BMES

HAJIM SCHOOL OF ENGINEERING & APPLIED SCIENCES UNIVERSITY of ROCHESTER

The Biomedical Engineering Society

University of Rochester Student Chapter

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Inside this issue:

Graham Corporation Presentation

On Friday, February 22nd, two representatives from Graham Corporation gave a presentation at the University of Rochester. Graham Corporation is the leading designer and manufacturer of vacuum and heat transfer equipment and they are located in Batavia, NY. One of the presenters was a recent graduate from the University of Buffalo with a Mechanical Engineering degree. He had good insight as to what an entry level engineer does for a manufacturing company. Graham's presentation covered both the technical aspects of the company as well as what it is like to work there on a day to day basis. The technical components of the devices used many of the principles taught in Fluid Dynamics, Heat and Mass Transfer, and Thermodynamics. The company produces products that are implemented all over the world. They even have installed products at the University of Rochester. Overall, it was a fantastic learning experience about a local engineering company. Thank you to everyone who attended.

-Gwen Musical (2014)

GRAHAM
ENGINEERING ANSWERS

Senior Design Projects

This year, the seniors are working on designing innovative medical devices as part of the Senior Design course. The class is divided into 12 groups of 4 to 6 students to work towards designing, prototyping and testing their devices in accordance with FDA and other regulatory policies. The devices are to be used in places ranging from the workplace, in-patient clinics, physical therapy clinics, doctor's offices, operating rooms and implanted into patients. Currently, the designs have been completed and the students are now working on making proof-of-concept prototypes of their designs. In the coming weeks, the prototypes will be finished, final testing will be carried out to assess the devices and the teams will present their final products!

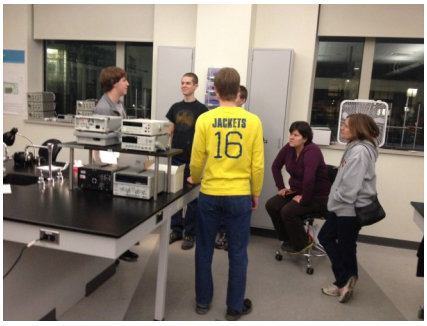
-Matt Hazelett (2013)

Some examples of senior design projects this year include:

- A balloon catheter with optimized electrode geometry to perform renal denervation to treat resistant hypertension
- A deltoid assist wheelchair attachment to aid in the rehabilitation of stroke victims
- A system to detect venous air embolism in the heart during surgery
- A system to produce thickened liquids of known viscosity for patients unable to swallow normally
- A bike telemetry system to keep track of cyclists' body temperature and heart rate during a race, and communicate this information to other team members
- A platform to measure startle response in small mammals
- A chair attachment to alleviate back pain caused from occupational stress and poor posture

Rochester Engineering Society Explorer Post

On February 6th 2013, from 6:30 to 8:30 pm, the University of Rochester's Biomedical Engineering Society hosted around 15 high school students at the Hajim school of Engineering in Goergen Hall in order to spark their interest in the field of Biomedical Engineering. In charge of the event were seven BMES students, John Nicosa, Natalie Mitchell, Tiffany Kobee, Cyrus Lambotte, Gwen Musical, Justin Delafontaine and Alex Anderson. They volunteered their time in order to better promote the exciting field of engineering at the University of Rochester. The event started with a presentation by John and Tiffany on what Biomedical Engineering means and in what direction the field is heading into in the next decade. After the presentation, an informal Q & A took place where all the biomedical engineering students present answered a series of questions the audience had. Whereas some parents and students wondered what type of professions you could get with a Biomedical Engineering degree, others were curious about the research opportunities available for students.



Above: Justin Delafontaine and Alex Anderson explaining optical engineering concepts to an invested crowd.

Above: Natalie Mitchell explaining the BME 210 Circuits final project, for which she was a TA for.

Above: Cyrus Lambotte and Gwen Musical helping out with the EKG Lab.

Above: John Nicosa and friends posing for the camera!

Following the exchange, the high school students were divided up into 4 groups and stationed at different corners of the room, where they would be each tasked with completing basic laboratory assignments U of R students themselves had to complete in the curriculum. Like the Force sensor or EKG monitor, each station represented a different concentration of Biomedical Engineering: Biomechanics, Bio-signals, Cell and Tissue and Optics. BMES students were there to guide the visitors through the labs as well as explain the concepts to them. Of course, since the guests varied in age, some students understood the concepts more easily than others. It was also great to see the parents excited by the laboratory assignments as well as eager to pick our brains for tips on navigating through college life. Although there were slightly less students than last year, the students were much more engaged in the material, which made for a memorable night.

-Cyrus Lambotte (2014)

Welcome to the newest members of the university of Rochester Class of 2035!

Biomedical Engineering Society Annual Banquet

Please join us while we celebrate the Biomedical Engineering Department at the University of Rochester

There will be food, drinks, and awards

When: Friday, April 12th at 5:30pm

Where: Munnerlyn Atrium in Goergen Hall

Tickets are discounted at $12 cash or declining and can be bought through the BME Office

Sponsored By the Biomedical Engineering Society

Biomedical Engineering Word Search

K	L	R	T	F	P	Q	Y	A	J	E	K	F	H	O	I	U	O	P	H
E	N	N	L	T	W	Q	M	E	C	H	A	N	I	C	S	Q	E	C	U
I	J	S	N	O	I	T	U	L	O	S	J	J	C	R	V	T	R	T	Z
G	Z	T	Z	U	G	I	A	U	J	A	Z	Z	V	N	M	A	B	M	Z
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ENGINEERING
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