

Industrial Blueprint

-The IOE Student Newsletter-

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Brought to you by APM and IIE

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Upcoming Events

Halloween	October 31
Thanksgiving Recess	November 25

A Few Words From the Editor . . .

Hello IOE!

October is here, and the time has come for your kick-off issue of the Industrial Blueprint. Students are working, professors are lecturing, and the football team is winning! The order of the universe has been restored. But seriously, the leaves are changing color and we are well into the fall semester, so let's get down to business.

In this issue, we have an exciting range of student-written articles from summer internship experiences and course reviews to phantonyms (wait...what?) and reasons why you should join IIE. Make sure to check them all out. Also, if you have any article ideas or would like to share your engineering-related opinion, send us an email at apmofficers@umich.edu.

Midterms are just around the corner, and I'm sure some of you have already taken the first of your exams. Feel free to take advantage of the free tutoring offered by Alpha Pi Mu every Tuesday and Wednesday from 7-9pm at the Engineering Learning Center. The tutors are just waiting for you!

Well that just about wraps it up. Until next time, stay classy IOE.

Trevor Young

Visit the IOE Undergrad Page:

<http://ioe.engin.umich.edu/degrees/ugrad/index.php>

IOE Student Societies

Alpha Pi Mu (APM)

<http://www.engin.umich.edu/societies/apm/>

The only nationally accepted industrial engineering honor society, APM membership is based on GPA. All students with junior or senior standing are considered. APM sponsors numerous events every year; highlights from last year include the IOE Bar Crawl and IOE t-shirt sales.

Engineering Global Leadership (EGL) Honor Society

<http://www.engin.umich.edu/egl/>

EGL is a five-year program that combines engineering curriculum with courses in the Business school and LS&A, culminating in a Bachelor of Science degree and Masters degree in Engineering. EGL is designed to help students improve the bridge between business and engineering in industry, as well as give its members a cultural background to work in an increasingly global market. EGL is no longer an IOE/ME only honor society, but its membership features plenty of IOEs.

Human Factors and Ergonomics Society (HFES)

<http://www.engin.umich.edu/societies/hfes/>

Nationally, HFES is a professional society whose mission is to “promote the discovery and exchange of knowledge concerning the characteristics of human beings that are applicable to the design of systems and devices of all kinds.” The student chapter at Michigan leads multiple Center for Ergonomics lab tours and attends conferences throughout the year.

Institute of Industrial Engineers (IIE)

<http://www.engin.umich.edu/societies/iie/>

Another society with links to a national professional society, IIE’s main goal is to “provide an awareness of the Industrial and Operations Department and its resources” at Michigan. The student chapter acts as a conduit to the local Detroit IIE chapter and a networking hub for all IOEs at U of M. IIE sponsors plant tours and features corporate speakers at meetings.

Institute for Operations Research & the Management Sciences

<http://www.engin.umich.edu/societies/informs>

Outstanding Multicultural Industrial Engineers (OMIE)

<http://www.engin.umich.edu/societies/omie/>

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Valuable Summer Intern Experience

By Alvin Pranata

During my last summer break, I worked as an analyst intern at Deloitte Touche Tohmatsu Indonesia, Financial Advisory Services Department (FAS). I was very nervous on my first day since I had never worked in such a professional working environment before and I was the only intern in the department at the moment. However, I was really glad to find out that my colleagues were very welcoming and friendly.

I was assigned to a financial due diligence project, working in a team of eight. I used to have a belief that interns will never have to work overtime. However, this experience had proven me wrong. During the whole project, my working hours ranges from 11 to 14 hours every day. Despite the physical and mental tiredness, I never once regreted my internship experience at Deloitte.

Through this experience, I am convinced that financial advisory is indeed the right career path for me. After graduation, I will apply for a full-time analyst position at Deloitte Touche Tohmatsu Indonesia, FA.

Headphones, Are We Getting the Most Out of Our Music?

By Jonathan Loh

I know we all like buying iPods and listening to music through the supplied earbuds and calling it a day, but do you ever wonder to yourself “is this what my music should sound like?” I’m here to share a little bit of my knowledge on how popularity of products does not always mean we are getting the most out of what we buy.

