



# Engineering Newsletter

Spring 2008

## Spring and Summer News

As we move into the final term of the academic year, our thoughts turn to summer and the opportunities waiting for us – at home, at an internship location, here at Union doing research, or maybe someplace altogether different! In this spring newsletter you will read about opportunities from the Becker Career Center, some policies to pay attention to this spring, spring events, student group news, plans for a few of our graduating seniors, and summer research plans. Enjoy.

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## News from the Becker Career Center

As you think about securing your summer internship or full-time jobs, we suggest focusing on the following areas this spring:

**Resume** - Whether you're seeking a summer job, internship, full-time employment, or graduate school, a resume will be necessary.

**Cover Letter** - For many opportunities, a cover letter is necessary. You should know how to craft an effective cover letter.

### ***Networking and Informational interviewing***

The most effective way to learn about and secure opportunities is through networking and informational interviewing. Networking and informational interviewing are important skills that will help you manage your career for a lifetime.

**Interviewing** - As with other experiences, the more time you take to prepare and practice the more likely you will perform better.

**eRecruiting** - Employers who are specifically seeking Union College students post their jobs/internships in eRecruiting, and every student has access (on and off campus) to eRecruiting. Currently, the eRecruiting database contains over 170 full-time jobs and 140 internships, and new jobs and internships are added weekly. These opportunities represent the low-hanging fruit that all students should look at on a regular basis. You can certainly broaden their search beyond eRecruiting, but eRecruiting should be your first stop. Importantly, when searching jobs/internships in eRecruiting do not use any key word or other filters in your search. It takes less than 10 minutes to review 170 titles. By reviewing the titles you are more likely to find opportunities of interest.

The Becker Career Center can help you with all of these areas. All you need to do is call 518.388.6176 or stop in for some assistance.

Upcoming programs include:

- April 9 Workshop – Resume & Cover Letter Writing, Becker Career Center, 5-6pm
- April 15 Workshop – Graduating Without a Job, Now What?, Becker Career Center, 6-7pm
- April 22 Workshop – Resume & Cover Letter Writing, Becker Career Center, 6-7pm
- April 23 Society of Women Engineers Panel – RPI/Union event, College Park Hall, 5-7pm

- May 6      Workshop – Juniors: Jumpstart Your Career Search, Becker Career Center, 1-2pm
- May 12     Workshop – Juniors: Jumpstart Your Career Search, Becker Career Center, 6-7pm
- May 13     Workshop – Juniors: Jumpstart Your Career Search, Becker Career Center, 6-7pm
- May 14     Workshop – Graduating Without a Job, Now What?, Becker Career Center, 5-6pm

If you have questions, or would like additional information, about any of these events please contact Laura Leib at 518.388.6176, or leibl@union.edu.

## International Experience Requirements

It is the policy of the engineering programs that all students fulfill their Linguistic and Cultural Competency general education requirements through some type of experience requiring travel to a foreign country. The only exceptions should be students with below a 2.5 GPA, and students who have personal or health reasons for being unable to travel. Even athletes should be able to at least participate in a mini-term. Freshmen and sophomores should be planning for how they will meet this requirement, especially if your preferred program has language prerequisites. Your academic advisor will be able to assist you in the planning process.

Information on all of the possibilities can be found at <http://engineering.union.edu/eta>. I would also be happy to answer your questions. Email me at [jewellt@union.edu](mailto:jewellt@union.edu), or stop by my office. However, this term I will be on sabbatical, so probably the best way to contact me is through email. -- Professor Jewell

## Student Groups - News and Events

### *National Society of Black Engineers*

#### *Winter Term Event: Professional Engineers Dinner & Conversations*

Each company representative talked informally with students about their company, their job and expectations for students seeking permanent positions or internships.

#### GE Research

- Donnell E. Crear
- Dean M. Robinson

#### Lockheed Martin

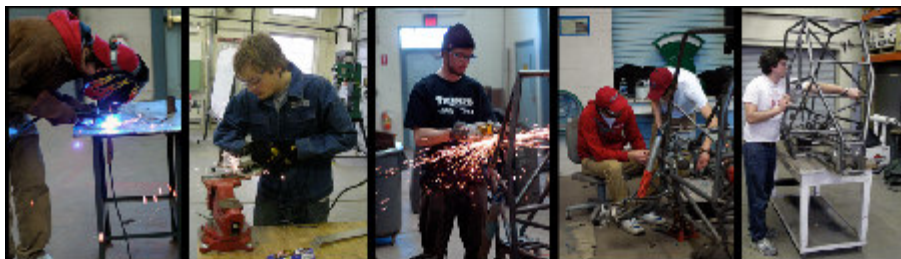
- Trevor Munroe
- Bereket Kiflu

### *Spring Term Event: STEP Outreach*

We will bring students from the STEP Program to Union and do an engineering activity. Look for flyer if you are interested to volunteer. (Mid May )

### *Baja Club*

With only a few short weeks until leaving for competition in Tennessee, the Union College SAE Baja team is working in full force. The team has completely redesigned the rear half of the car and is currently finishing up the fabrication phase of the project. The next few weeks will be dedicated to assembly, testing, tuning and many late nights in the machine shop. With the recent, very generous, support of the Taylor Made Group and The Pheasant Hill Foundation, the SAE Baja team is confident that it will be well prepared to compete against over 95 other teams. This competition will test not only the cars design and cost effectiveness, but its ability to drive in deep water, traverse incredibly rugged terrain and run well for over five straight hours of abuse. Stop by the shop or check out our website to learn more! [www.vu.union.edu/~baja](http://www.vu.union.edu/~baja) -- Matt Beenen



## ***Society of Women Engineers***

April 11th & 12th we will be going to the regional F conference at Olin University in Boston, MA.

