EEE Newsletter

October 9, 2015

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EEE Townhall Followup: FE Exam Q&A

This section will be included in the next several EEE newsletters to respond to the major topics discussed at the Spring 2015 EEE Townhall meeting. There are too many points to address at once, so topics will be placed in categories and a new category will go into each newsletter. The category for this issue is the FE Exam. Read below for the related questions posed on this matter and the responses.

When should I start studying for the FE and how?
Preparation for the FE exam begins your first day on campus freshman year. FE is an acronym for “fundamentals of engineering”; as such, a good way to study would be to focus on learning the content in your courses with a goal of knowledge retention.

What is the process for registering and taking the FE?
This information is available online from the FE board, National Council of Examiners for Engineering and Surveying (NCEES). NCEES is the national organization dedicated to advancing professional licensure for engineers and surveyors. It develops, administers, and scores the examinations used for engineering, Fundamentals of Engineering (FE). Read instructions for more info on the exam itself and how to register at http://ncees.org/exams/fe-exam/
Faculty mentors are good direct resources for this question if needed, and Tammi Thayer communicates info directly to seniors. Additionally, SEE and EEE SAC are responsible for communicating with EEE seniors and organizing review sessions.

Can there be a more detailed list of courses that would be helpful to have when thinking of the FE exam?
The EEE Selectives listed in Table 1 (the columns) are partially aimed at that. The list can be found at https://engineering.purdue.edu/EEE/Academics/EEESelectives

Another approach is to review the FE exam topics list, found at http://ncees.org/wp-content/uploads/2012/11/FE-Env-CBT-specs.pdf, and look at the number of questions in each category. You can use this info to guide you when selecting courses.

<table>
<thead>
<tr>
<th>Topic</th>
<th># of Questions</th>
</tr>
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<tbody>
<tr>
<td>Water and Wastewater</td>
<td>14-21</td>
</tr>
<tr>
<td>Environmental Science and Chemistry</td>
<td>11-17</td>
</tr>
<tr>
<td>Air Quality</td>
<td>10-15</td>
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<td>Water Resources</td>
<td>10-15</td>
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<tr>
<td>Solid and Hazardous Waste</td>
<td>10-15</td>
</tr>
<tr>
<td>Groundwater and Soil</td>
<td>9-14</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>9-14</td>
</tr>
<tr>
<td>Risk Assessment</td>
<td>5-8</td>
</tr>
</tbody>
</table>
I would like to see EEE finalize the course schedule and bring in some more topics that are covered on the FE if that is going to be emphasized so much for us to take.

Using the information above (questions in categories) review the Course Catalog (available at myPurdue) and map out the classes that you find important to take. There may be instances in which a class is not offered or cancelled but this is a guide to deciding which classes to take and when.

**What type of classes should I take to best prepare me for careers in EEE in general and also the FE?**

Take classes that sound interesting, that allow you to explore a facet of EEE that is new to you (great way to discover a career passion), and classes that have technical rigor. Don’t take classes just because they’re “easy”. And, realize that at some point in your life you will stop taking classes, and will have to learn the next skill semi-independently.

**Why aren’t there more courses related to the FE exam if this exam is so important? What extra courses should we take to help with the FE exam?**

Trick question. We think electives and selectives are great and we want our students to have as much choice as possible when choosing their career paths. The exam is important but the content is dull without any context. Anyways, topics on the FE exam are covered in many courses. Advice...make use of those selectives/electives. Think strategically to align your choices. Research necessary prerequisites, and don’t waste your electives on “easy” or fun courses.

There are many courses that would have been helpful for the FE but they were only slightly mentioned. EEE may need to require a water and air pollution class.

Again, strategize with your technical electives and selectives. Prioritize what is important to you. And you can still take courses even if they are not required.

**How much are all EEEs affected by the changed FE format? Is it likely to reduce our chance of success or will it help us?**

It’s better. They got rid of things like “circuits” and added more questions about water treatment (among other things directly relevant to environmental practice).

**How do I prepare for the FE? What resources are available outside of class to help EEE’s prepare for the FE?**

Get some FE practice tests. Work FE practice problems. Attend review sessions in fall of senior year. SEEE and EEE SAC partner together to coordinate review sessions relevant for EEE students. Chi Epsilon, the National Civil Engineering Honorary Society, also provides some review sessions but not all topics will be relevant to the Environmental Engineering FE exam.

**When should we take the FE test?**

For many, early February of your senior year might be the best time. This assumes a light workload at the beginning of the semester, so January can be focused on studying -- coupled with some slow and steady preparation in the prior fall semester.