Although I don’t want to bash the iPod earbuds, I’d like to at least expose you to other alternatives out there (‘cause really, who doesn’t like more choices?). For portable use, what you’re given is not the only choice. There are IEMS (in-ear-monitors) that you stick in your ear and generally isolate a lot of outside noise as well as portable cans (typical headphones that you wear on your ears). I’ll be talking about IEMS since that’s what I use.

“Wait, I stick them in my ears? I’ll go deaf!” Not true. Since IEMS isolate outside noise, you actually listen to music at a lower volume than you would if you were using earbuds (unless you really like your music loud, but everyone’s different). Well, if I’ve at least captured your interest now, you might be wondering about the price of IEMS. I mean what starving college student wouldn’t? In a broad range, IEMS range from around \$10 to \$1,200 with the average being around the \$150 mark. I know, I know. “\$1,200? You’re crazy! That costs more than my <insert anything here> for a lousy pair of headphones?! Who would ever pay that much?” I thought the same exact things when I was first entering into IEMS. It’s true that you should never jump into the market looking for the best pair of headphones right from the start. Everyone has different ears and the price may not justify the enjoyment you get out of the headphones. To be fair, only IEMS made to custom fit your ears will cost over \$400.

Why would anyone spend this much on headphones? Sound Quality. You see many people content with their stock headphones from their portable player’s company and listening to music, but tell me, have they ever heard anything better? The statement “ignorance is bliss” is perfect here. If you like music enough to

buy an iPod and spend hundreds of dollars, why not spend a bit more to actually listen to your music better? The Touch is a different story since it offers more than just music. Well, even if I say statements like “the soundstage is expanded beyond normal earbuds” or “the detail and instrument separation is many times superior”, it doesn’t mean anything in the long run. What matters the most is if you hear a difference. In order to find out about new things, we have to try them. In summary, what I’m trying to say is try new things. You may really be impressed with what you see (or in this case, hear).

Level 3 Internship

By Paul Foley

Over the summer I held an internship at Level 3 Communications. While working there I gained valuable real world business knowledge and was able to vastly expand my social network. Listed below are the duties I performed over my 15 week summer internship:

- Process incoming mail and enter accurate information into internal database.
- Compare geographical limits of construction prints with the geographical location of the Level 3 fiber optic network.
- Work with contractors and governmental entities in obtaining appropriate supporting documentation for projects and additional details as necessary to determine where projects are located.
- Update various tracking reports.
- Work with a document retention database for retrieval and storage of company documents.
- Use company workflow tool to determine status of work.
- Various administrative tasks as requested by supervisor.
- Dealing with various Right of Way (legal) applications.

While the internship is not geared directly towards IOE majors, I found the internship required me to use Excel and Access quite often, allowing me to apply the things I learned in 201, 265, and 373 to the real world. The internship paid \$13 an hour, which is not bad for an internship, and held fun monthly events such as kickball tournaments and trips to Colorado Rockies games. I would definitely recommend this internship.

NERS 211, A Different Type of Non-IOE Engineering Course

By Dan Basile

As IOE’s we are expected to take at least 3 non-IOE engineering courses in order to graduate, forcing us to decide which non-IOE classes would be the most useful to our studies, and more importantly, decide which classes would occupy the least amount of our workload.

MSE 220 is a popular choices because of its general application to all fields of engineering. But NERS 211 offers a different style as a tech elective class that makes it significantly more entertaining, as well as providing valuable knowledge tools.

The class (in my case) is taught by Ron Fleming, a senior teacher in the NERS department whose enthusiasm for his field and eccentric personality make every lecture worth attending. The class is designed solely for non-NERS majors, meaning that students don’t have to compete against students dedicated to the sub-

ject. Also, Prof. Fleming knows that the students of this class will not usually treat it as their first priority, and thusly he lets up on the workload as the semester progresses allowing students to focus on classes within their major.

This is not to say, however that the class is without interesting and challenging material. Prof. Fleming dedicates the first half of the semester to the fundamentals of Nuclear Engineering, allowing students to gain an understanding of the processes of radioactivity, atomic fusion and fission, as well as the workings of nuclear reactors and weapons. Though the class does not go deeply into the subatomic and mathematical aspects of Nuclear Engineering, one leaves the class feeling that they could explain ‘how nuclear engineering works.’

