. Scholarship

8 AEROCOM SUMMER 2009
Thank you for celebrating with us.
The Minnesota Twins have teamed up with the University of North Dakota for a special event on Saturday Aug. 29th. As a current student, faculty member, alumni, supporter, friend, or family of UND you can take advantage of discounted tickets for the 6:10 p.m. game vs. the Texas Rangers. With the purchase of a ticket you will also gain admittance to a UND pregame picnic. The best part about this great event is that a portion or every ticket sold will go back to UND!

To order tickets call toll free at 1.800.33.Twins (89467) or call 612.33.Twins (89467).

Lower Reserve Ticket $24 (face value $33)
Upper Club Ticket $15.00 (face value $22)

With the purchase of a ticket you are invited to a pregame picnic at the Gate D picnic area. The Gate D picnic area is located right outside gate D by the player’s parking lot. The picnic will start 2 hours before game time.

Orders will be filled on a first come/first served basis and will be based on availability. All orders placed the week of will have to pick up tickets at will call. No refunds/exchanges. Questions, call Mitch Kluska with the Minnesota Twins (612.375.7436)

Special Guests

Robert Kelley, UND President
and
Dave St. Peter, UND alumnus and Twins President

To submit your update, visit www.undalumni.org or send an email to joshc@aero.und.edu.
This year a primary initiative of the Aerospace Alumni Advisory Board is to strengthen our capabilities as “advisors” to the Odegard School. The concept is not new. For many years alumni have returned to UND to share their unique experiences with students and faculty. What is new however is using Distance Learning tools, allowing the alumni speakers to give their presentations from across the country and having a data base of specific experience and skills for each of our board members.

This combination allowed for the creation of the first AAAB Industry Workshop program. Elizabeth Bjerke, Assistant Professor for the Department of Aviation asked for the alumni perspective on the effects the current economic situation is having on the aviation industry. Presenting to her Contemporary Issues in Aviation class, each speaker covered their specific segment of the industry. The participating board members and their subjects were; Rick Baker / FAA ATC, Chris Cooper / Aviation Insurance, Brian Gora / OEM, and Josh Shields / Corporate Aviation. During the Q & A portion, questions naturally turned to career options during this recession. The graduating job-seekers were advised by each of the alumni to maintain as much flexibility as possible in both expectations and strategy.

Besides continuing this successful Industry Workshop initiative, we are also in the infancy stage of creating a mentorship program to harness the immense experience of our alumni. Matching alumni having diverse career experience with potential and current students for an informal exchange of information can be of great value.

To have a board best-suited for these new initiatives, we will be in search of candidates to speak to classes or provide career experience. We will be organizing the AAAB to have members that provide this help, but will not be required to participate in board administrative duties. We have found those alumni experiencing their first year in the industry and those nearing retirement both have valuable experiences to share with students and faculty. Your knowledge will be appreciated.

If you are interested, please send me an e-mail with a brief description of your career experience.

Kurt Jensen
President, Aerospace Alumni Advisory Board
kjensen@earthlink.net
(Vice President – Air Transportation Business Development, Inc.)

To see a list of current Board members, turn to page 12
The UND Aerospace Foundation was created in 1985 to serve as the support organization for UND’s aerospace program. UNDAF has supported the mission and students of the John D. Odegard School of Aerospace Sciences through these projects totaling $12 million in the past 12 months.

"By making these investments in the Odegard School, we are investing in the success of these incredibly talented, passionate and driven students," says Chuck Pineo, executive director of the UND Aerospace Foundation.

- The 360 and 225 degree Air Traffic Control tower simulators received $500,000 in technology enhancements to keep them at the forefront of graphic display capabilities.
- The UND Flying Team received nearly $80,000 in scholarships for its team members for flight costs in preparing for regional and national competition.
- Purchased 24 Cessna 172s to reduce the primary trainer fleet transition timeline.
- Purchased two Cessna 150s for use by the UND Flying Team.
- Acquired a Super Decathalon for the UND Aerobatics Team.
- Schweizer 300 helicopter added to fleet.
- Three Frasca Cessna 172 flight training devices for the Ryan Hall Simulation Lab.
- The CRJ-200 simulator was upgraded with enhanced visual display capabilities.
- Two Beechcraft King Air C90s were purchased to fulfill the high-performance aircraft training needs.

