BMESSANGER
Biomedical Engineering News at UC Davis

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SUMMER 2014
Greetings!

Summer is over and we’re back in school! But that doesn’t mean the fun is over!

Let me introduce myself, my name is Philip Domondon and I am the Editor-in-Chief for this year’s BMESsenger. I transferred to UC Davis last year and fell in love with BMES the moment I attended the 2013 Fall General Meeting. Majoring in Biomedical Engineering and attending UC Davis, I knew the possibilities were endless, but it was not until I joined BMES did I truly appreciate the hard work it takes to bring those opportunities to the students.

You reading this newsletter already tells me one thing: you are interested in BMES. I am here to tell you that you just took the first step into your best undergraduate experience yet.

So, let’s get started! Welcome to the Summer 2014 issue of BMESsenger!

- Featured in this issue is a message from our chapter’s President, here to talk about this year’s biggest event: the Medical Make-a-thon!
- Also included is information about our Outreach Program and our Mentor-Mentee Program!
- Lastly, we hear from one of our very own members who had an amazing experience working in industry!

Do yourself a favor and take this journey with me. Find out why being a member of BMES at UC Davis is something to be proud of!

Philip Domondon
Editor-in-Chief
Dear students of BME,

Welcome back to Davis! It was a long summer and I know that many of you are excited for this academic year to get going. Lucky for you, your charming group of BMES officers has worked all summer long to bring to you the best possible year. Below, I have highlighted some of the many things that you could look forward to.

Let’s start off with the biggest event! This year BMES will be hosting our first annual hackathon, called the Medical Make-a-thon (many of you may have also heard us refer to it as the Innovathon).

All fitting names for the same compelling event – an engineering design competition squeezed into 30 hours. Participants will be presented with a clinical problem coming from our clients at the UC Davis School of Veterinary Medicine. In this short amount of time, your team will competitively design an innovative solution to the problem at hand and ultimately create a functioning device using prototyping equipment, such as the 3D printers and laser cutters, courtesy of our very own TEAM Design, Prototyping, and Fabrication Facilities.

Our Medical Make-a-thon will not only stimulate your interests in the field, but will also make you feel engaged outside of the classroom through hands-on experience!
**Why did we bring Make-a-thon to you?**

In Letterman Top 10 style:

1. A secret poll led us to believe you wanted more hands-on activities.
2. We never miss an opportunity to showcase our wonderful facilities and talented BME students.
3. It is a BME geared event but this Make-a-thon is open to everyone; creating an interdisciplinary setting that is reflective of the industry.
4. Meet the people who you might be working alongside with for the next following years.
5. An excellent introduction/extension to the design cycle of medical devices.
6. We hope that by showing freshmen and sophomores a way to take BME from theory to practice, they would fall madly in love and push through the next few years of engineering!
7. We are providing an opportunity for industry professionals to engage, advise, and become competitively invested in you.
8. We have no doubt that, not only will you rise to the challenge, but you will accomplish something incredible and unexpected.
9. Of all people, BMEs *would* find a way to squeeze months-long of engineering design into a 30-hour competition.
10. Free Stuff! Free Stuff! and Free stuff!

We’re not done yet! BMES at UC Davis has a mission to provide you with all the helpful academic and professional resources you need to be successful engineers.

Our events, professional (ex: mock interviews, lab/industry tours, undergraduate research fair) or social (ex: Biomedical House of Horrors, bowling night with the professors, + more) aim to bridge the gap between you and our biomedical engineering department, in an effort to enhance your undergraduate experience and make sure you feel very much part of this dynamic community.

I am truly excited to see all of you at our events this year, in class, and/or out and around.

I will leave you with one last thought.

Be proud to be a BME. Be proud to be a BME at UC Davis.

**Warmest regards,**
Rose Hong Truong
President of the UC Davis chapter of BMES
Listen up!

Time for some real talk, folks: did you choose to study Biomedical Engineering for more than just the fame, money, and glamour? For the select few, going down this academic path was based on a desire to end up in a career that would benefit others. Lucky for them, BMES has put me in charge of coming up with opportunities for its members to indulge in such altruistic desires!

Last year, our Outreach Committee successfully visited many schools and helped run one of our most popular outreach events of the year: Picnic Day’s Biomedical House of Horrors! Last year’s Vice President of Outreach, Rachel Gurlin, has left us with quite the legacy to follow, but here we are getting bigger and better! This is where you come in!

Over the course of the upcoming year, our Outreach Committee will be more ambitious than ever: we will be making visits to middle school and high school classrooms to talk about what we do as biomedical engineers, we will be helping senior citizens become more technologically proficient, we will judge science fairs, and we will provide mentoring to high schoolers.

Join us this year and make a difference!

**October 25th: Outreach to the general Davis community at the Farmer’s Market**
We will have a table at the Saturday morning Farmers’ Market doing a DNA extraction experiment.

**November 7th: Collaborative Classroom Visit with BESA**
We will be visiting John Barrett Middle School to give a biomedical engineering-related presentation and activity to mostly low income students.

**December 8th: Hour of Code**
In celebration of Computer Science Week, we will be (virtually) joining millions of students in teaching other students about the basics of coding.