There should be a one credit hour FE prep course that reviews a topic every week and provides ‘study sheets’ every week so that students can take the exam in April or May and be set.

SEEE and SAC are organizing review sessions with faculty - take advantage of these. Also, take the test earlier - in February.
Repeat Policy Update for ME Courses

- Mechanical Engineering has instituted a repeat policy effective beginning Fall 2015. The policy is designed to maximize student success and minimize time to graduation.
- The policy is applicable to all students taking ME courses.
- Main impacts on EEE students are:
  - Grades of C or higher cannot be repeated for a higher grade.
  - Students cannot “regress” and take a prerequisite course after having moved forward. (i.e. take ME 27400 Basic Mech II, then decide to repeat ME 27000 Basic Mech I)
- The full policy can be found at https://engineering.purdue.edu/ME/Academics/Undergraduate/ME%20Course%20Repeat%20Policy%20Effective%20Beginning%20Fall%202015%29.pdf

Grade Policy Update for Math Courses

- The Math Department has instituted a minimum grade policy that will be enforced beginning Spring 2016. The policy is designed to maximize student success.
- The policy is applicable to all students taking MA (math) courses.
- Main impact on EEE students are:
  - A grade of C- or higher is required to move forward to the next subsequent course.
  - Example: Prerequisite for MA 26200 in the Fall 2015 catalog:

**Changed all required grades to C- or better**

MA 26200 Lin Alg Diff Equats
Prerequisites:
Undergraduate level MA 26100 Minimum Grade of C- or
Undergraduate level MA 18200 Minimum Grade of C- or
Undergraduate level MA 17400 Minimum Grade of C- or
Undergraduate level MA 27100 Minimum Grade of C- or
Undergraduate level MATH 26100 Minimum Grade of C- or
Undergraduate level MA 17200 Minimum Grade of C- or
Undergraduate level MA 26300 Minimum Grade of C-

Holds for Spring 2016 Semester

- There are 2 new important requirements starting with the Spring term that will require action from you. Two new holds have been placed on your student record representing the call for action on these requirements. Lack of compliance will result in your inability to register for classes, including the ability to drop or add courses.
1. Purdue Financial Responsibility Statement
   - This statement outlines the terms and conditions of the financial responsibilities and obligations associated with attending Purdue University
   - Action needed: Review and update your annual agreement by visiting the Bills & Payments page via mypurdue.purdue.edu and click the link “Acknowledge Your Financial Obligations” found within the Student Account section. Doing so will automatically release the hold on your account.
2. Emergency Contact
   - In an effort to provide timely information in the event of an emergency we are requiring students to provide at least 1 validated emergency contact.
   - Action needed: Add or validate an existing emergency contact by visiting the Academics page via mypurdue.purdue.edu and click the link “Emergency Contacts” found within the Personal Information section. Doing so will automatically release the hold on your account.
**myMail being replaced by Office 365**

- With Purdue’s myMail email service nearing the end of its lifecycle, the University will begin transitioning student email to Office 365 beginning Oct. 12, 2015. The change will provide students with a modernized user experience, a vastly increased email quota. Several other benefits include access to five copies of the Office software suite, unlimited OneDrive storage and access to SharePoint Online.
- Purdue students and student organizations will have until Jan. 29, 2016, to activate their new Office 365 email and calendar accounts and transfer their myMail data to Office 365.

