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Barbara Fordyce (IOE/EGL Peer Counselor):
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Wednesdays: 10:30-11:30am
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A Few Words From the Editor . . .

Hello fellow IOEs! This might be the least-read Blueprint issue of the year (until that one that always comes out during finals week), but it definitely has its uses: this month we have articles related to the upcoming break and a page full of jokes so you can fill your head with amusing thoughts during class.

Chinese (Lunar) New Year was this past Sunday (February 18) so celebrate by cooking yourself up something sweet. It’s the year of the pig, and that’s making me hungry; fortunately, this issue has some Oriental-influenced recipes just for the occasion.

On a more somber note, I’ve heard that Good Time Charley’s has closed down, for good… is it true? For those of us who have yet to turn 21 (or turned 21 during the last couple months), I feel like we missed on a great birthday tradition. But on the plus side, Mitch’s is open again.

Oh yeah, have a nice spring break!

Best,
Franklin.

Visit the IOE Department Website:
http://www.ioe.engin.umich.edu/ugrad.html
IOE Student Societies

Alpha Pi Mu (APM)
http://www.engin.umich.edu/soc/apm
The only nationally accepted industrial engineering honor society, APM members are in the top GPA percentiles of upper-classmen. 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 Senior Advice Night.

Engineering Global Leadership (EGL) Honor Society
http://www.engin.umich.edu/students/support/egl/
EGL is a five-and-a-half 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 society, but its membership features plenty of IOEs.

Human Factors and Ergonomics Society (HFES)
http://www.engin.umich.edu/soc/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/soc/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/soc/informs

Outstanding Multicultural Industrial Engineers (OMIE)
http://www.engin.umich.edu/soc/omie/

Engineers Can Cook!
By Miranda Olds
February's Recipe: Coconut Shrimp

**In the spirit of going near an ocean for Spring Break, or in case you are hosting a dinner party, here is an easy recipe all will enjoy!

Ingredients:
- 28 large shrimp (about 1 1/2 pounds)
- 1/3 cup flour
- 3 large egg whites
- 1 1/2 cups flaked sweetened coconut
- Cooking spray

Procedure:
To prepare shrimp, peel and devein shrimp, leaving tails intact. Rinse shrimp in cold water; drain on paper towels until dry. Put flour in a small dish. Place the egg whites in a medium bowl, and beat with a mixer at medium-high speed until frothy (about 2 minutes). Place coconut in a small dish.

Working with one shrimp at a time, dredge in flour. Dip in egg white; dredge in coconut, pressing gently with fingers. Place shrimp on a baking sheet coated with cooking spray. Repeat the procedure with remaining shrimp, flour, egg white, and coconut. Lightly coat shrimp with cooking spray. Bake at 400° for 20 minutes or until shrimp are done, turning after 10 minutes.
Chicken Rice Recipe
By Aaron Chow

For all the Asian food lovers out there, worry no more! What better way to enjoy some Asian food than to cook it yourself! It might be a bit on the tedious side, but hey! Invite a couple of friends over and I’m sure they will love your food to bits!

Ingredients for the chicken:
1 whole Chicken (to be boiled in a large pot of water by itself)
70 ml of Sesame Oil
60 ml of Light Soy Sauce
1 medium sized cucumber
1 sprig parsley
60 ml of Concentrated Chicken Stock (made from boiling chicken bones or from chicken stock concentrate e.g. Maggie chicken stock)

Ingredients for the rice:
1 Clove Garlic
4 cups of Thai Fragrant Rice
150 gm of chicken fat
1/2 teaspoon of salt
Water that was used to boil the chicken (some to be used for cooking the rice, the balance is to be used as a base stock for an accompanying soup)

Ingredients for the condiments:
20 gm Galangal (optional)
100 gm red peppers
20 ml concentrated chicken stock
2 cloves Garlic

Ingredients for Soup to accompany the Chicken rice:
Balance of water used to boil the chicken
20 gm peeled shallots
250 gm of cabbage
Spring onion for garnishing

1. First start preparing the stock. Simmer the chicken feet or bones for about 2 hours in the stated amount of water. By the time the stock is ready for use, ensure that there about 1.5 liters left after evaporation of the water during simmering. This makes the stock more concentrated and thus more effective. If this stock is used then the need for chicken concentrate or powder is not necessary.

2. While the stock is simmering, check and clean the whole chicken. Boil a large pot of water. The water has to be sufficient to cover the whole chicken. Bring the water to a boil. Put the whole chicken into the pot of boiling water. The fire should be strong so as to bring the water to a boil again as soon as possible. Approximately 15 minutes cooking is required. A good way to test whether the chicken is cooked or not is to get a skewer and stab the meatiest part of the chicken (e.g. the thigh) and if the meat is soft and easily penetrated, we know that it is cooked. Remove the chicken and let it cool down.

