IEEE Newsletter

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In This Issue...

Mission Statement

This monthly newsletter will inform, entertain, and connect the students of Electrical and Computer Engineering at the University of Florida. This newsletter links students to our university and future workplace by presenting articles on our department, industry, and events hosted by the different campus organizations.

The IEEE Newsletter needs your help making this a better newsletter. Please email your comments, events, and ideas to **IEEE.UF.Newsletter@gmail.com.**

The Value of Paper
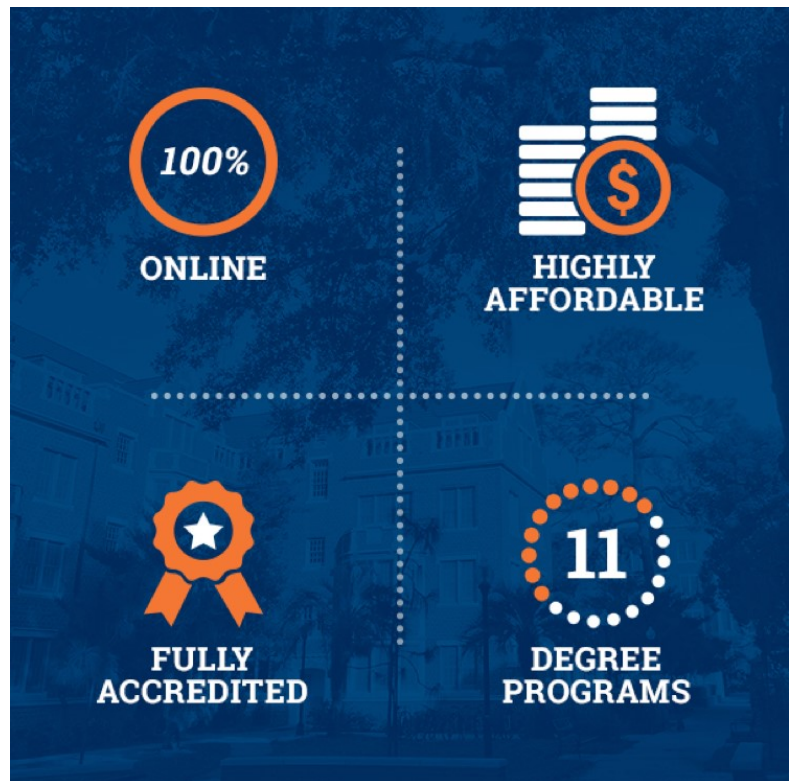
As I submit yet another lab report for Microprocessor Applications, I realize how consuming this one class has been. I look back and realize that two months have evaporated.

But this semester has been invaluable. Although it has not been easy, I have become skilled with my Xmega board, better understanding the fundamentals of microprocessors with every lab. When an online ECE degree is mentioned, I wonder how the weekly pressure of these reports could be conveyed over the Internet.

I feel that engineering programs must be given respect by both

Online Degrees

UF Offering Online Engineering Degrees

students and institutions. An engineering degree means nothing without practical experience, and I fail to see how an online program could deliver that. A recent study has shown that "students typically received lower grades in online sections compared to face-to-face sections of the same course."[1]

This diminished performance is not surprising, and I think it is indicative of the ways online programs underserve their students. The online format is not conducive to meaningful, hands-on projects.

Instead, it isolates the student, often filling his or her time with busy work. If the ECE department offered an online degree, I fear that the students would receive a stifled education.

An online ECE degree would hurt the institution at least as much as it would fail the students. The University of Florida is built on the reputation of its alumni.

When graduates make a good impression on their employers, Gators become more attractive. But sending ill-prepared graduates to the work force would only tarnish UF's name.

A study published by researchers at Louisiana State University and Florida State University stated that "72 percent [of hiring executives] answered 'yes' to the question of whether the type of degree makes a difference in the decision to select a candidate."[2]

The study also found that "when companies attempted to fill management or entry-level positions in […] engineering and information technology, 96 percent indicated that they would choose the candidate with a traditional degree."[2] These findings suggest a corporate bias against online graduates. In order to build UF and the ECE department's esteem among employers, it is essential that we protect the value of our degrees.

From my perspective, an online ECE degree would threaten the most important parts of the engineering program. Students would pay for a limited education while the university would poison its public esteem. The University of Florida is known for its engineers, and we should keep it that way.