**Global Development Team- Spring 2016 Applications**

- The Office of Global Engineering Programs (GEP) will be accepting applications for Global Development Teams (GDTs) for the Spring 2016 semester until Friday, October 23, 2015.
- GDTs offer students an opportunity to engage in the research and development high-impact international development innovations. Students will gain design experience and an increased awareness of global development challenges. Selected students may be expected to enroll 1 to 3 credit hours of GEP credit with the project advisor during the Spring 2016 semester. Opportunities for international travel (bearing separate credit and applicable program costs) may exist with each project.
- Applications are to include (1) a copy of your official Purdue transcript and (2) a statement highlighting your interest and qualifications for Global Development Teams. The statement should not exceed 300 words and must include each of the following:
  - Qualifications: A summary of your background, experience, and interest - what you can bring to the project?
  - Motivation: What do you hope to gain academically, professionally, and personally from this experience?
  - Include a header (not included in the word limit) containing your name, e-mail address, major, expected graduation date, and the title of which project(s) to which you are applying
- Please combine your application materials into one PDF file and email the file to gep@purdue.edu with the subject of “GDT Application” by 5:00pm on Friday, October 23, 2015. Selected students will be notified within two weeks after the application deadline.
- Project Groups are:
  - **Drinking Water Treatment in Developing Countries:** [https://engineering.purdue.edu/~jafvert/](https://engineering.purdue.edu/~jafvert/)
    Faculty advisors: Prof Chad Jafvert (CE/EEE), Prof John Howarter (MSE/EEE)
  - **Purdue Utility Platform (PUP):** [https://engineering.purdue.edu/pup](https://engineering.purdue.edu/pup)
    Faculty advisor: John Lumkes (ABE)
  - **Hybrid Energy:** [https://www.fordblueovalnetwork.org/hybrid-power-rural-community-capacity-building](https://www.fordblueovalnetwork.org/hybrid-power-rural-community-capacity-building)
    [https://youtu.be/UDZok3d1LdQ](https://youtu.be/UDZok3d1LdQ)
    Faculty advisor: Prof Jun Chen (ME)
  - **WATER (Water Access To Empower Rural) Tanzania:** [https://sites.google.com/site/watertanzania/](https://sites.google.com/site/watertanzania/)
    or [http://docs.lib.purdue.edu/jpur/vol5/iss1/6/](http://docs.lib.purdue.edu/jpur/vol5/iss1/6/)
    Faculty advisor: Prof Venkatesh Merwade (CE)
  - **Counterfeit Drug Analysis:** [http://www.purdueexponent.org/features/article_8aa615de-0160-5f97-81c9-73555d2ab0e0.html](http://www.purdueexponent.org/features/article_8aa615de-0160-5f97-81c9-73555d2ab0e0.html) or [http://docs.lib.purdue.edu/jpur/vol5/iss1/26/](http://docs.lib.purdue.edu/jpur/vol5/iss1/26/)
    Faculty advisors: Prof Stephen Byrn (Pharm), Prof Kari Clase (ABE/PPI)

**Research Roundtable 2015**

- The Purdue Society of Professional Engineers and Tau Beta Pi, along with four participating colleges, are sponsoring the 5th annual Research Roundtable. **November 10th, 2015 from 9AM to 4PM broke up into two sessions (9:00AM - 12:15PM & 12:45PM - 4:00PM).**
- This is an ideal opportunity for undergraduates to connect with faculty and research centers in their specific field of investigation, and apply for positions in their lab for the summer or the following academic year. If you are looking to get involved with a research project, whether for tech elective credit, a summer fellowship, or internship, come to the Roundtable, and see what’s available for you.
- See attachment.
$10,000 MS Degree Funding Opportunity for Environmental Engineers

- Seniors that may pursue a Master’s in Environmental Engineering during academic year 2016-2017 are encouraged to apply for $10,000 in funding that will be provided by the Environmental Engineers of the Future (E2F) program to each selected student. Selected students have the opportunity to develop early job networking/mentoring relationships with Environmental Engineering employers from both the public and private sectors. The online application is here: http://www.engineeringmastersfunding.org/EMastersFunding/howtoapply.asp.
- The application deadline is December 14, 2015.

University of Colorado BioFrontiers Institute PhD program

- The BioFrontiers Institute was built on a vision of creating a flexible and supportive environment for scientists and engineers to work across disciplines on projects that might be outside the realm of traditional research in their area.
- Faculty members at BioFrontiers have a passion for their work, and openness to new ideas, allowing them to embrace challenges in core areas like genomics, bioimaging, therapeutic paradigms and regenerative biology.
- We started our IQ Biology PhD program to nurture students who can reach across disciplines and develop productive teams consisting of multiple experts. Our results have amazed us. Our fifth class of graduate students recently began their journey through the Ph.D. process, and will continue through their first year in the labs of world-class researchers across disciplines and department.

Free lunch for a great cause

- Going to be in town over Fall Break? Want free lunch for a bit of your time?
- All you have to do is help ITaP stress test a piece of software at 11am Oct 12th at one of the ITaP computer labs.
- Details and a link to sign up available at: http://eng.purdue.edu/jump/c0c793
Do you picture research in your future? Well, you’re at the right university! Designed to connect students with a plethora of exciting research projects, the Purdue Research Roundtable brings together a multitude of groups and programs currently in progress at Purdue. Researchers and program staff will be there to talk with you about available research internships and jobs. If you are looking to get involved with a research project, whether for tech elective credit, a summer fellowship, or internship, come to the Roundtable, and see what’s available for you.

- Where? Purdue Memorial Union South Ballroom

- When? November 10th, 2015, 9:00AM – 4:00PM

- Need more information? Use the links below or contact murray71@purdue.edu

Facebook: https://www.facebook.com/PUResearchRoundtable
Purdue CCO: https://www.cco.purdue.edu/Calendar/Default.aspx?id=1622