April 28th we will be having our annual networking dinner (people interested in attending must sign up).

## **Summer Research**

Sixteen engineering and exchange students will be participating in research and pedagogical projects this summer with engineering faculty. This is a great way to gain new skills and in-depth knowledge about an engineering topic.

Name	Faculty Sponsor	Class	Title of Project
Matthew Adams	Ron Bucinell	2009	Photogrammetry of bullfrog hearts
Wendy Beatty	Bill Keat	2009	Development of an Undergraduate Engineering design textbook
Michael Bono	Ann Anderson	2009	Alumina aerogels for catalytic applications
Andrew Brown	Ronald Bucinell	2010	Optimizing the visualization of crack propagation in DCDC specimens
Lauren Brown	Ann Anderson	2011	Effects of precursor chemicals on aerogel properties
Margaret Capotosto	Helen Hanson	2009	Development of the front/back vowel distinction in young children
Alexandra Guernon	Ronald Bucinell	2010	Studying the strains in the atria frog hearts
Jessica Lord	Brad Bruno	2010	Studies of slug flow in microfluidic channels using PIV and liquid crystal stress measurements
Prad Pathirana	Richard Wilk	2009	Development and Testing at an optically enhanced, high performance solar thermal collector system
Bogdan Pavlov	Brad Bruno	Exchange	Hydrogen fueled internal combustion engine research
Isaac Rogers	Shane Cotter	2010	Component analysis of spectral data to explain color evolution in biological specimens
Tomas Sadilek	Helen Hanson	Exchange	Improving methods for restoring speech data in GSN and VoIP
Jason Shaffer	Rebecca Cortez	2011	Strain characterization of MEMS switches
Ryan Skeuse	Rebecca Cortez	2010	Atomic force microscopy characterization of MEMS switches
Petr Svestka	Shane Cotter	Exchange	Adaptive prediction using recursive least squares for congestion estimation in active queue management
Collin Doyle	Ashraf Ghaly	2010	Digital Image Analysis

## **Senior Plans**

Where are all our seniors going? Here are just a few examples.

Tim Schwarz - Mechanical Engineering

*"I will be working for General Motors at their Fuel Cell Activities Research and Development center south of Rochester, NY."*

Daniel Harkenrider – Electrical Engineering

*"I am entering the United States Navy as an officer candidate. Upon being commissioned, I will be going into the field of nuclear propulsion and will spend a year studying nuclear reactor theory and operations, before becoming an engineering officer on board a nuclear submarine."*

Kyle L. Tilley – Mechanical Engineering

*"GE Aviation in Lynn, MA"*

Charlie Wood – Mechanical Engineering

*"Accepted a fellowship offer from Northwestern University for a PhD degree."*

**Congratulations to all the seniors and best wishes for pursuing your dream career!**

## Declaring Your Major

First year students who have majors of “Engineering Undeclared” should be selecting a more specific major this spring. In fact, you **MUST** select one in order to pre-register for fall classes! If you are still unsure about your major, please understand that you can change it again in the future if you want. Change of major forms can be obtained at the registrar’s office, or on the registrar’s web site at <http://www.advising.union.edu/advisingforms.html>

## ReUnion Weekend and Engineering Alumni Awards

May 30 – June 1 is ReUnion weekend, when our Union alumni will be on campus to catch up with classmates and professors and to celebrate the Union traditions and ideals. On Friday, May 30, at 3:00pm we will be honoring seven Union engineering alumni for their accomplishments. Some of our seniors will be selected to present their project posters at this session as well. It is a good opportunity to connect with alums who share your Union engineering background and hear about their experiences and career paths.

## “Don’t Worry, Be Happy” Rube Goldberg Competition



On Saturday, April 26th, we will be hosting the Union College Rube Goldberg Machine Contest at the Field House. This is an annual design challenge for teams of middle and high school students who design a machine to accomplish a specific task. In the Rube Goldberg style, they build the most complicated machine they can think of to do the task! Actually, the guidelines say that their machine must complete the task in at least 20 steps.

This year’s challenge is to draw a smiley face. There are 25 teams signed up to compete in this year’s challenge, and we will have about 25 judges from local industry to help us determine the winners. The schedule for the day is as follows:

### *Saturday, April 26*

8:30am - Set-up

9:30am - Competition Briefing Session

9:40am - Competition

12:30pm - Lunch

1:30pm - Awards immediately following Lunch



The competition is generously supported by the GE Volunteers, Lockheed Martin/KAPL Nova, and the Schenectady Museum. Professor Hedrick leads the team of volunteers, which include Professors Almstead and Spallholz, in the planning and organization of the event.

Please come join us in the festivity and support these middle and high school students in their first engineering design project.

For more information, go to <http://antipasto.union.edu/engineering/rube/>.