



IEEE Newsletter

Institute for Electronics Engineers | University of Florida | April 2015 | Volume 2, Issue 4

Ready, Set, Register!

Editorial Board:

Valentina Rendon, Editor

Elizabeth Dominguez

Elise DuTreil

Matthew Griessler

Daniel Halloway

Emily Macon

Christina Sileo

In This Issue...

- Ready, Set, Register!
- From Seashells to Bitcoin
- TEDxUF Breakthrough
- 3 Things I Learned about EE from Quora

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 in making this a better newsletter. Please email your comments, events, and ideas to ieee.uf.newsletter@gmail.com.



Spanning from the end of March to the beginning of April, a phenomenon occurs at the University of Florida. Nearly 50,000 students take their place at a starting line and compete to see who is faster than the rest.

But what sets this race apart from others is that it does not require the use of your feet. On the contrary, it only requires the use of one hand. Around this time, tens of thousands of students are competing on computers for available classroom seats for the upcoming summer and fall semester only to find classes already full.

This creates a plethora of internal conflicts for the student who could not secure a spot in a class they want or need. Some may mentally break down because their perfect college plan is ruined, some may think that they will fall academically behind their peers, and some will go into denial and set up shop in front of their computers to hit 'F5' repeatedly until a class section opens up.

The problem with class registration is that, every semester, the vast majority of classes are offered at different times and with different amount of openings than the previous semester. Some students, when

they first see the course listings for the next semester, create a hypothetical plan, laying out what classes and what sections they want come their registration time.

This saves much needed time for when the race begins and could effectively win one a seat. Advanced planning cuts back the amount of time spent juggling classes on the UF ISIS page and ensures that whatever classes one picks, the classes will not overlap with each other.

It also allows one to plan to keep class times at a specific time of day to avoid the dreaded 8:00am class and 8:00pm class from happening on the same day. However, this planning is both a blessing and a curse.

If one does not plan for hypothetical bumps in the road such as a full class or even a full section, the whole schedule could be ruined. What one needs to do is to create a list of compatible sections to use as backup and have a handful of backup classes ready for if and when a class fills up.

A backup class is essential, especially if one is trying to get into a historically fast

Registration
Continued on Page 2

Registration Continued from Page 2

filling class such as Chemistry 1 Lab or Digital Logic.

Many students early in their college career will not get their first choice schedule and it is good to remember this. Taking a break from a course early on will not jeopardize one's graduation time.

A student, as their seniority increases with the amount of credits they take, will see that their registration time comes earlier every semester. Priority based on seniority ensures that

one will eventually have a starting time that allows one to sign up for that one elusive class that they could never secure. Just remember to breathe.

Class registrations is a stressful time and losing a section seat is never the end of the world. Try to plan ahead and be smart about how you spend your time adding and arranging your classes.

-Emily Macon, CE Sophomore

From Seashells to Bitcoin

Over the past few years, an exciting new technology has emerged, and it promises to revolutionize our lives. Rising from the Internet Age, this new tool is called cryptocurrency, but it is not as mysterious as it might sound. This digital money is being used by people all around the world for activities ranging from daily transactions to massive charitable donations.

These new electronic currencies offer a secure alternative to the often-manipulated currencies of nations, and they promise to change international trade forever. But before we discuss the exciting possibilities of this technology, we should first understand how it works.

Cryptocurrency is founded on the notion of secure transactions protected by cryptographic algorithms and group verification. When money changes hands, the community must verify the exchange in the ledger. The users who do this work are called miners, and they are often rewarded with a small amount of currency for every transaction they approve.

Different currencies employ different methods to accomplish this, but they often involve very difficult hashing algorithms that miners' computers

must solve. After the miners validate a transaction, a record is added to the currency's ledger. This ingenious system ensures the security and quality of the cryptocurrency. Not only is this process safe, but it is also completely transparent.



One of the greatest achievements of this exciting new technology is its openness. Instead of employing the dark and mysterious ways of fiat money, these platforms operate without any deception. Many of these electronic currencies make source code available to the public, allowing users to understand exactly how the systems operate.

Because of this transparency,

massive corporations cannot control the currency. This new medium of exchange may be reinforced against the whims of the power structures, but it is as useful as it is liberating.

