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 2009 requirements or later:

1) Your primary major is Computer Engineering. Path A or B recommended.
   Complete all requirements for the CpE degree. Follow CpE flowchart, while adding in additional EE requirements.

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 3180 – 3 cr  Probability and Random Signal Analysis (can be taken in place of MA3710)
   - EE Electives 15 credits
     - ENG1101 and ENG1102 or approved substitution for Path C and transfer students – 6 cr
     - Math/Science – 5cr. (use CS2311 & CS3911 credits. 10/2007)
     - Do NOT take EE3170 or EE3306. These credits are covered by EE3173 – 4 cr.

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 (or use MA3160 as your Ma/Sci elective course on CpE degree, then use EE3180 as Tech Elec)
   2. EE 3140 - Theory Track
   3. EE course from a non-Theory Track (must qualify as EE Elective, 3+ credits)
   Additional Credits required:
   - EE 3120 – 3
   - EE 3180 - 3
   - 9 credits of “EE Electives” ( EE4173 & No. 3 above will apply leaving 9 cr remaining)
   - Path C students and transfer students without credit for ENG1101 & ENG1102 – 6cr or approved substitution. See the advisor. This is your opportunity to have a more in-depth focus area to prepare you for a job in your area of specialty.

If you began Fall 2006 – Spring 2009, you must take one of the following for “EE Elective” courses to satisfy requirements on the EE degree:
EE4250, EE4253, EE4256, EE4257, EE4272, EE4290, EE3180  Does not apply to students following 2009 and beyond degree requirements.

MA3710 Caution: CpE major may substitute EE3180 for MA3710. While this saves you 3 credits, it may hurt you on the pre-req chain. One of these two courses must be complete before EE3173, therefore you may be better off taking MA3710 first. You cannot take EE3180 until EE3160 is complete. Plan to take both.

It is recommended to get the computer engineering ‘Technical Electives’ you want, giving preference to your desired emphasis over taking least number of credits. It’s your career – do what’s best for you.

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:
SS3510, 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.