



# Danville Area Community College

# ENGINEERING UPDATE

Issue 6

Fall Semester 2003

## Alumni News

- Brian Kingston (1999), a Purdue graduate, works as a chemical engineer for Nestle in Eau Claire, Wisconsin.
- Kari Ovall (1999), a general engineer and graduate of U of I, works for IDOT in Schamburg. On an interesting note, she recently married Corey Smith, 1999 DACC Engineering Graduate. They reside in Chicago.
- Paul Van Ryn (1999) works in Colorado as a computer engineer.
- Dustin Foster (2001) will graduate from SIU this December with a civil engineering degree.
- Dave Freeman & John Ingram (2002) are in their second year at U of I. Dave is studying civil engineering and John is a TAM student.
- After DACC graduation, Darrin Shroul (2003) was accepted to U of I to study mechanical engineering.
- Aaron Riefsteck (2003) transferred to U of I to study electrical engineering.
- Ben Cahill (2003) was accepted at U of I as an engineering student.

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## DACC ALUMNUS BUILDS ILLINOIS ROADS

Jason Smith, former DACC student, currently works for IDOT as a civil engineer.

I started at Danville Area Community College (DACC) in 1997 and my experience was very enjoyable. To be honest, the number one reason I came to DACC was to play baseball. In my sophomore season at DACC, I ranked 10th in the nation for Earned Run Average, and I believe I still hold the single season record for DACC pitchers for ERA for that same year. Obviously I took baseball seriously, but I would not have come if I was not confident the pre-engineering program could prepare me for a senior institution. I was pleasantly surprised that I was just as, if not more, prepared as my classmates at the university who had been there from the beginning. I got a very good start on my engineering education at DACC because I had great one-on-one attention that I know for a fact you can not get at a major university. I think people underestimate how important that is!

After DACC, I attended and graduated (December 2001) from

the University of Illinois where I majored in General Engineering. My secondary field was Business Administration. I enjoyed the General Engineering curriculum because I learned many aspects of engineering rather than just a specific field, and I could specialize in other interests such as Business. This specialization gave me a head start on a Masters in Business Administration, which I plan to begin in the near future. It is a very prestigious honor to have an engineering degree from the University



JASON SMITH, DACC GRADUATE, CURRENTLY WORKS AT IDOT.

of Illinois. Every step in life makes it feel much more rewarding; landing my first job, buying my first set of wheels, taking my first step in my own home. All of these remind me that it was worth all the blood, sweat, and tears!

I am a registered Engineer-In-Training with the State of Illinois, after passing my EIT exam in April. I currently work for the Illinois Department of Transportation. I am involved in a 3 year rotation program in which I am

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## DACC FINDS INTERNSHIPS

Through cooperative efforts between DACC and local industry, two DACC students, Brian Rudin and Mansi Naik, began working at Watchfire™, designers and producers of electronic message centers. Both students work directly with Lou Reik, Watchfire's electrical engineer. Brian works with the research and development branch of the company performing temperature tests to collect data used to analyze the heat rise within the sign cabinet. In addition, he has built prototypes of new signs with the intent of testing electrical and mechanical function. Mansi is currently working on the final testing of the Watchfire's custom software. Both students have found the experience beneficial. Brian confidently states, "Having this internship with a well known company and dealing with very technological equipment is a great experience for me and my future." In addition to gaining experience related to the engineering field, both are earning much needed dollars to fund their education. The company has also found the interns to be beneficial, especially compared to interns that have no background in engineering. Lou Reik says, "I find the engineering students to be able to take brief instructions and go with them. They are well prepared to work with software without training and they also appreciate what we are trying to do because they see the big picture."

## MANSI NAIK: STUDIES AT DACC INSTEAD OF INDIA

Mansi Naik is a second year engineering student at DACC. She is working towards a degree in either electrical or computer engineering.

When surfing through possible majors, I found engineering to be the most appealing. After being accepted into a four-year computer engineering program at a reputable university in India, it was a hard decision for me to move to the United States of America. My family believed a US education would be

most beneficial. As we arrived in the United States, I found that getting into the top universities is very difficult, but I could apply at a junior college in the hopes of transferring to a 4-year university. It was just a matter of finding the right community college that would build a strong start. I decided to apply at Danville Area Community College to obtain transferable engineering credits.