From its very beginning in 1968, John D. Odegard molded the School of Aerospace Sciences at the University of North Dakota into what it is today: the most prestigious flight school in the world. Flight of the Odegard captures John D. Odegard as a leader and visionary who set out to change the aviation world through his passion for teaching people to fly.

Order the book about the launch and continued growth of UND’s aerospace program.

To order call 1-800-258-1525 or visit www.flightoftheodegard.com
The Sky is the Limit When Looking for an Aviation Career

Ken Polovitz, assistant dean for Student Services, was recently asked to submit an article regarding aviation career paths for a specialty publication. With the number of alumni and friends of the Odegard School in the industry, we thought it would be beneficial for all of you to read it as well. As you meet young people interested in aviation or related fields, please keep UND in mind and pass along this advice.

Since you were old enough to understand the question, you have been asked, “What do you want to be when you grow up?” And, like most, you probably blurted out something that seemed really exciting and glamorous but really didn’t have the first clue what it really was or how you become a fireman, rock star, ballet dancer or pilot. Now that you are older and wiser and considering your options after high school, the question now goes like this: “Where are you going to college and what are you going to major in?” And, you may be like most—still clueless and confused! Determining a career and selecting a college can be some of the most difficult decisions we ever make.

For almost twenty years as Assistant Dean for Student Services within the Odegard School of Aerospace Sciences at the University of North Dakota, I’ve been advising young people who are considering a career in Aviation. And, when asked what specifically they would like to do in aviation the vast majority respond: “Airline Pilot!” That’s certainly exciting and specific, but most have really no clue about how you become a professional pilot. Or, about the many other occupations within the industry like air traffic controllers, maintenance and avionics technicians, airport managers, military options, helicopter pilots, corporate pilots, airline operations managers and the list can go on and on. Like many career fields, the aviation industry is so large and diverse that it can leave many clueless and confused—again!

When considering a career within the aviation industry, it’s best, in my opinion, to first turn toward those colleges and universities that have the degree options covering all or most of the occupations you should explore. This approach can help determine the quality of the school but just as importantly, allow you to explore and become more knowledgeable about the many, many occupations within the aviation industry—including becoming an airline pilot!

It is very important that you find and explore degree options in professional flight—both airplane and helicopter, air traffic control, airport and aviation management, aviation systems management (maintenance/avionics/dispatch), engineering, ROTC programs and the newest degree option, unmanned aerial systems (UAS) operations. Collegiate aviation has become the main avenue for individuals to follow to as they consider establishing a career within the aviation industry. Consequently, not only is it important to choose a school with comprehensive degree options, it’s also very important to choose a university with a strong reputation within the aviation industry. This, of course, gives you an advantage with job placement upon graduation.

So, what do you want to be when you grow up? Well, if you are considering a career in aviation, don’t limit yourself to any single occupation or university. Explore the vastness of the industry and the comprehensive collegiate aviation programs that can enable you to lay a foundation for success.

For more information on becoming a student at UND, or the areas of study within the John D. Odegard School of Aerospace Sciences call 800-258-1525 or visit www.aero.und.edu.
On September 12, 1968 the UND Alumni Association purchased N50405 and N50267 new from Executive Aero. The UND Aviation program flew N50405 for its first 3,000 hours and sold it on January 27, 1973.

On April 4, 2007 the UND Aerospace Foundation purchased the aircraft with the total time being just over 5,000 hours.

UND Aerospace spent a year restoring N50405, which included a rebuilt engine, new interior, updated avionics and new factory paint job done in Independence Kansas.

It is now used by the UND Flying Team and helped them set the all-time NIFA championship scoring record.