Double Major ~ CpE and EE

Guidelines for a double major in Electrical Engineering and Computer Engineering:

MTU Double Major Information and Guidelines.

Requirements depend on the year/plan you began as well as electives you choose. Meet with the advisor to find out details for your plan. The following is a guide to help with planning:

See the Advisor, EERC 131 and fill out the Curriculum Add/Drop form.

This information pertains to students on the Fall 2005 plan or later:

1) Your primary major is Computer Engineering. Path A or B recommended.
   Complete all requirements for the CpE degree. Following path C may require additional courses to fulfill EE degree requirements.
   (ENG1101,ENG1102 or appropriate substitution; see the advisor)

2) Additional credits needed to meet requirements for an EE major:
   MA 3160 – 4 cr Multivariable Calculus with Technology (Calc III)
   EE 3120 – 3 cr Electric Energy Systems
   EE 3140 – 3 cr Electromagnetics
   EE Electives 15 credits
   ❖ Math/Science – 5cr. (see below) (CS311 & CS3911 count as Math/Sci electives on EE. 10/2007)
   ❖ Do NOT take EE3170 or EE3306. These credits are covered by EE3173 – 4 cr.
   (Note: EE3175 and EE3970 count as EE Electives if taken before Fall 2008.)
   ❖ If you began Fall 2006 or after, you must take one of the following for "EE Elective" courses to satisfy requirements on the EE degree:
     EE3175, EE4250, EE4253, EE4256, EE4257, EE4272, EE4290, EE3180

3) This is how you do it with the least "extra" credits:
   You need 9 credits approved electives for the CpE degree and these may double count towards the EE major.
   For your CpE Technical Electives, TAKE:
   1. MA 3160 – Theory Track
   2. EE 3140 - Theory Track
   3. EE course from a non-Theory Track (must qualify as EE Elective, 3+ credits)
   Additional Credits needed:
      EE 3120 – 3
      12 credits of "EE Electives" (EE3175, EE3970, &/or EE4431 will apply). Include one of the following:
      EE3175, EE3180, EE4250, EE4253, EE4256, EE4257, EE4272 or EE4290 (Fall 2006 – Fall2008 requirements).
      0 - 5 credits of Approved Math/Science electives as needed.
   Path C students and transfer students without credit for ENG1101 & ENG1102 – 6cr or approved substitution. See the advisor. This is your opportunity to have an in-depth focus area to prepare you for a job in your area of specialty.

If you began Fall 2009 or later, also take EE3180.

It is recommended to get the computer engineering 'Technical Electives' you want, giving preference to your desired emphasis over number 3) above. It's your career – do what's best for you.

Math/Science: CS2311, CS3911 and/or CH1100/50 will apply as Math/Science electives. 5 cr required for the EE major – See the advisor for your requirements. Also includes MA, BL, PH and some GE courses, and cannot be pre-requisite to completed courses.

MA3160 can be used as Math/Sci electives on the CpE degree in lieu of CH1100/CH1150.
Make sure you check pre-requisite chains and semester offerings when planning your schedules. Get pre-requisites done on time to take the ELECTIVES you want. Plan ahead.

All double majors following 2005 requirements and later: Must take required general distribution course for computer engineers:
SS3520, SS3530, SS3630, SS3640, or SS3800. Plan ahead.

See the academic advisor, EERC 131. Review your plans and fill out the Curriculum Add/Drop form.

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