I began my studies at DACC and expect to obtain an Associate of Engineering Science. After finishing

my freshman year, I strongly believed that enrolling in DACC was

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*Brian Rudin is currently a second year student of our Coordinated Engineering Program. He plans to transfer to the university of Illinois to study mechanical engineering.*

*"My experience with IDOT has intensified my desire to earn my degree, and has given me a foundation to more clearly understand the concepts taught in my courses."*



*Kevin Smith graduated from university of Illinois-Urbana in May 2003 with a degree in Civil Engineering. He currently works as a county engineer.*

## Brian Rudin: From Farming to Engineering

I recently started my second year at Danville Area Community College (DACC) in the engineering program. How I got here is an interesting tale. It began in Hoopston, IL where I was born and raised on a farm. While growing up, I assumed that my future would be in agriculture, most likely farming with my father. I planned to take over the farm responsibilities once he retired; however, in high school, I second guessed my decision. I remained unsure of what I really wanted to do.

My mother provided me with the first inkling of what I would be good at. She often asked me to do odd

jobs for her, but the problem was initially I didn't know how. I impressed her repeatedly with my ability to figure out how it worked and how to fix it. Mom thought engineering was "for me," but I was still unsure. Later, I took a job that involved constructing grain bins, and my supervisor convinced me to pursue engineering because he thought that I had the kind of instinct that an engineer needs.

I enrolled in Danville Area Community College's Coordinated Engineering Program, and it has been quite an experience. After my first semester, I was still unsure of my major. Classes were chal-

lenging and I found myself stressed a lot, but I made it through and I am currently in my second semester of engineering courses. Every time I start to doubt myself, my friends and family are there to encourage me and I am able to stick with it. I will push myself to finish the program at DACC and continue at University of Illinois. I have learned more in these two semesters than at any other time in my educational career. It has been challenging, but it's well worth it, and I thank the dedicated instructors who have helped me.

## DACC OFFERS STUDENTS CO-OP EXPERIENCES

Yet again, Illinois Department of Transportation (IDOT) has offered Danville Area Community College's (DACC) engineering students the opportunity to gain experience in the field of engineering. Currently, DACC students can apply for summer positions or a full year co-op experience. Students can combine classroom learning with work in civil engineering, data processing and other transportation-related fields at IDOT while earning a degree.

Their Cooperative Education Program provides students with employment before, during and/or after college. Students receive

practical experience with a wide range of transportation responsibilities and practices. Engineering students work in transportation planning, research, design and construction, environmental mitigation and highway operations. Co-op students are entitled to health and life insurance and may contribute into the deferred compensation plan. Co-op engineers are eligible for educational leave after satisfactorily completing each work phase of the program. These students earn vacation, sick and personal business leave just like a permanent IDOT employee.

DACC has had two students, Dustin Foster & Ben Cahill, participate in the summer position and one student, Brian Duez, complete a phase of the co-op experience. All gained engineering experience and thus found the opportunity beneficial. Brian stated, "My experience with IDOT has intensified my desire to earn my degree, and has given me a foundation to more clearly understand the concepts taught in my courses. In addition, this co-op experience will help me later when seeking a certified engineering position."

## Alumni Mentoring DACC Students

Kevin Smith, Danville Area Community College (DACC) graduate of 2000, graduated from University of Illinois-Urbana this last year with a degree in Civil Engineering with a specialty in structural engineering. He is currently working as a county engineer near Galesburg. Kevin happily joined current DACC students for lunch to discuss his experience as a U of I student. He was joined by Dave Freeman and John Ingram

who graduated from DACC in 2002. Both are attending U of I. Dave is specializing in civil engineering while John is in the TAM program studying mechanical engineering.

