EEE Newsletter
November 22, 2019

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EEE End of Semester Celebration*
Come celebrate the end of the semester with your fellow peers and EEE faculty. All EEE students, faculty, and staff are invited. The event will also recognize December 2019 graduation candidates. We hope you can come!

• Tuesday, December 3 from 10:30-11:30AM
• Fu Room (POTR 234)

Refreshments served. See the attached flyer.

Job Corner with Ms. Whelton, PE
I am sure you are all ready for a break. Thanksgiving vacation is a great time to apply for job opportunities and graduate school or to polish up your resume and LinkedIn account. Putting in a little extra time over the holiday when you don’t have classes can really help with your job search. While meeting with family and friends over the break, you could also practice your elevator speech and ask for their feedback. Meeting and talking with a variety of people is a great way to “practice” your networking skills. In addition, by speaking with people about EEE and your specific interests you might learn about a job opportunity!

There is a career fair in the City of Ft Wayne on December 18th from 1 to 3pm at 200 East Berry Street. City Utilities is hiring 17 interns this coming summer—they wanted to hire quite a few last year. More information and how to apply to the internships is found here: https://www.cco.purdue.edu/Calendar/Event/5AF3DB8EE4E1C617E4464AD3F57671DD

As we head into the end of the fall semester, many of you have or will be hearing from companies. If you have a job offer, check out the CCO online. The CCO gives some good information on evaluating job offers, negotiating aspects of your position, and even how to professionally accept or decline an offer: https://www.cco.purdue.edu/Students/JobOffersandNegotiation. The Career Portal provides online free support for the job search via employer research, salary data, and interview and resume guides. If you still have questions on an offer or on comparing offers and would like advice, contact me.

Enjoy the break!

CCO Inside Track*
The CCO has many resources that are very beneficial for students throughout their time at Purdue. A great resource to check out is the Career Research Portal. The Career Research Portal is a free online resource that supports job and interview seekers through phases of the job search process by providing employer research, salary data, and interview and resume guides. Click Here to access the portal.

Feeling end of semester stress? You might feel stressed and overwhelmed and unsure of how to manage everything. For tips on how to best manage your time over these next few weeks, check out this article here which contains all the info that overwhelmed college students may need to organize their approach. Finals week may seem stressful, but if you create a planned-out schedule and an itemized list of what needs to be done, your giant obstacles will become much more achievable.
Fuel for Finals*
There will be free coffee, tea, juices, & snacks on Monday, December 9th and Tuesday, December 10th from 9AM - 2PM in the Armstrong Atrium. The College of Engineering wishes all students good luck with finals and hopes that this will help to get finals week started right! See attachment.

ACE Campus Food Pantry*
ACE Campus Food Pantry is a resource to combat food insecurity on Purdue’s campus. The Pantry is available on a biweekly basis for Purdue students, staff, and faculty. All you need is your PUID. They are currently opened on Tuesdays from 2-6pm and on Sundays from 6-8pm. The pantry focuses most of its efforts on serving the immediate needs of its clients, but also focuses on the eradication of the root causes of hunger so that there is a world where ACE doesn’t need to exist. ACE is located on the Bottom Floor of the Baptist Student Foundation at 200 N. Russel St. West Lafayette, IN 47906. Any questions can be directed to acefoodpantry@gmail.com.

U.S. Department of Energy Scholars Program*
Gain a competitive edge as you apply your education, talent and skills in a variety of settings within the DOE complex. The DOE Scholars program allows students to gain insight and experience on the DOE’s mission, culture and operations, enhance preparedness for scientific, technological and policy related-careers, and become part of a skilled workforce for the future that will benefit both the DOE and the overall global competitiveness of the nation. The mission of the DOE is to ensure America’s security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions. Appointments for DOE scholars are typically during the summer months and are approximately 10 weeks in length. More information can be found here. You must be a U.S. citizen to apply. Applications are due January 3, 2020.