- **Daniel Holloway,** CE Sophomore

1   Xu, Di, and Shanna Smith Jaggars. "The Impact of Online Learning on Students' Course Outcomes: Evidence from a Large Community and Technical College System." *Economics of Education Review* 37 (2013): 632-42. Web.

2   Adams, Jonathan, and Margaret H. Defleur. "The Acceptability of Online Degrees Earned as a Credential for Obtaining Employment."*Communication Education* 55.1 (2006): 32-45. Web.

Happy Pi Day!

A special, once-in-a-century event is coming this year! It is the year that Pi Day falls on 3/14/15. If you want to go even further, look at your watch at the time of 9:26:53 on Pi Day, and it will be 3.141592653, ten whole digits of pi in one day! To mark this occasion, I am going to take a look at the remarkable history of pi. Although most engineers use pi on a regular basis, I am sure many do not know the rich history behind this mathematical constant. As Professor William L. Schaaf once said, "Probably no symbol in mathematics has evoked as much mystery, romanticism, misconception and human interest as the number pi."

The earliest appearance of the discovery of pi was about 4000 years ago in the time of the Babylonians and Egyptians. They were to first to discover that the ratio between a circle's circumference and diameter was around 3. Evidence of this is in the construction of the pyramids and in an ancient Egyptian piece of papyrus from around 1650 B.C, which calculated pi as 3.16. The first more accurate calculation of pi was made by the Greek, Archimedes of Syracruse, who found that pi was between 3 10/71 and 3 1/7 by inscribing and circumscribing polygons. Many mathematicians would follow in his footsteps.

A Brief History of Pi

-1650 B.C Archimedes discovers pi is about 3.14.

-150 A.D Ptolemy finds pi is about 3.1416.

-1593 Francois Viete creates new, more accurate formula for pi.

-1665 With the development of calculus, Sir Issac Newton calculates arcsin functions to derive pi.

-1706 John Machin discovers formula that William Shanks uses to calculate pi to 707 digits in 1873.

-1737 Leonard Euler adopts π symbol we all know and love today.

-1949 John Newman first person to use computer to calculate pi and finds 2,037 digits of pi.

-Today over 5 trillion digits of pi have been calculated.

Now that we have computers, we are able to calculate the digits of pi faster than ever before, but some pi fanatics prefer to memorize the digits of pi. There is even a club of people who can recite 1,000 digits of pi. Right now Chao Lu of China holds the world record for recitation of pi at 67,890 digits and the recitation lasted over 24 hours. In honor of Pi Day, I challenge you to learn a few digits of pi and eat some pie while you do!

- **Elise DuTreil,** ME Sophomore

Engineering Fair 2015

A part of E-Week every year is the Engineering Fair. At E-Fair, engineering organizations gather to present their field and their organization to high school and middle school students. Organizations feature interactive demonstrations to help encourage students to pursue engineering degrees.

This year fifteen hundred students came to see over fifty organizations including SWE, WECE, the Institute of Transportation Engineers, the American Society of Chemical Engineers, and the UF concrete canoe team.

I attended E-Fair. The demonstrations on display were very well received by students. It was no wonder as they were able to eat ice cream made with nitrogen with the American Society of Chemical Engineers and watch a model roller coaster in action at the Coaster Modeling Enthusiasts display. Then, they could go over to WECE and play snake with silly putty and then to the Gator American Nuclear Society to test a scale city for radiation.

This is just a small selection of the fun and learning to be had at E-Fair 2015. It was a great and inspiring event!

- Matthew Griessler, EE Junior

Easy Recipes for College

I remember when I used to eat on campus every day. At first, I loved the experience of going to a location for food, but that quickly got as old as the limited food options. That is when my culinary journey began. I started out with only knowing how to make pasta to replicate many of my favorite restaurant recipes. However, I faced the problem of poor grocery planning and ended up spending a lot of money every week. That's primarily why I stay away from Publix. I do most of my shopping now at Trader Joe's and visit the local Indian and Asian food markets when I need a specialty items like premade sauces or chai spices- they are literally right around the corner from where I live.

There are many great local markets like Ward's Supermarket and the newly opened Lucky's Market for those of you who live by University Avenue. The benefit of smaller grocery stores is being able to play around with their unique items. And once you're familiar with the selection, you can get creative and plan meals that reuse ingredients. Also, get yourself a giant spice rack. That way, you will never be limited in what you can make. All that is left is to determine if you're willing to spend time cooking meals. That is why I have provided a little bit of everything: fast, slow, Korean, Indian—you will never be bored of food again!