The second half of the semester deals more with the history of nuclear engineering and radiological sciences, namely its dangerous side effects, its many critics and underlying problems and possible solutions. Issues range from Global warming and how to dispose of radiological waste to possible nuclear holocaust. In the end, NERS 211 with Prof. Fleming offers a nice break from the standard engineering class, and gives non-NERS majors a unique opportunity to learn about nuclear engineering, without worrying as much about homework and grades (most students receive a B+ or better). I highly recommend it to any student unsure about what to take for their non-IOE engineering courses.

A Recap of the New York Times Magazine

Article on the word: Phantonym

By Stephanie Scapa

Recently I read an article in The New York Times Magazine titled “Phantonym,” written by Jack Rosenthal. Phantonyms are “words that look as if they mean one thing but mean another.” In this article examples of common phantonyms are given and discussed. You might think that as an educated individual you would be aware of these tricky words, however the examples of misused words in the article came from mistakes affluent people made. Such as President Obama’s use of *fulsome* to mean full, when really it means *disgusting, excessive, or insincere*.

A few other frequently misused phantonyms provided in the article are *disinterested* used in place of *uninterested*, meaning indifferent or bored; and *restive* meaning stubborn, or balky, not *restful*. Be careful when writing, so you don’t get caught using these common phantonyms.

IOE 373 Review

Liang Zou

Data Processing is a confusing course name. What to do in this class should be programming and creating tools to deal with data.

Mr. Goodsell is a nice person; he tried to improve the course every time. Therefore the syllabus changed a lot from term to term. At this time (Winter 09), lots of work has been assigned: ten online quizzes, ten assignments, four lab quizzes, three individual projects and one final. To get an A, it seems strict, 96% of the total grade is required.

Seems quite hard? Not that hard. You can get extras! Every time you do the work by yourself without ask-

ing others and turn it in ahead of the deadline time, you can get two bonus points. The schedule is also flexible. Since most students worked really hard on the previous two projects, costing them too much time, Mr. Goodsell changed the third project into an extra project to give us a chance to get a higher grade. Also, if you really did the online quizzes on your own, you're sure to have a good final grade. So most people get an A after the term.

Although programming is not a simple task for us IOEers, dealing with VB, Access and Excel in one term requires a lot of time. Struggle with the complicated projects is awful! But if you just finish all the tasks, trying to improve a little, and you can get an A!

My Study Abroad Experience in Spain

By Tom Hamilton

In June/July 2009, I traveled to Spain with 50 UM students through the Office of International Programs. I arrived with hopes of gaining a better understanding of the Spanish language and culture. Six weeks later I accomplished this feat. However, looking back at my trip I learned even more about myself while being immersed in a whole different world.

As I arrived in Madrid, I immediately noticed that my Spanish was rusty. To add on to this dilemma, I had to adjust to jet lag, the weather, and the food. *Siestas* (aka mid-day naps) were initially a struggle. Temperatures varied around 100 degrees of dry heat. Lastly, I was forced to eat seafood and other dishes I wasn't accustomed to. I was worried how this experience would turn out!



A week later, our program split from our hotel rooms and we settled in with host families in the college town of Salamanca. Here, I was forced to speak strictly Spanish – like it or not! Though, this is where I began to grow the most and realize the beauty to the Spanish lifestyle. Walking the gorgeous streets I began to soak in the old buildings and plazas. Passing locals, I began to realize the love that Spaniards have for their family and friends. It was evident that the company of a friend was enough to be satisfied.

Each weekend, I went on excursions. From the beach, to the running of the bulls, to churches and palaces, this was my favorite part of the trip. Each city was an adventure as I figured out transportation systems and city streets, while I observed new architecture, tasted new foods and met new people in each region.

I found that the hardest part of being in a foreign country is the fear of being correct. I often questioned my grammar and vocabulary. At times it was a struggle to get my point across. Still, if you decide that you are going to try your best you will eventually find a way to connect. Getting past this fear, was a huge accomplishment for me. This "fear" applies to many more situations - whether it is an interview, talking to a professor, or a conversation with your boss - just be confident in yourself and never let the fear of being wrong hold you back.

Though much of my time was spent with my classmates, I can honestly say that the Spanish culture will forever impact my way of life. I now have greater appreciation for my family and friends, an open mind to diverse cultures, and an exploratory palette. The experience as a whole gave me more self confidence, new friends, and a lifetime of memories. I would highly recommend a study/work abroad experience!

All About SWE

By Stephanie Kuo

The Society of Women Engineers is a great organization! The members have opportunities to volunteer in many different areas: outreach, public relations, corporate information sessions, and industry. The outreach committee typically goes on field trips to nearby schools and girl scout troops.