Scholarship Opportunities Available!
- It is always scholarship season! If you are looking for scholarships for next semester or year, the EEE web page has a listing of private scholarships offered by organizations outside of EEE and/or Purdue. There are a number of opportunities listed there currently and the page is continually updated with more information as it is shared with our office. Get in the habit of checking this page frequently.
- You may access this page by taking this path - EEE -> Current Students -> Useful Resources -> Scholarships and Financial Aid -> Outside Scholarship Opportunities

ScholarshipUniverse
The Division of Financial Aid is excited to introduce ScholarshipUniverse, a new tool that makes finding and applying to both Purdue scholarships and external scholarships easier. ScholarshipUniverse is a matching system that maximizes scholarship opportunities for students. It allows students to create an academic profile that enables them to connect with various internal and external scholarship opportunities. Updating the student profile criteria regularly will ensure students are seeing all external scholarships for which they qualify. ScholarshipUniverse will also match students to Purdue scholarships and departmental scholarships for which they qualify to apply. All you have to do is answer questions and the portal will match you to scholarships that you can easily apply to online. The portal can also be used to track the application status as well as when new opportunities arise. The portal is located at purdue.scholarshipuniverse.com. More information can be found here.

Class of 1937 Scholarship
A limited number of scholarships are available for the 2020-2021 school year from funds donated by members of the Purdue Class of 1937 in support of current students. The criteria for determining recipients include: Leadership, Character, and Scholarship. To be eligible for the scholarship, the applicant must:

- Be registered for 12 or more credit hours
- Be classified as a sophomore, junior, or senior during the 2020-2021 academic school year
- Have a cumulative grade point index of 2.0 or higher on a 4.0 scale
- Be in good academic standing and social standing with the University
- Show evidence of leadership potential and ability

An average of 15 scholarships have been awarded each year since 1987-88, with individual scholarship amounts ranging from $500-$4000.
The application is to be completed online and submitted by January 13, 2020 @ 5:00 pm (EST). Access the app from this page: https://www.purdue.edu/vpsl/leadership/. The references are due January 22, 2020 @ 5:00 pm (EST). Questions can be sent to hebrown@purdue.edu.

Charles O. McGaughey Leadership Award

The Charles O. McGaughey Leadership Awards will be presented in the Spring Semester of 2020. A limited number of awards will be available in the amount of at least $2000 each. These awards are made possible by an endowment established by the late Mr. Charles O. McGaughey, a 1939 graduate of Purdue University. Mr. McGaughey designated the award to honor Purdue undergraduates who show leadership abilities and “appreciation for basic American values”.

Applicants must:

- Be an undergraduate student currently registered at the West Lafayette campus of Purdue University who will have completed at least two years of undergraduate studies as a full-fee student by the end of the spring semester 2020
- Have at least a 3.0 overall GPA
- Have demonstrated leadership abilities and appreciation of basic American values as evidenced by a record of achievement through community service and service to the university
- Demonstrate an appreciation for the values of liberty and the democratic form of government and an appreciation of the importance of respect for others and for the diversity of the United States of America
- Have no evidence of addiction to drugs or alcohol and no criminal record

Submit the application online no later than January 15, 2020 by 5:00 pm. Previous McGaughey Leadership Award recipients are not eligible. Preferences will be given to majors in the College of Liberal Arts, Science or the School of Management, but all colleges will be considered. Access the app from this page - https://www.purdue.edu/vpsl/leadership/.

Questions can be sent to Harry Brown at hebrown@purdue.edu.

ABE 591: Machine Learning & High-Performance Computing*

Dr. Somali Chaterji (Assistant Professor, Department of Ag and Biological Engineering, Purdue University) will be offering a one-credit science and data engineering course for non-computer science majors. The course is about data stories, data lakes, and algorithms that will provide the conceptual and foundational bases for machine learning applied to genomics, digital agriculture, and IoT, to name a few domains. The course is meant for both advanced undergraduate or graduate students and does not assume any prior knowledge of ML algorithms. It is part of the Purdue initiative to deliver stackable one-credit courses to create a custom data-science curriculum. More information can be found here.

- EEE will count this course as a Tech Elective or Free Elective.

AGRY 123: Genetics and Society*

The science of Genetics is everywhere in your life. Therefore, you should know a little something about it as well as how to discuss it. AGRY 123 will teach students about Genetics and the food supply, climate change, extinctions, synthetic biology, disease, epidemics, and much more. The class will be run as a series of topics broken up into a mixture of informational presentations, small group discussion, and case studies. It will be offered this Spring MWF @12:30.

- EEE will count this course as a Tech Elective or Free Elective.

