Electrical Engineering Curriculum Changes for 2012

The Electrical Engineering program is making a number of curriculum changes starting Fall 2012. The new EE program will be referred to as the Orange program to differentiate it from the current Red program.

What are the changes?

- EE 200 (Design Tools) is a new required course, replacing EE 316 (Embedded Microcontrollers). EE 210, CMPEN 270 (or 271/275) and CMPSC 201 (or 121) are prerequisites for EE 200.

- EE 300W (Design Process) is a new required course, replacing one of the 6 EE technical electives. Students in the new program will only need to take 5 EE technical electives instead of 6. EE 200 is a prerequisite for EE 300W. ENGL 202C is a co-requisite for EE 300W.

- EE 340 (Introduction to Nanoelectronics) is a new required course, replacing E SC 314 (Electrical Properties of Materials). EE 340 has been taught informally as EE 397E for a number of years. EE 210 and PHYS 214 are prerequisites for EE 340.

- EE 316 (Microcontrollers) is being revamped as a 300-level technical elective. EE 200 will be a prerequisite for the revamped EE 316.

- EE 403W (Design Experience) is being modified to now allow undergraduate research, Schreyer Honors theses, projects with Engineering groups (SSPL, Eco-car, etc.) to satisfy the design experience requirement. Students will learn details about their options for EE 403W in EE 300W.

Note: The total number of courses required for the BSEE degree will not be affected by this curriculum change. The number of credits for the BSEE degree will increase by 1 (from 129 to 130) because EE 340 is a 4-credit course and E SC 314 was only 3 credits.

Who is affected? (THIS IS IMPORTANT, SO MAKE SURE YOU READ THIS)

All EE students in the Spring 2012 (or later) entry-to-major pool will automatically be placed in the new Orange program. However, if you are in the SP12 ETM pool and already took (or are currently taking) EE 316, you will need to follow the old (Red) program instead. These students must submit a petition to the EE Main Office (121 EE East) to be moved back to the old (Red) program.

All EE students already in the major are automatically placed in the old (Red) program. However, if you have not completed EE 316 by the end of Spring 2012 (with a C or better), you will need to follow the new (Orange) program instead. These students must submit a petition to the EE Main Office (121 EE East) to be moved to the new (Orange) program.
Why are we making the changes?

With the addition of EE 200 and EE 300W, the EE major now has a 3-semester design sequence consisting of EE 200 (Design Tools) → EE 300W (Design Process) → EE 403W (Design Experience). This sequence is intended to introduce more hands-on design into the curriculum, better engage undergraduates in faculty research projects, diversify the spectrum and depth of capstone design projects, and increase the number of credit hours for engineering design tools and professional topics.

Replacing E SC 314 with EE 340 achieves to two goals. First, it significantly increases the interaction between junior-level EE students and EE Materials and Devices faculty. Second, it provides a natural platform for bridging the required electronics/circuits courses (EE 210, EE 310) and the senior-level electronic materials/devices electives (EE 441 and EE 442).

What is the timeline for the new courses and which courses am I allowed to take?

- EE 200 will be taught in FA12 and every semester thereafter.
  
  Only students in the new (Orange) program are permitted to take EE 200.
  
  As stated earlier, if you did not take EE 316 by the end of SP12, you are required to take EE 200 and follow the new (Orange) program. If you took (or are currently in) EE 316, you are not permitted to take EE 200 and will follow the old (Red) program.

- EE 300W will be taught in SP13 and every semester thereafter.

  Only students in the new (Orange) program are permitted to take EE 300W.

- EE 340 will be taught in FA12 and every semester thereafter.

  Students in the new (Orange) program are required to take EE 340 and are not permitted to take E SC 314 to meet any degree requirements. However, if you are in the new (Orange) program and took E SC 314 in SP12 or earlier, we will allow you file a petition in the EE Main Office to use E SC 314 (3 credits) instead of EE 340 (4 credits). Because the new program is 130 credits instead of 129, you will need to have an extra credit somewhere to make up the missing credit.

  Students in the old (Red) program may take either E SC 314 or EE 340 (but not both) to meet degree requirements. If you elect to take EE 340, you must fill out a petition in the EE Main Office to let us know that you are taking that instead of E SC 314.

- A revamped EE 316 (which will have EE 200 as a prerequisite) will be available as a 300-level elective starting SP13.

  Students in the new (Orange) program can take the revamped EE 316 as an elective, if desired.

  Students in the old (Red) program must have taken the old version of EE 316. If you haven’t taken it yet, you must move to the new (Orange) program.

- The more-flexible EE 403W requirements are in place now. Students in both the old (Red) and new (Orange) program are permitted to follow the new rules.

  Questions? Contact Prof. David Salvia at dsalvia@psu.edu