During one of the visits I made, I helped elementary school children build gumdrop bridges. The public relations committee stays more on campus than the outreach society and sponsors some awesome events. My favorite event is Mr. Engineer, a male “beauty pageant” for engineers that raises money for a charity.

The corporate information session group is in charge of hosting corporate information sessions with many different companies throughout the year. Finally, the industry committee is a great part of SWE because they put on various networking events and professional development events.

Last but not least, SWE is not just for women or engineers, we welcome everyone: women and men, engineers and non-engineers. Come check out the society at one of our bi-monthly seminars on Thursdays!

Join IIE

By Brooke Silverstein

Looking to network with major corporations during your job/internship search? Looking to build a tighter bond with your IOE peers? Looking to have some fun? If you answered yes to any or all of the above then IIE is what you are looking for! The Institute of Industrial Engineers strives to provide an awareness of the Industrial and Operations Department and its resources. IIE works to develop an interdepartmental relationship as well as to present insight into career opportunities. By maintaining a strong relationship with the IIE National Chapter, an industry network is sustained.

IIE will be hosting corporate information sessions, two bar nights a semester and a bar crawl at the end of the year. We will also be having a bowling night and several other fundraisers as the year goes on. Although all of the events that IIE hosts are open to the entire IOE student body, we would really like to encourage all of you to join. During all of our events there will be benefits to members. Such benefits include free appetizers, free bowling, and a free T-Shirt for joining! If you are interested in becoming a member please e-mail Brooke Silverstein (President) at brsilve@umich.edu for more details.

IIE had a very successful start of the year. We hosted BP, Bank of America, Eli Lilly and Strategic Weapons and Facility Pacific. We also held our first bar night of the year! Please look out for emails about our upcoming events and we hope you will consider attending the events and better yet, joining IIE!

My Summer as a General Electric intern

By Nayana Srivastava

This summer I worked as an intern with GE Aviation in Lynn, MA, which is very close to Boston. It was the best location I could have hoped for. I spent 10 weeks of my summer as a professional living near a major city. It was a very good summer.

Working for GE is the best experience anyone can ask for. I was assigned to the Supply Chain and Materials Management division. I was the first intern that my team had ever had. At first, they were unsure of what to do with me but slowly began to trust me with more and more work as time went by. I had to deal with large amounts of inventory and had to make sure it got where it needed to be on time. I also had to set up a system for the easy access of parts for an engine line.

I loved working at GE because I was able to work at my desk as well as on the shop floor with real plane engine parts. I was given the opportunity to meet with managers from different departments. There were a large number of interns and a lot of intern events were planned which included playing paintball, having weekly intern lunches and my personal favorite – skydiving!

If any of you ever have the opportunity of working for General Electric, you should definitely take advantage of it. You learn a lot and become part of a great company that employs great people who have inspirational stories about their journeys as employees and leaders in GE.

Academic Integrity and the Honor Code at the College of Engineering and the IOE Department

By Marcial Lapp

Hello fellow IOE Students and IIE Members,

I may be slightly biased, but Industrial & Operations Engineering is by far the best department in the College of Engineering. However, there is one trait that all students in the College of Engineering share: personal integrity, a matter I would like to address in this article.

Where does this integrity come from? The short answer is: it doesn't come from anywhere; or rather it comes from within. The College of Engineering assumes all students bring with them a set of core values such as respect and fairness to others, self awareness of our own limitations, and the confidence to admit those limitations. From these values flows the responsibility to ensure a level learning environment for all, as well as the right to be judged fairly on our accomplishments.

So why did I write this article? Well, this answer is not quite as short. The core of the College of Engineering is its diverse population. We have the brightest and best students from all over the world who have previously attended institutions with their own set of rules, regulations, and fundamental principles regarding academic conduct. Often these policies differ from those set forth by the students and faculty here at the University of Michigan.

At U of M we believe in the academic principle of never claiming ideas or work that is not one's own,

while also advocating the importance of team work in appropriate situations. More specifically, each class taken at U of M will identify what is appropriate academic conduct. Some classes will allow you to work on homework in teams, others will not.

Some allow you to work together for major projects, others will not. Since course policies are not identical from course to course, it is vital that you familiarize yourself with the policy of each course. Every instructor includes a section on what he/she considers acceptable academic conduct in the course syllabus. If the policy is unclear, do not hesitate to ask.