ASM 591: Decision Agriculture Methods*

Taught by Dr. Dharmendra Saraswat, this 3-credit hour course will cover the fundamentals of spatial analysis as applicable to georeferenced data obtained from diverse sources. At the end of the course, students are expected to gain hands on experience with cloud based and desktop-based software for combining data from diverse sources and apply spatial and temporal algorithms for its analysis. Experts from the industry and academia will be invited to provide current status and future scope of data-driven, decision agriculture. The class will be MW @1:30 as well as a Lab on Thursdays @1:30.

- EEE will count this course as a Tech Elective or Free Elective.
All EEE students, faculty, and staff are invited to celebrate December 2019 EEE graduates.

Tuesday, December 3
10:30 - 11:30 AM
POTR 234 • FU ROOM
The Career Research Portal is a free, online resource that supports job and interview seekers through phases of the job search process by providing employer research, salary data, and interview and resume guides. CLICK HERE to access the portal!

Virtual Fair
- Health Professions Week | Nov. 16-21 | Online | Virtual Fair on Nov. 21 | MORE INFO

Information Session
- St. George's University School of Medicine | Nov. 19 | 7:00pm-9:00pm | Four Points by Sheraton, West Lafayette | MORE INFO

University Events
- Explore a Career in Genetic Counseling | Nov. 18 | 10:30am-11:30am | REC 121 | MORE INFO
- Public Health Student Panel | Nov. 19 | 3:00pm-4:00pm | REC 121 | MORE INFO
- Occupational and Environmental Health Professional Roundtable | Nov. 20 | 6:00pm-8:00pm | Purdue Graduate Student Center Lounge | MORE INFO

A Letter to the Overwhelmed College Student
Winter Break is quickly approaching and so are all of your deadlines. Group projects, papers, and finals, oh my! CLICK HERE for tips on how to best manage your time over these next few weeks.

Visit the CCO website for a full list of upcoming workshops, career fairs, and other events
www.cco.purdue.edu/calendar

Contact CCO YONG 132 | 765.494.3981 | askcco@purdue.edu
NEED A BREAK FROM STUDYING FOR FINALS?

MAKE YOUR WAY TO THE ARMSTRONG ATRIUM FOR FREE DRINKS, SNACKS, & ENCOURAGEMENT!

DEC. 9TH & DEC. 10TH

9:00 AM TO 2:00 PM

REMINDER: IT’S FREE!

GOOD LUCK w/ FINALS!

Sponsored by the College of Engineering's Office of Undergraduate Education
ACE CAMPUS FOOD PANTRY

The ACE Campus Food Pantry makes food more readily available to members of the Purdue community who may be experiencing food insecurity on a consistent or inconsistent basis. All you need is your Purdue ID! (Students, Faculty, and Staff)

While we focus efforts on serving the immediate needs of our clients in the Purdue community, we also focus on the eradication of the root causes of hunger (culturally appropriate food access, food use, food availability) so that we may live in a world where ACE no longer needs to exist.

ADDRESS

Bottom Floor of the Baptist Student Foundation
200 N. Russell St. West Lafayette, IN 47906

HOURS

Tuesdays 12-6pm, Sundays 5-8pm

DIRECTIONS

CONTACT US

Email: acefoodpantry@gmail.com
Follow us on facebook
As a participant in the DOE Scholars Program, you will gain a competitive edge as you apply your education, talent and skills in a variety of settings within the DOE complex.

Eligibility:
- U.S. Citizen Only
- Undergraduate and graduate students pursuing a degree or recent graduates who have a degree in science, technology, engineering, or mathematics (STEM) discipline or in a discipline that supports the DOE mission

Veterans are encouraged to apply.

Location: Various locations across the U.S.

Duration: Appointments for DOE Scholars are typically during the summer months and are approximately 10 weeks in length. Limited extensions may be granted on the needs of the facility and the candidate's availability.

Benefits: Stipend and limited relocation to the appointment site (if eligible)

Visit the program website at https://orise.orau.gov/doescholars/

Application Deadline: January 3, 2020

Questions?
doescholars@orise.orau.gov

Visit the program website at https://orise.orau.gov/doescholars/
Machine Learning & High-Performance Computing for Digital Ag & Biological Engineering; Part 1: Algorithms, resilient data lakes, & analytics at the edge

Instructor: Prof. Somali Chaterji (Ag and Biological Engineering); Coming March 2020!