All three alumni offered the students a picture of what U of I classes are like. According to the alumni, it is not uncommon to have classes with over 300 students in them at one time with little personal or instruc-

tional interaction. They also emphasized that most U of I courses are actually taught by TAs, not instructors. They recommended that DACC students focus on their Calculus, Statics and Dynamics courses, but they also recommended they take Differential Equations before transferring. All felt DACC provided a quality education, but they regretted not taking more humanities courses while at DACC.

## ALUMNUS VISITS DACC TO SHARE EXPERIENCES

Dustin Foster, Danville Area Community College (DACC) 2001 transfer student, visited with DACC students on September 26<sup>th</sup>. He is currently a student at Southern Illinois University--Carbondale and will be graduating this December with his Civil Engineering degree with an emphasis in structural engineering. In addition to this accomplishment, Dustin has also successfully passed the EIT exam.

Dustin described his coursework, including his lead role in designing a \$4 million convention center with a recreational area for Crab Orchard Lake. This project is

a team-oriented assignment required for one of his courses. In addition to his coursework, Dustin serves as a teacher assistant for a drafting course at SIU. He also worked for the Illinois Department of Transportation (IDOT) for two summers during which he played a significant role in building one of Carbondale's bridges. Dustin found the IDOT summer program beneficial and recommended that students seriously consider internships.

Dustin openly shared that he felt DACC provided him with a quality education. In fact, he stated, "I

was as prepared in calculus as the other non-transfer students and even better prepared in physics." He recommended that students studying for engineering concentrate on calculus, statics and dynamics. His only regret was not taking more humanities at DACC, but he is rectifying the issue by taking a couple SIU courses and one DACC online course this semester. When asked if the other non-transfer students were accepting of him, he quickly responded with, "There are more transfer students than you would think." His recommendation was simply to

*Dustin graduates this December from SIU-Carbondale.*



spend time getting to know other engineering students in the first semester.

*I was pleasantly surprised that I was just as, if not more prepared, as my classmates at the university who had been there from the beginning.*  
—Jason Smith

## DACC Alumnus Builds Illinois Roads

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currently working in Program Development (Design). I have already spent a year in Construction (Inspecting Contractors' work), 3 months in Local Roads and Streets, and 3 months in Operations doing bridge inspections.

On this "stop" on my rotation, I am working in the design unit of the Bureau of Program Development, in the Studies and Plans unit. I am presently designing a project on I-72 through Decatur. For the I-72 project, I have designed Impact Attenuator Systems, calculated material quanti-

ties, and performed in-the-field inspections of the job. The scope of this, and virtually every job we do at IDOT, is enormous. The I-72 project we are designing is expected to cost approximately \$15 million, so designing cost-effective solutions is very important and could save thousands of dollars! I will also be designing US-51 resurfacing south of Decatur. Another duty I have at IDOT is recruiting students for the CO-OP program and summer employment, and I visited DACC this last year looking for possible interns.

*"I was as prepared in calculus as the other non-transfer students and even better prepared in physics."*

*-Dustin Foster*

## Mansi Naik: Studies at DACC Instead of India

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my first step toward a successful future. DACC has helped me to make my dreams come true not only with transferable engineering credit, but also with the 21<sup>st</sup> Century Scholarship. In addition, the faculty members are always willing to help and I am really enjoying my studies at DACC. It has been a great experience because DACC has also been instrumental in assisting with the location of an industrial intern-

ship. So, I am taking classes but also gaining REAL industry experience at Watchfire™, a LED message sign company here in Danville. Internships are a great way of gaining working experience in an engineering field while attending school. DACC has indeed helped me get a great start to my endeavor to obtain an engineering degree.

## THE 21<sup>ST</sup> CENTURY SCHOLARSHIP

The 21<sup>st</sup> Century Scholars Program provides scholarship and support services for 30 students attending Danville Area Community College who are pursuing an Associate or Bachelor's degree in the fields of Computer Sciences, Mathematics, or Engineering. Each award, valued at \$2,300 per year, is combined with a student's total financial aid package to fully fund the cost of their education including tuition, fees, and books. In addition to this support, students will receive an additional \$800 if they choose to participate in a local industrial internship related to their field of study. The program is funded by a \$400,000 grant from the National Science Foundation.



