# Division of Electrical and Computer Engineering

New Curricula for 2013-2014

Presentation to students October 24, 2012



## Rationale Behind Changes

- Students wanted more flexibility in choosing junior level courses
- Students wanted a freshman introduction to ECE
- Students wanted a course teaching Matlab,
  PSPICE and printed circuit board CAD
- One or more of these things already exist in many strong ECE programs



## What are the major changes common to both EE and EEC?

- Added EE 1810 Intro to ECE
- Added EE 2810 Computer Tools in ECE
- No longer require EE 3220 and 3221
- Combined EE 2720 and 2730 into a new 3 credit course: EE 2740
- Combined EE 3750 and 3751 into a new 3 credit course: EE 3752
- Only allow PHIL 2020 and drop 1 Humanity requirement



## What are the major changes to EE?

- Dropped requirements of CSC 1254, EE 3220, 3221, 3410, 3530, 3752 (old 3750 and 3751)
- Added the Breadth Elective 18 hours of courses selected by students from a list of 3000 level courses with EE rubric



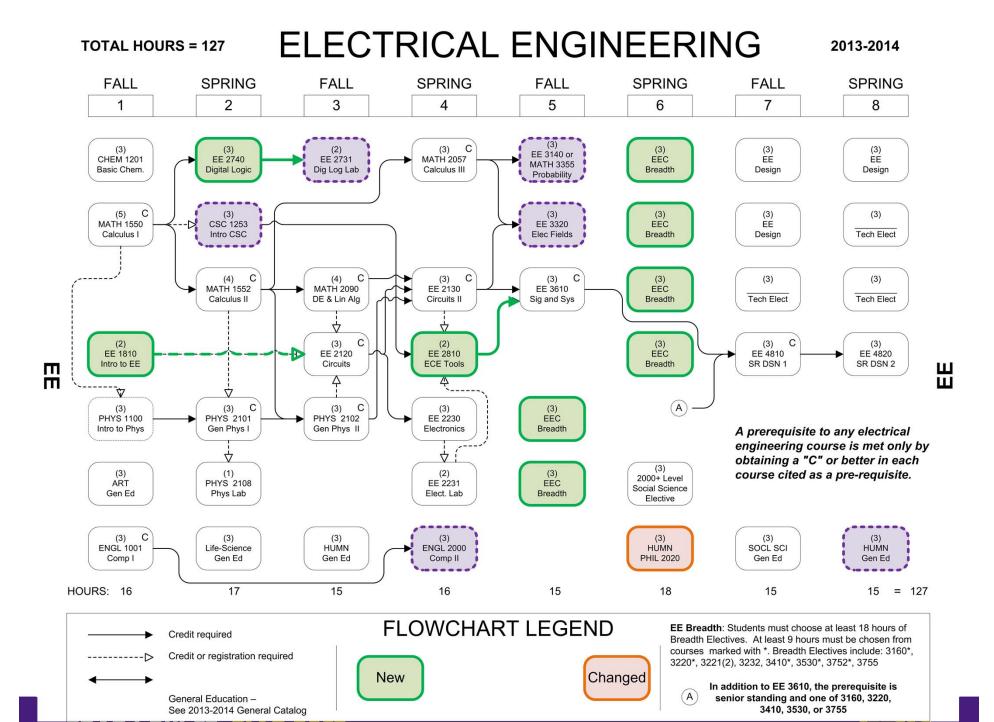
### What are the major changes to EEC?

- Added EE 3710 Communications in Computing (required, formerly EE 4710)
- Added EE 4755 Hardware Description Language (required, new course)
- Dropped requirement of 4750
- Added a Breadth Elective choose 1 course from a list of 3000 level courses with EE rubric