PI: Cells and Machines Innovatory; More at: https://schaterji.io

Prerequisite: STAT 30100 OR ABE 20500 OR CHE 32000 OR Graduate Standing; a more advanced statistics course is also acceptable as long as the student has taken the course for credit.

Offering: Spring 2020 [starting Mar 9th, 2020]; 1 lecture/week for 2 hours

This course is part of a Purdue initiative that aims to deliver stackable one credit courses to create a custom data-science curriculum. These courses will be offered online too through lecture capture during live lectures for future digitized offerings.

Want to know more about the following:
- Deep learning
- Reward learning
- GPU accelerators
- Supercomputers
- The living cell as a sensor
- IoT and in-sensor analytics

This course is about data stories, data lakes, and algorithms that will provide the conceptual and foundational bases for machine learning (ML) applied to genomics, digital agriculture, and IoT, to name a few domains. These are some of the domains that are generating terabytes of data, both diverse and available in large volumes. These data sets can be used for “deciphering the rules of life” or to extract actionable information from the ubiquitous IoT sensors. Overall, this course is meant for both advanced undergraduate or graduate students and does not assume any prior knowledge of ML algorithms.

Topics include:
1. “Genomical” and IoT data: concepts and storage
2. Data immersion (AI/ML stories) [Part 1]
3. How to classify?
4. Linear, non-linear, and logistic regression
5. Interpretable ML
6. Data immersion (AI/ML stories) [Part 2]
7. A practitioner's guide to ML (includes use of real-world datasets)
8. Shallow versus deep networks
9. Activation functions
10. Special topics (pick 2 out of the list below, will keep updating)
   a. In-sensor analytics
   b. Edge computing
   c. Data lakes and scalable databases
   d. GPU acceleration and ASICs
   e. Deep learning
   f. Epigenomics and regulatory genomics
   g. Distributed computation and supercomputers

It is expected that the student will have a willingness to delve in data science and engineering principles with the need to go beyond the tools available through various software bundles and packages. We will discuss domain concepts to lay the groundwork for the kinds of data sets that domains related to digital agriculture and biological engineering students see, which could range from cropping systems to geospatial data, genomics and machine systems, and environment and forestry. We will sprinkle in concepts, algorithms, and frameworks for ML and high-performance computing (HPC) tools, such as supervised and unsupervised learning, deep learning, feature engineering, and data storage.
AGRY 123
Genetics and Society
SPRING 2020 | MWF 12:30 (CRN 16836)
*Approved for Humanities and Social Science selective*

The science of GENETICS is EVERYWHERE in your life—you should know a little something and how to discuss it.

Come learn what that means and why it is important to you. Fascinating topics will include:

- Personalized Medicine
- Genetics and the food supply
  - Personalized nutrition
- The microbes that are everywhere talk to each other
  - Genetics, disease and epidemics
  - Genetics and Behavior
  - Climate Change and Extinctions
- Genetics from Scratch: Synthetic Biology
  - And much, much more

Not your typical class, this will be a series of topics broken up into a mixture of informational presentations, then small group discussion, wrap-ups to the larger class and case studies.

- You don’t need to know a lot about the subject to start with—you WILL at the end!
**Spring 2020**

**ASM 59100: Decision Agriculture Methods**

**Instructor:**
Dharmendra Saraswat, Ph.D.

**Course Credits:** 3

Pre Req.: AGRY 105/ASM 222, AGRY 255, Stats 301 or equivalent
Or approval of the instructor

**Lecture**
Monday and Wednesday 1:30 - 2:20 p.m.

**Lab**
Thursday 1.30 - 3.20 p.m.

**Description:** This course will cover fundamentals of spatial analysis as applicable to georeferenced data obtained from diverse sources such as human scouts, ground and equipment sensors, Internet-of-Things (IoT) sensors, public sources, drones etc. At the end of the course, students are expected to gain hands-on experience with cloud-based and desktop-based softwares for combining data from diverse sources and apply spatial and temporal algorithms for its analysis. Students will also develop customized solutions based on data to provide support for on-farm decision making. Experts from the industry and academia will be invited to provide current status and future scope of data-driven, decision agriculture.