**Date TBD: Computer Lessons for Senior Citizens**
This will be an opportunity to teach local Davis senior citizens computer skills.

**Ongoing: E-Mentoring for Vallejo High School Students**
Interested Outreach members can sign on to be mentors via email to high school students in the Vallejo Biotechnology Academy. At the end of the year, mentors and mentees meet in person.

Interested? Join us at our first meeting on **Monday, October 20th, 4-5PM, Kemper 1127.**

Natalya Shelby
Vice President of Outreach
The Biomedical Engineering Society at UC Davis has a unique opportunity that biomedical engineers can take advantage of to start networking with their peers, graduate students, and individuals working in industry. The BMES Mentor-Mentee program seeks to pair students together in order to help them form networking relationships with their peers early in their college career. If you are looking to jumpstart your biomedical engineering network, this is by far one of the best ways to explore the major and make long lasting connections. This opportunity will help you succeed in future classes and the job/internship application process by having access to tips from experienced individuals.

As this year’s Student Affairs Officer, I plan on taking our award winning mentor-mentee program and adding some features that will work to enhance mentor-mentee communication and connectivity. It is my job to make the pairings and thus connecting you with your new networking partner as easy as possible. I will be pushing for the use of smartphone applications like GroupMe that will allow for easy communication between mentors and mentees. A focus on communication and connectivity brings us to our first event of the year: Speed Networking. Our first mentor-mentee event will focus on developing a personal connection with your potential networking partner by meeting as many individuals as possible during this event. Once the pairings are done, we follow-up with social mixers and games to break the ice!

This is going to be a great year for BMES at UC Davis; we have a lot of new events that will be showing up this year and what better way to get involved in these events than with a new mentor or mentee! So if you have a minute, follow the link to take the survey if you are interested in becoming a part of this amazing academic and social opportunity!

Go to http://mentormenteebmesucd.questionpro.com or use the QR Code below!

Gabriel Jagoe-Seidl
Student Affairs Officer
Biomedical Engineering, like all engineering disciplines, is not necessarily the path of least resistance to a degree in higher education. Engineering in general may be the most practical decision someone could make but it's definitely not for the faint of heart. Worse yet is the varied difficulty that an individual experiences. I know people that started their first math sequence in pre-algebra and I know people that have failed circuits three times. It is therefore not a stretch of the imagination to say that most engineers, despite the obstacles, trek on forward in an automated way as if the only alternative is to rust away and doubt the existence of their heart. Well, I'm here to tell you, sincerely, that the light at the end of the proverbial tunnel does in fact lead to greener pastures.

By the end of September, I will have been interning at Genentech for a little bit less than four months. This internship has single handedly been one of the most worthwhile and clarifying experiences in my life. Genentech is a place that emphasizes working hard while enjoying the work you do. Like engineering though, industry work is not for the meek. However, I do believe any biomedical engineer could handle this daunting task.

The internship started exactly how I thought it would: difficultly. Within the first day I was assigned eight chapters to read and was expected to contribute in a meeting that was to take place in three days. Needless to say I stayed up every night, reading the chapters, taking notes, and practicing my coding. I did this literally until just moments before the start of the meeting. At the conclusion of the meeting, I was assigned to work on a script with my newly, haphazardly acquired knowledge and was expected to finish relatively fast. My task, eventually became a full month and half long project that went from simply updating a piece of MS-DOS code to a full project that automatically installed our computer services on various servers.
Looking back, my project really began with just a rudimentary understanding of computer networks, Genentech's own computer infrastructure, and coding experience in a language that I had only really spent three days on. Many times during the project I doubted whether it was even possible to accomplish what our objective was, yet I could never admit this to myself or to my manager. I was interning at the place that I want to start my career at and a failure on my first project would not be the way I was going to start my track record.

My will to succeed was further incentivized not just by my career ambitions, but also by Genentech itself. Within the first month and a half that my project was taking place, Genentech paid its employees to volunteer for a day at a charity event of their choice. In my case, we painted a farm at a public park, rented out the AT&T field to host a private concert for their employees (where I saw The Foo Fighters open up for Usher!), and we raised the pride flag for a week in support of Gay Rights. All of which were luxuries happily accepted.

A month and a half later of research, toil, and attempted creativity, I eventually yielded the results my team was looking for. I presented my project at two different poster presentations and received very positive feedback from those that took the time to listen to me. Additionally, as a result of my work my internship got extended to a co-op that will continue unto this school year!

If you ever had any doubts about pursuing internship opportunities, let my story be an example of how you should be more aggressive with your priorities. You are in great hands this year, so let's work together in getting you out there to be a competitive force in the industry. As you begin to finish your walk, don't be fooled into believing the shadows on the wall are your reality, step outside of the tunnel and enjoy the fruits of your labor.

David Gomez
Vice President of Corporate Relations
Interested in Writing for BMESsenger?

We’re always looking for newsletter contributors! No writing experience needed! We can teach you!

Contact our Editor-in-Chief:
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Many thanks to the contributors for this Summer Issue!

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President

Natalya Shelby  
Vice President of Outreach

Gabriel Jagoe-Seidl  
Student Affairs Officer

David Gomez  
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