**ELECTRICAL ENGINEERING TOTAL HOURS = 127** 2013-2014 **SPRING SPRING SPRING FALL SPRING** FALL **FALL FALL** 7 3 5 6 8 4 EE 2740(3) **BREADTH Elective** EE 3752 (3) C (2) (2) (2) (3) (3)ART EE 2720 EE 2730 EE 2731 EE 3751 EE 4810 EE 4820 Gen Ed Digital Logic Digital Logic Dig Log Lab Micro Sys Micro Lab SR DSN 1 SR DSN 2 (3) (3) EE 3140 or EE 1810 CSC 1253 CSC 1254 **MATH 3355** Intro to ECE Intro CSC Intro CSC II Tech Elect Tech Elect Probability C (4) C C (3) (3) (3) (3) (3)MATH 2090 MATH 1550 MATH 1552 MATH 2057 EE 3410 EE 3320 EE Calculus I Calculus II DE & Lin Alg Calculus III Elec Power Elec Fields Design Tech Elect C C C (3)(3) (3) (3)(3)(3) (3)PHYS 1100 PHYS 2101 PHYS 2102 EE 2130 EE 3610 EE 3530 EE EE Intro to Phys Gen Phys I Gen Phys II Sig and Sys Design Design Ш E Circuits II Control  $\nabla \nabla$ (3) C C (3)**BREADTH CHEM 1201** PHYS 2108 EE 2120 EE 2230 EE 3220 Elective Basic Chem. Phys Lab Circuits Electronics Electronics II (3) (3) (3) (3) (2)(2) 2000+ Level HÙMN HUMN Life-Science EE 2231 EE 3221 Social Science Gen Ed Gen Ed Gen Ed Elect. Lab Elect. Lab II Elective (3) C (3)(2) (3) PHIL 2018. **ENGL 1001** HUMN EE 2810 **ENGL 2000** SOCL SCI 2020, 2025 Comp I Gen Ed **ECE Tools** Comp II Gen Ed or ROTC 16 HOURS: = 127 16 15 17 15 15 18 FLOWCHART LEGEND New Changed Removed New Course Changed **BREADTH** Moved Merged **LOVE PURPLE LIVE GOLD** 