3. When the chicken is cooling down, the rice can be prepared. The rice is just as important as the chicken. This because the essence of good chicken rice is having tasty rice. Fry the uncooked rice in a wok with some of the chicken oil obtained from the fat as well as some cooking oil. Keep on frying in a moderate fire. Continuously keep on turning over the rice so that it does not burn at the bottom of the wok. Continue until the rice turns a slight golden yellow shade. Next pour the rice into a pot. Add the rice stock, salt and the balance of the water required is obtained from the water used to boil the chicken. The liquid added should cover the rice by about 1/2 an inch. Add 1 clove crushed peeled garlic and a piece of about 20 gm bruised ginger to the pot. Cook the rice. Serve in a bowl or plate.

4. While the rice is cooking, the chicken should have cooled down. The whole chicken should then be brushed evenly with sesame oil. This should be done as soon as the chicken is cool enough to handled Otherwise chicken skin would darken. The sesame oil also gives a fragrance and flavoring the chicken. No salt is to be added to the chicken. The cooked chicken is then cut up into appropriate sized pieces and served on a large plate. It is not easy to cut a large chicken and yet not mess up the chicken. An alternative would be to debone the chicken meat in whole intact chunks as large as possible with the skin intact on the meat. These are then cut up into appropriate sized pieces. The chicken must not be overcooked.

5. The condiments are prepared by grinding the ginger and galangal (optional) together. 5 to 10 ml of concentrated chicken stock is added. About 1 tsp. of chicken oil is also added. The red peppers are then ground with the peeled garlic, served separately.

6. The soup is then made using the balance of the stock and water that was used to boil the chicken. Add the shredded cabbage. Add the peeled shallots. Add the shredded cabbage. Add salt to taste. Simmer for 15 minutes. Cut the spring onion and garnish the soup.
**IOE 425 Course Review**

By: Amir Azer

One of the great things about the IOE program here is its flexibility where students can pick from a wide range of electives. One of the electives that one should definitely consider taking is IOE 425, Manufacturing Strategies. The class deals with one of the most integral parts of Industrial Engineering, lean, and shows different methods of implementing them in an industrial setting. As the word implied, lean means being able to use the least amount of resources (people, inventory, equipment) necessary to satisfy customer requirements in order to achieve the highest quality, lowest cost, and shortest lead-time through the total elimination of waste. The system, initially developed by Toyota Motor Corporation – and the key to their manufacturing success – now finds widespread implementation even outside the manufacturing world.

The importance of this subject is underscored by the number of recruiters who bring up the subject during information sessions and interviews. Many interview questions will be targeted to see if the candidate has a good understanding of the principles of lean and whether they can implement them or not.

The only drawback of this class is that it is offered for half semester only and I believe that such an integral part of an IE’s education should have more time devoted to it. During the class, it is not difficult for one to notice the lessons are rushed and that this is only an inch deep, mile wide view of these principles. It is offered both during the first and second half of the semester in both the fall and winter. As far as the workload is concerned, there are eight short online homework assignments, one online midterm, two group projects, and a closed-book final.

For those of you not interested in manufacturing, the professor insists that if you try to implement these proposals at home to your sock drawer, your life would be much easier.

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**Spring Break Deals**

By Carlo Spagnuolo

Spring break is a nice week off from school and gives you a great opportunity to go on vacation – you’ll probably be in need of one at this time of year. In my experience, I’ve always booked way too late and constantly found only overpriced rates. This year, my friends and I were a little more proactive about the situation, and started looking for spring break vacation prices to Cancun in mid December. We found many rates around $600 per person, but kept looking and eventually came across a deal from orbitz.com that included 5-nights hotel, round-trip air, and transportation to and from the airport for $465.

While not the most exclusive place to stay, our hotel has a good rating, an ocean view, and is located right in the center of most of the festivities. I’ve recently gone back to the website to check the prices again, and found that most hotels (including mine) are booked. Most comparable vacation packages that still exist cost at least $700, so my advice for planning any vacation is to start looking early and check many different sites for deals.

Here is a list of 10 websites that I’ve used to find good deals online:

1. Orbitz.com
2. CheapTickets.com
3. Expedia.com
4. Travelzoo.com
5. Hotwire.com
6. Priceline.com
7. Travelocity.com
8. Hotels.com
9. SideStep.com
10. Lowfares.com

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**Egg Drop Soup!**

By Jeremy Chan

**PREP TIME 10 Min**

**COOK TIME 10 Min**

**READY IN 20 Min**

**INGREDIENTS**

- 4 cups chicken broth, divided
- 1/8 teaspoon ground ginger
- 2 tablespoons chopped fresh chives
- 1/4 teaspoon salt
- 1 1/2 tablespoons cornstarch
- 2 eggs
- 1 egg yolk

1. Reserve 3/4 cup of chicken broth, and pour the rest into a large saucepan. Stir the salt, ginger and chives into the saucepan, and bring to a rolling boil. In a cup or small bowl, stir together the remaining broth and cornstarch until smooth. Set aside.
2. In a small bowl, whisk the eggs and egg yolk together using a fork. Drizzle egg a little at a time from the fork into the boiling broth mixture. Egg should cook immediately. Once the eggs have been dropped, stir in the cornstarch mixture gradually until the soup is the desired consistency.
Musicology 123 Course Review
By Mark White

If you are looking for a fun humanities class to get those humanity credits out of the way, consider MUSICOLOGY 123: Introduction to Popular Music. This class is worth three credits and covers American popular music mainly from the 20th century. The course covers musical styles such as ragtime, jazz, blues, country and western, rhythm and blues, rock ‘n’ roll, funk, punk, disco, metal, and early hip-hop. The class also emphasizes the significance of early pop performers such as Louis Armstrong, Muddy Waters, Frank Sinatra, and Elvis Presley, on American pop music. The first half of the semester may seem kind of boring because you won’t know many of the songs. The main purpose is to get familiar with the early styles of pop music, as well as the genres. These early genres later intermix and introduce new styles and musical hybrids such as rock ‘n’ roll.