Cryptocurrencies are based on the Internet, so they have no borders. A transaction can happen between any two locations in the world in an instant, regardless of international politics. By diminishing the need for exchange markets, this technology stands to bring the world even closer together.

Digital money would make purchases considerably faster and safer. There is no need to wait for a payment to clear because these systems automatically validate every exchange. Electronic money is the next great innovation in trade.

As time marches on and our world becomes better connected, cryptocurrencies are rising up to assist us in our electronic journey. Like many other inventions, digital money has come about to fill a need. By providing superior speed and transparency, it will supplant government-backed fiat money as the standard for the future. The currency of the people has arrived.

-Daniel Holloway, CE Sophomore

TEDxUF 2015 Breakthrough



On March 21st, 2015, UF hosted TEDx 2015 break through, and I was lucky to attend. TEDx is the independent version of the famous series TED Talks which hosts stages for people to speak about ideas worth spreading. This year TEDx was full of great speakers and surprises.

If you have ever watched a TED Talk you have probably wonder, how different can it possibly be to watch a TED Talk in YouTube instead of being part of the audience, and the fact is that it is a totally different experience.

The Curtis M. Phillips Center for the Performing Arts was completely silent as each speaker got on stage and presented ideas on their areas of expertise. The topics varied from how to reduce patient pain through the arts, and the side effects of medicine

used by Parkinson patients from the medicine department, to how learning to dance salsa can teach you how to treat others, to electronic voting by the engineering department, to how remembering history makes us appreciate how far we have come from knowledgeable women through narration. It was amazing to be able to hear every speaker and reflect on what they were talking about.

While we might be attending university and focusing on specific topics of knowledge, it does not mean that we have to narrow the horizon of such knowledge. I was amazed to be able to know about some of these topics, but there was a lot that I did not know, and even if I knew about the topic, hearing another perspective to the same idea made me wonder how

much I appreciate these other areas of knowledge.

I also wondered how I do not have time to read fiction anymore, or draw, or paint, or do something that is not studying. So, if you have been thinking about nothing other than computers, voltage, current, circuits, or anything related to engineering, after that exam you are studying for, go and do another activity that you love, but you cannot find time for. You may find that the combination of these hobbies and studying might make studying more rewarding and stress-free.

To watch TEDx UF 2015, visit: <http://new.livestream.com/tedx/tedxuf2015>

-Valentina Rendon, CE Junior

3 Thing I Learned about EE from Quora



If you think Yahoo Answers is useful, wait until you check out Quora. Quora is a question and answer site with a community of professionals and people who are passionate about anything from electrical engineering to puppets. The best part is that the community seems to have a higher average IQ than Yahoo users. Sorry-not-sorry, Marissa. Just be warned that Quora can be really addicting, and I often use it as a stress-avoidance source—meaning that when I have to study for an exam, I don't. Anyway, here are three interesting questions and answers from users.

-Elizabeth Dominguez, EE Sophomore

As an electrical and electronic engineering student, how can I find a job in the summer?

Start looking now. By April, the significant jobs will taken! Don't your profs know anyone? How about the job board/career center? Word of mouth is a good way. Fellow students sometimes say something by accident or being proud, but you could ask where they found their job. The local newspapers may not have much so check the nearest major city newspapers. Trades mags will have a few offers for students this time of year. Check Craigslist and all those jobs searches online. You should be pouring over job listings at least 2 hours daily. Resumes should be flowing out from your computer. Also, don't overlook a possible foreign exchange. Usually it's for a year, but you never know. Good luck.

- Jan Dawson, Engineering Alumni

What is something electrical engineers know that others don't?

I won't kill you. I will.

-Krishna Teja Mokshagundam

That electrical engineers don't have as much practical knowledge as an electrician. They can't actually repair anything.

-Brijesh Kumar, Assistant Professor

How can I improve my intuition skills in electronics circuits analysis?

Practice, practice, practice!

Go into a lab or workshop and use your multimeter and oscilloscope to observe the circuits in operation. Browse collections of circuit diagrams and study each until you understand how it works. Design or modify existing circuits to understand what happens. Study the theory of operation for many existing circuits.

- Leland R. Beaumont, Bell Labs