As a member of the Engineering Honor Council for three years, I have seen students accused of violating a course's policy because they simply did not take the time to read and understand what was and was not allowed. Such course policy violation instigates a process whereby the accused student is required to present his/her violation to the Engineering Honor Council. This Council then decides the extent of the punishment (usually a grade decrement) and sends this recommendation to the Faculty Committee on Discipline, who has the final say in the matter.

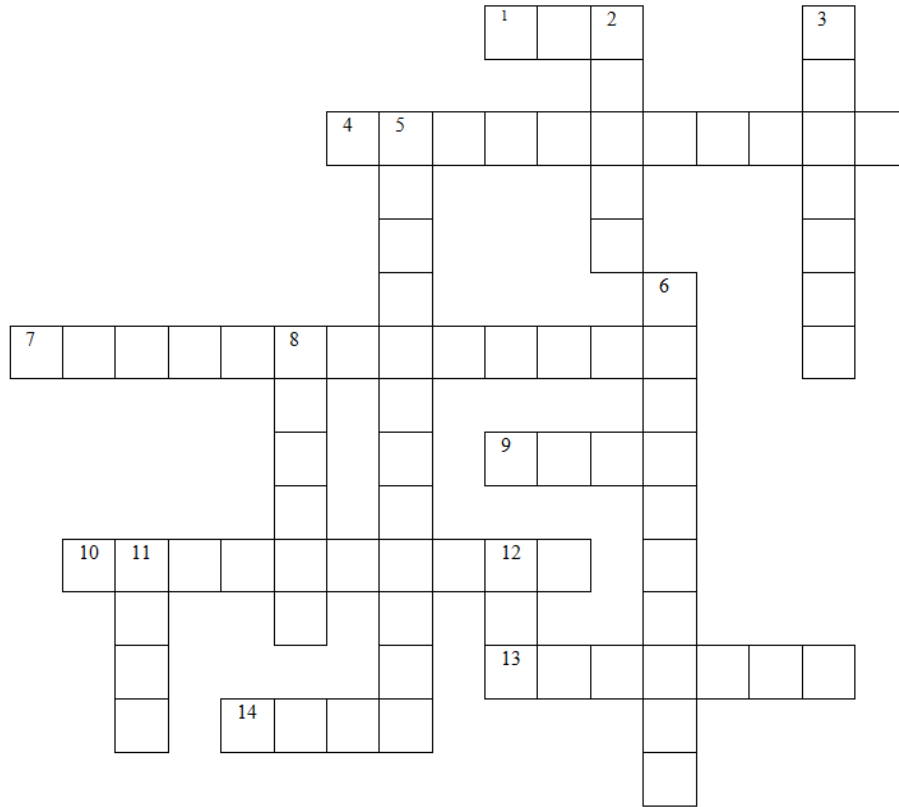
While we all come from different backgrounds, each one of us is required to learn, live and play by the rules set forth by our community. For more information, please visit the Engineering Honor Council website at <http://www.engin.umich.edu/students/honorcode> or email us at: enghonor@umich.edu

Again, welcome (back) and I wish you a successful academic year. Go Blue!

Marcial Lapp
IOE Graduate Student and Former Engineering Honor Council President

The BACKPAGE!!!!

-IOE Crossword Puzzle-



Crossword
Puzzle
brought to
you by
Olivia Dunn

ACROSS

- 1 Honor society and combined undergrad/grad program for engineering students who want to include business and LS&A courses into their curriculum
 4 IOE undergraduate student advisor
 7 Can take you back to central campus or even all the way to Crisler Arena
 9 Café found in the Duderstadt center
 10 First word in SGUS
 13 Popular statistical software found on CAEN computers
 14 Technology that recently celebrated its 25th anniversary

DOWN

- 2 North campus 165-foot tower
 3 IOE department chair: Lawrence _____
 5 Primary topic studied in IOE 310
 6 What 333 is all about
 8 Neighboring building directly south of the IOE building
 11 Office for engineering students to get career-related assistance
 12 Industrial engineering honor society

Note: The opinions expressed herein do not necessarily reflect those of the Industrial and Operation Engineering Department at the University of Michigan—Ann Arbor. Any questions or comments should be submitted to apmofficers@umich.edu © 2009

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