*For specific measurements, Google recipe title
*TJ = Specifically sold at Trader Joe's

- Liz Dominquez, EE Junior

Breakfast

Greek Omelet

Ingredients:

	Optional:
Eggs	Oregano
Garlic	
Handful Spinach	
Tomato	
Feta Cheese	
Salt & Pepper	

Directions:

1. Sprinkle oil in pan
2. Fry garlic clove
3. Throw in eggs, spinach, tomato, salt, pepper, oregano
4. Once cooked, top with feta cheese.

Fruit Smoothie

Ingredients:

	Optional:
Yogurt	Oats
Milk	Flaxseed
Banana to sweeten	Kale
Ice	Spinach
	Avocado

Directions:

1. Put liquids and fruit in
2. Put ice in
3. Blend

Lunch

Homemade Ramen

Ingredients:

Rice Noodles
Chicken/Veggie broth
Mushrooms
Carrots
Soy Sauce
Rice Wine Vinegar
Boiled Egg

Optional:
White Vinegar
Sesame Oil
Scallions
Vegetables

Directions:

1. Follow instructions on Rice Noodle package

2. Boil an Egg for 10 minutes (put egg in before water boils

3. In soup pot, add veggies, soy sauce, vinegar, and sesame oil

Homemade Mac &Cheese

Ingredients:

Butter
Flour
Milk
Garlic
Sharp Cheddar
Ground Mustard
Paprika
Macaroni Pasts

Optional:
Gruyere Cheese
Bacon

Directions:

1. Boil pasta with salt

2. Melt butter in saucepan

3. Add Garlic

4. Add flour and mix well

5. Pour in milk and whisk until hot (not boiling)

6. Add spices and cut put cheese pieces until melted

7. Add pasta

Chicken Tender Sandwich

Ingredients:

Bread
Frozen Chicken Tenders
Choice of Cheese

Toppings:
Honey Mustard
Ketchup
Mayo
Salad Dressing
Bacon

Directions:

1. Top Chicken Tenders with cheese

2. Heat in microwave or toaster oven

3. Assemble sandwich with chicken and toppings

Dinner

Quick Curry

Ingredients:

TJ Premade Curry of your choice

Veggies of choice

Options:
Bell Peppers
Bamboo Shoots
Carrots
Mini Corn
Zucchini
Peas
Thai Basil
Chicken

Directions:

1. Throw curry and veggies in a pot until veggies are soft

2. Serve with rice

Katsu Chicken

Ingredients:

For Chicken:
Chicken breast, pounded
Flour
Egg
Panko Bread Crumbs
Frying Oil
Salt & Pepper

For Tonkatsu sauce:
Ketchup
Worcestershire sauce
Soy Sauce/ Oyster sauce
Sugar

Directions:

1. After chicken is pounded to 1/2 in. thickness, add salt and pepper

2. Separate egg, flour, and bread crumbs in separate bowls

3. Dip chicken in order: flour, egg, breadcrumbs

4. Cook chicken in medium-high heat

Skillet Sausage & Potatoes

Ingredients:

Any Sausage
Pre-boiled potatoes
Onions
Garlic
Italian Spices
Salt & Pepper
Frying Oil

Optional:
Serve with Pasta or Rice

Directions:

1. Chop potatoes and boil until fork can pass through

2. Cut up sausage, onion, and garlic (first smash garlic with knife)

3. Fry together in saucepan with spices

"The Theory of Everything"

Sometime over the Fall 2014 semester I decided to watch "The Theory of Everything" - an adaptation movie describing the personal life of Professor Stephen Hawking.

While many of us think of him as the brilliant man who proposed the theory of black holes, the less known part of his story is his personal life. Since I do not want to ruin the plot of the movie, I will tell you about some of the thoughts that came to my mind after.

Our lives are not defined by the things we cannot do, but rather the things we can do. Professor Hawking is perhaps the best example of life as the impediment to move and speak has not stopped him from communicating his thoughts through technology.

He managed to marry, divorce, and remarry through his lifetime, along with having children. Professor Hawking is not just an intelligent man, he is a man looking for explanations to the world that we live in and has not given up on life regardless of the many difficulties life has presented him with. I could not help but wonder how Jane Wilde Hawking, Professor Hawking's first wife, could know that Professor Hawking wanted to live in any possible way. Maybe it was her unconditional love that made her fight for and with him for his life and purpose in the early stages of his illness.