As for the workload in the class, it’s pretty light. You are required to write two papers 4-5 pages (double-spaced) in length (30%), take three exams (55%), and the rest is participation in discussion (15%). The papers are easy to write since the length is fairly short, and the tests aren’t bad, consisting of a few short answer questions and the rest multiple choice. It’s a pretty fun class, especially if you like listening to music. To prepare for the tests, you just have to read over the lecture notes, and download the songs a couple of weeks in advance to your ipod and listen to them in between classes.

I recommend taking this course if you need humanities credits, enjoy music, or are looking for a fun, nonstressful class. The course introduces you to many different musical genres and explains how/why certain songs in the past became popular and their relation to the time periods in which they were recorded.

Spring Break Rant
By Katherine Brown

It is extremely cold outside, below zero with a wind-chill factor of -87293017. We all love the University of Michigan, except when its freezing, except when you have to wear three sweaters, ugggs, a scarf, mittens, and a hat, except when you have so much work to do you’re at the library from 11 to 7:30 working on one IOE 373 HW assignment…

Hmm ok, so maybe we LOVE the University of Michigan during football games and welcome week. BUT one thing we do have to look forward to is spring break! For most of us that means going somewhere hot – for the Greek System its Acapulco or Cancun, for me and my friends (and about 100 others) a Bahama-vention cruise. For some it means Alternative Spring Break, those people I definitely give a ton of props to. For others it means visiting home or friends who are abroad. One thing that all U of M students have in common is that NO ONE WANTS TO STUDY ON SPRING BREAK. So thank you ME 320 and IOE 434 and Biology and any other science/ engineering classes where professors’ hearts have turned to ice from the weather.

I do not understand why professors schedule exams the week after spring break. Wouldn’t it make sense to have a midterm before spring break so they can grade them during it (oh wait, that’s all GSI work) or at least wait until the Thursday or Friday after break. Come on now, even the stiffest professor has to have heard Cancun stories; they know college students aren’t holing up in their apartments for a week to “hit the books.”

Another thing that gets me is those few kids in every class that end up setting the curve with a 106% because they spent their spring break week going over lecture slides. In conclusion my advice is when packing for your spring break getaway don’t forget the suntan lotion, a bikini, your liver, and of course your 600 page orgo book.

Industrial Blueprint – February 2007
Backpage Jokes
By Kelly Wendling

Have you always wanted to be the life of the party and wow everyone with your dazzling sense of humor? These jokes are guaranteed to make your friends laugh. Well, at least the ones that are fellow engineering students.

Three men: a project manager, a software engineer, and a hardware engineer are helping out on a project. About midweek they decide to walk up and down the beach during their lunch hour. Halfway up the beach, they stumbled upon a lamp. As they rub the lamp a genie appears and says "Normally I would grant you three wishes, but since there are three of you, I will grant you each one wish."

The hardware engineer went first. "I would like to spend the rest of my life living in a huge house in St. Thomas with no money worries." The genie granted him his wish and sent him off to St. Thomas.

The software engineer went next. "I would like to spend the rest of my life living on a huge yacht cruising the Mediterranean with no money worries." The genie granted him his wish and sent him off to the Mediterranean.

Last, but not least, it was the project manager's turn. "And what would your wish be?" asked the genie.
"I want them both back after lunch" replied the project manager.

Reaching the end of a job interview, the Human Resources Person asked the young Engineer fresh out of MIT, "And what starting salary were you looking for?"

The Engineer said, "In the neighbourhood of $75,000 a year, depending on the benefit's package."

The HR Person said, "Well, what would you say to a package of 5-weeks vacation, 14 paid holidays, full medical and dental, company matching retirement fund to 50% of salary, and a company car leased every 2 years - say, a red Corvette?"

The Engineer sat up straight and said, "Wow!!! Are you kidding?"

And the HR Person said, "Certainly, ...but you started it."

An engineering student was walking across campus when another engineer rides up on a shiny new motorcycle. "Where did you get such a great bike?" asked the first.

The second engineer replied "Well, I was walking along yesterday minding my own business when a beautiful woman rode up on this bike. She threw the bike to the ground, took off all her clothes and said 'Take what you want.'"

The first engineer nodded approvingly, "Good choice; the clothes probably wouldn't have fit."

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 frajen@umich.edu or bwinokur@umich.edu.

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