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### DACC ALUMNUS WORKS ON THE WORLD'S LARGEST IRON TONNAGE OUTPUT

*Shawn Lantis, 2000 DACC graduate, is a civil engineer for Chicago Bridge & Iron.*

I am working on a field assignment doing a major process systems "remodel" of a blast furnace in the Chicago area. The furnace is the largest in the western hemisphere and most of my company's work starts at about two hundred feet above grade so safety is a top priority (but we have a killer view of the Chicago city skyline!) Once finished, the furnace will have the largest iron tonnage output of any in the world at about 15,000 tons a day.



Photo provided by Shawn Lantis

## Engineers . . . We make your ideas happen!

There are a number of reasons why a student might select a coordinated engineering program at Danville Area Community College.

- Coordinated engineering studies are conducted in general areas that prepared students for a number of advanced specialized studies. So, the program permits exposure to engineering studies before final commitment to a particular field of study

- Completion of the program provides flexibility to transfer to any desired school. Although this program is planned for continuation at the University of Illinois, SIU, Bradley, and Purdue, the same number of credits may be transferred to other engineering schools.

- Danville Area Community College provides an opportunity for the student who prefers to do his/her early college work at a community college. The strong coordinated engineering program at Danville Area Community College will qualify students to transfer with little difficulty.

- Danville Area Community College is an accredited public two-year community college providing higher education opportunities for youth and adults in east central Illinois. Since 1965, Danville Area Community College has been located on a seventy-five acre campus at the east edge of the city of Danville.

### This Past Semester ...

DACC engineering students traveled to Batavia, IL to visit the Fermi Lab for a complete tour and were also invited to visit with a Fermi Lab Scientist. The trip was a result of student interest. Special thanks to Jeremy Washburn for arranging the trip details.

DACC's Coordinated Engineering Program was featured on WDAN (1490 AM), a local radio station. The program featured Kathy Sturgeon, DACC Instructor, and five students including Rigo Torres, Darrin Shrout, Aaron Riefsteck, Brian Duez, and Jeremy Washburn. Keep an ear out for further broadcasts!

## FROM ENGINES TO ENGINEERING

*Jeremy Washburn is a second year engineering student at Danville Area Community College (DACC). He enrolled after receiving an honorable discharge from the Marine Corps. Jeremy will transfer to the University of Illinois in the Aeronautical and Astronautical Engineering Program.*

The decision to begin college was not an easy one for me. I attended High School in Cape Girardeau, Missouri, where I never enjoyed going to school and my grades showed my lack of enthusiasm. While growing up, I always had a passion for air and space travel. Having very few options due to my lacking grades in high school, I knew I would never get to do what I loved so much, so I decided to join the Marine Corps. (I come from a long line of military veterans.) While in the Marine Corps, I took full advantage of every opportunity afforded to me; I saw part of the world most would never get to see, and I learned from a host of engineers ranging from mechanical to electrical engineering.

My military experience was vast and fun. My military occupational specialty was power plants technician on the Huey and Cobra Helicopters. I worked with turbo shaft engines which are complex machinery because you have to work under strict tolerances. For example, if you're off by a thousandth of an inch, there could be serious consequences, like complete destruction of the engine and possible loss of life. My favorite duty was running engines on test cell at Cherry Point. When a particular engine had problems, the engineers would explain the workings of the engine to help us better understand the problem instead of just telling us how to fix it. I gained a better understanding about the internal complexities of the engine which was intriguing, but rebuilding engines was time consuming, and not fun. It was not something I wanted to do with the rest of my life.

In November 1999, I married my



*Matt Smith (left) & Jeremy (right) are playing with motors in lab.*

best friend Sheryl. She encouraged me to chase my potential and with her support, as well as the discipline of the Marine Corps, I decided to go to college and achieve my dreams instead of reenlisting. When I was discharged from the Marines we decided to settle in Danville and attend DACC. I have spent the last year within the Coordinated Engineering Program, and I've really enjoyed my experience at DACC. The instructors are great and they are always willing to help. I have learned so much, and I really enjoy learning something new, especially when I can relate it to my work on turbo shaft engines.