2012-2013

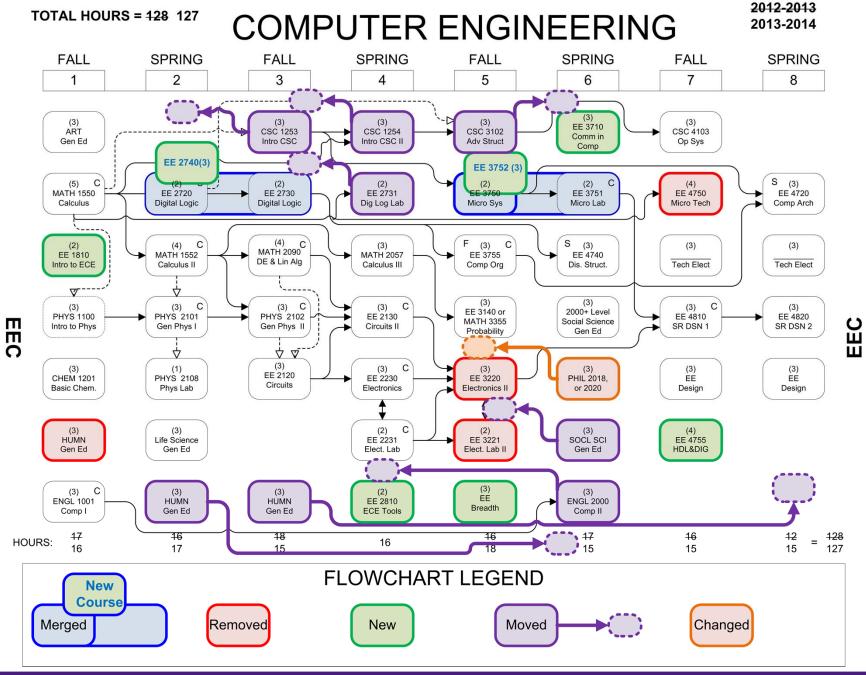


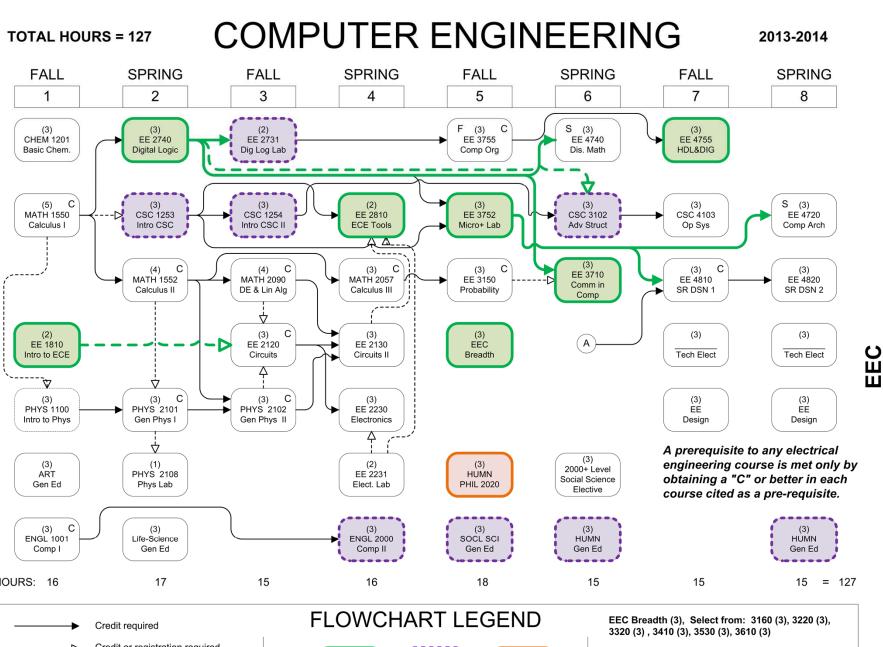
#### **EE Breadth**

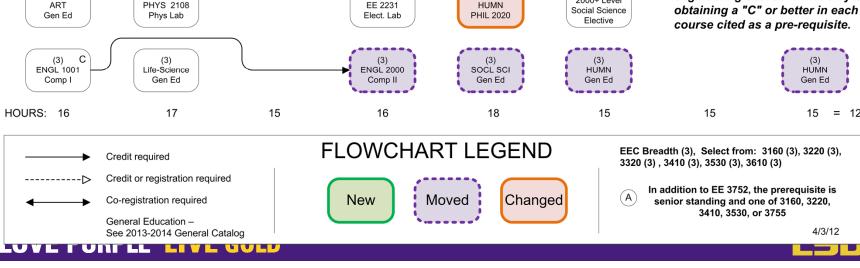
 Students must choose at least 18 hours from this list, and 9 hours must be chosen from courses marked with \*.

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EE 3160*, 3220*, 3221(2), 3232, 3410*, 3530*, 3752*, 3755
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#### **EEC Breadth**

• Students select 1 course from this list:

• 3160, 3220, 3320, 3410, 3530, 3610

#### What does this mean?

- Retention in ECE should improve after the freshman year.
- Students will be more prepared to take courses requiring the use of Matlab, PSPICE and PCB design
- Students will have more flexibility when choosing their areas of interest in ECE.



## Should you switch?

- Students can choose to move to a more recent catalog year from their current.
- Changing to the 2013-1014 flowchart would mean significant changes to requirements.
- Articulation tables will help with the switch similar to transfer student articulation.
- Students should meet with the undergraduate advisor prior to making the switch.



## Other important considerations

- If you have credit in 2 humanities and credit for either PHIL 2018,2025 or 3 ROTC credits, you WILL NOT need to take PHIL 2020. You can just take another humanity elective.
- GenEd electives:
  - In 2011 some humanities were moved to social sciences
  - First year of foreign language now counts as HUM



## If you switch...

- EE 2810 will be required for EVERY student who switches to the new catalog year. <u>No substitutions for EE 2810 will be made.</u>
- EE 2810 may be offered in Spring 2013
- No current students will take EE 1810, other substitutions will be allowed.



## If you switch...

- Were you planning to enroll in *EE 2720* in the spring 2013?
  - What if *EE 2740* was offered instead?
- Were you planning to enroll in EE 3750 in the spring 2013?
  - 3751 may be offered the last time in Fall 2013
- Any student enrolled in 3750 this semester should probably not switch to the new flowchart.



## If you DON'T Switch...

- Eventually, classes from the old flowcharts will be dropped.
- New classes will replace these classes. If a student does not switch to the new flowchart, some may be forced to take new classes to meet old requirements.
- Hopefully all of you graduate before this happens – or switch



## If you DON'T Switch...

Here are some acceptable substitutions:

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- EE 3752 (3) = EE 3750 (2) + EE 3751 (1)
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- EE 2740 (3) = EE 2730 (2) + EE 2720 (1)
- EE 2810 (2) = EE 3751(1) + EE 2720(1)
- EE 3710 (3) = technical elective for EEC and EE
- EE 4750 (3) = 3 credits of 4750, leaving them 1 credit short of the necessary 128. I would encourage a student in this case to switch to the new flowchart.
  EE 4750 can count for a design course.