However, without her, no one would know about his theories, nor the theory of everything. As Professor Hawking famously says, "While there is life, there is hope". We all have aspirations in life to become great at something. We want to work for a certain company, we want to invent something, we want high salaries, or expensive houses and cars. Some of us also want to have families, travel, try new things, but these things individually are not all that will define us. Our lives will be defined by the effort and sacrifices we make to achieve all of goals and exceed our own expectations.

- Valentina Rendon, *CE Junior*
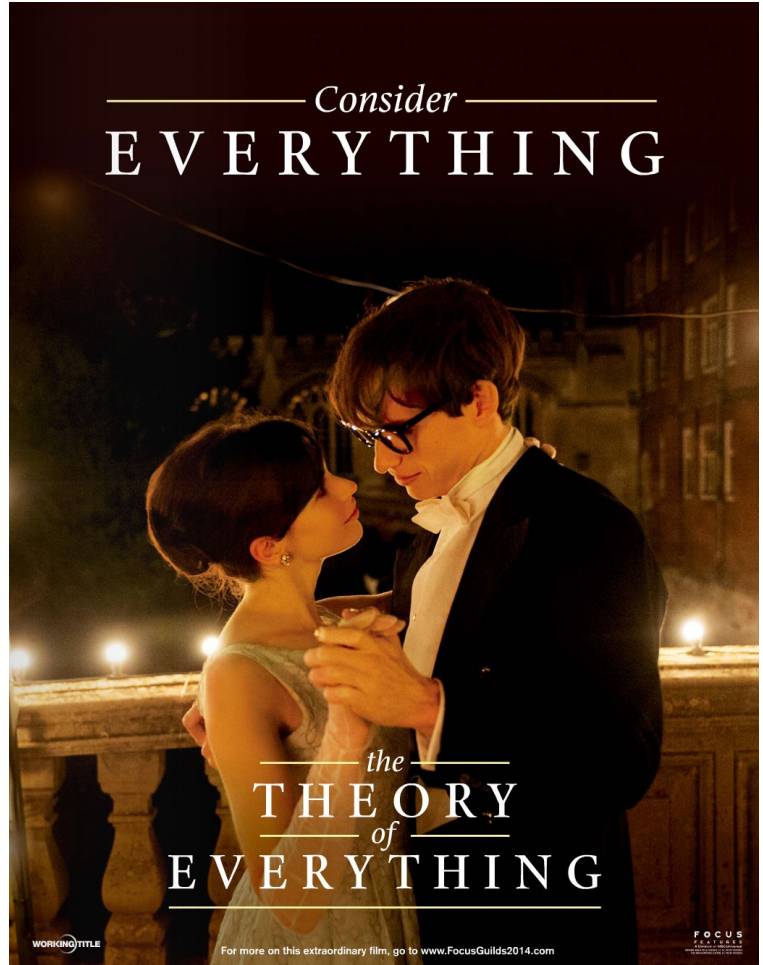
Runners Without Borders 5K

A fundraising event by Engineers Without Borders UF Chapter benefitting the Nepal Project

Start Time: 8:00am EDT

End Time: 10:30am EDT

Price: $20.00 Race Fee +$2.50 Sign Up Fee

The Race Fee includes:

- An event T-Shirt
- Entrance in a raffle to win over $150 in prizes.
- Race Prizes include:
    - 1 month alterego
    - 1 gold 1 month Study Edge membership
    - Tutoring Zone Coupon
    - 2 $20 Hyppo giftcards

Place:

2001 Museum Road
Commuter Lot
Gainesville, FL, US 32611

Registration ends March 14th, 2015 at 11:59pm EDT

MARCH 15 - 8am · Commuter lot on Gale Lemerand (just south of Museum Road)

Runners Without Borders

NEPAL TEAM 5K

Register at: https://bit.ly/EWB-Nepal-5K

Description: As part of the Engineers Without Borders UF Chapter Nepal International Team, this fundraising event has been put together to raise money to support our project in Khanalthok, Nepal. We have established a 5 year commitment to this village, with the plans of creating a dependable, potable water source for the secondary school in the village.

For more information, visit: https://runsignup.com/Race/FL/Gainesville/RunnersWithoutBorders