Computer Engineering (CpE)
Spring 2018 Second Year and Beyond
Advising Presentation
March 2018

Electrical and Computer Engineering Department
Michigan Technological University
Houghton, MI 49931 USA

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Outline

• Following your degree requirements
• Your online degree audit (DARS) and how to use it?
• Using your Flowchart AND DARS!
• The General Education Requirements
• What to do for upcoming registration period?
  • Course Selection, Courses to keep in mind, Priority Registration
• Using the Schedule of Classes/BANWEB
• What if? Questions?
  • Typical questions you may have
• How to Succeed
• Wrap-up
Following your degree requirements

Catalog year:
- based on the year you began at Tech
- This year 1st year students catalog year is Fall 2017, coded as "201708"
- Degree requirements are defined by catalog year

Your Flowchart:
- Follows requirements for your major and catalog year.
- Sample 4-year plan

Academic Plan:
- Create your own plan as you progress and make academic and career decisions

Online Degree Audit Report:
- Review your report each time you schedule or change classes
- Access in Banweb
- "pdf" audit form
  - Official degree requirements document
  - Access on Degree Services Website under "Degree Audits"

Your online degree audit

Online Degree Audit Reporting System. Use this to track your degree progress.
- Located in BanWeb, Quick 5 min video and information slides.
- This is a live document and changes as you register in courses.
- There are sometimes errors in the "coding" of DARS and therefore you should also use the CpE pdf audit form.

What is DARS used for
- Tracking Degree Progress
- Viewing degree requirements

What is DARS NOT used for
- Pre-requisites checks
- Course selection

When should you run your Audit?
- Before you register for classes.
- After you register for classes.
- Ensure theses courses go into the appropriate category.

Meeting the Degree Requirements is YOUR RESPONSIBILITY!
**General Education Requirements**

*The information below is Catalog year specific and shown for REFERENCE ONLY. Refer to your online degree audit for your specific Gen. Ed. information.*

**MTU General Education information**

**Core Course Selection:**

**MTU General Education information**

**HASS Course Selection:**

- Students must take 12 credits from the HASS Electives (Humanities, Arts, and Social Sciences) with the following restrictions:
  - 6 credits must be upper division (300-400)
  - 2 credits are required from each of the following lists:
    - Communication/Composition
    - Humanities/Arts (H/ART)
    - Social and Behavioral Science (S/PSB/SOC)
  - No more than 2 credits from the Realized list
  - Each course can satisfy only one requirement

**Flowchart Gen. Ed. Course Selection:**

**Co-curricular Courses:** 3 units of Physical Education + others
Schedule of Classes/BANWEB

Registrar's webpage: Schedule of Classes (SOC)
- View Schedule of Classes or BanWeb for times the courses are offered
- Look and avoid conflicts
  - Conflicts MAY occur so plan your class WELL before your registration time.
  - If you are unsure, send your advisor an email.
- Course Registration Number (CRN): A personal course identification number
  - No two courses will have the same CRN
  - Click CRN below to see more course information.

Schedule of Classes/BANWEB for Gen. Ed.

Registrar's webpage: Schedule of Classes (SOC)
- View Schedule of Classes or BanWeb for times the courses are offered
- You can view the various General Education requirements using the SOC
  - Go to SOC/BanWEB
    - Select all subjects (Control-A Keys)
  - Go to Attribute Type
    - Select General Attribute Type by clicking
    - Select Class Search
- Attribute Types Terminology (2015+ General Education)

<table>
<thead>
<tr>
<th>General Education</th>
<th>SOC/BanWEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical and Creative Thinking</td>
<td>Critical/Creative Think’g CORE</td>
</tr>
<tr>
<td>Social Responsibility &amp; Ethical Reasoning</td>
<td>Soc Resp/Ethical Reason CORE</td>
</tr>
<tr>
<td>Communication/Composition</td>
<td>Communication or Composition</td>
</tr>
<tr>
<td>Humanities/Fine Arts</td>
<td>Humanities &amp; Fine Arts</td>
</tr>
<tr>
<td>Social &amp; Behavioral Science</td>
<td>Social &amp; Behavioral Science</td>
</tr>
</tbody>
</table>

- You can select several attributes at the same time by holding the control key and selecting any of the attributes above
What to do for the Upcoming Registration Period

**Course Selection:** Using your flowchart and pdf audit
- Consider the previous semesters and determine credit load; 12-17 credits
- Select the courses numbers for fall
- View Schedule of Classes or BanWeb for times the courses are offered
- Look and avoid conflicts
  - Conflicts MAY occur so plan your class WELL before your registration time.
  - If you are unsure, send your advisor an email.

**Things to keep in mind:**
- Did you take ENG1102?
  - It will count as a Technical Elective (if taken in FY)
  - Check your degree audit to see if it is counting!
- Need a Math/Science Elective??
  - consider taking CH1150/51 University Chemistry I
  - Or MA3160 Multi-Variable Calculus

**Registration Priority Schedule:**
- Priority is based on credits EARNED at the time of registration!

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Technical Electives

**Courses from CS or EE Technical Areas**
- You can find a list of possible technical areas located on the ECE Computer Engineering website: [http://www.mtu.edu/ece/undergraduate/advising/computer/](http://www.mtu.edu/ece/undergraduate/advising/computer/)
- Run your online degree audit to see your courses

- 2) Additional Technical Electives: 6 credits required from the course list below. ENG1102 (if taken w/FY program), up to 4 credits maximum from UN3002, UN3003.
  - EE 3111
  - CS 3425 Intro to Database Systems
  - CS 3712 Software Quality Assurance
  - Other Non-CS Courses:
    - MA 6202 Introduction to Coding Theory
    - MA 3323 Introduction to Cryptography

*Course in cyan may need to be added manually by your adviser in online degree audit.*
Engineering Design Path

You are not sure which Engineering Design Option you want to pursue?

1. **Senior Design**: Year long design project in your senior year. Student teams of 3-5 students are formed with industry sponsored and industry engineering support.
   - Heavy emphasis on technical problems/solution with limited non-technical roles and limited choice on projects.
   - 1. **EE4901→EE4910**: Fall→Spring sequence only
      2. **MEEM 4901→MEEM 4910**: Fall→Spring or Spring→Fall sequence
      3. **BE4901→BE4910**: Fall→Spring sequence only

2. **Enterprise**: Four semester of design option in junior/senior years.
   - Students teams size varies by enterprise and team. Projects include industrial sponsored, completion teams, and internally sponsored.
   - More balance on technical problems/solution with some non-technical roles and vast choice on enterprise participation and projects.
   1. Required: **ENT3950→ENT3960→ENT4950→ENT4960**: Fall or Spring sequences, limited option for summer
   2. Optional: **ENT1960, ENT2950, ENT3960** (does not contribute to degree completion)

3. **Europe Project Semester**: A study abroad experience in Europe for 1 semester.
   - Credit for EE3901 & EE4901 & EE4910. Additional HASS course credit can be earned.
   - Required Pre-reqs: For EE4901 or ENT4950 are EE3901 & EE3131
     For EE4910 or ENT4960 are EE3173

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Considering Taking Summer Classes?

You may want to consider summer courses if you want to ......

1. get ahead of the suggested flowchart
2. catch up to the suggested flowchart
3. reduce the number credits per semester

**Taking classes at MTU**: Nothing needed, register for classes as normal

**Taking classes elsewhere**: This is completely a self driven endeavor. Below are suggested steps. You should refer to the presentation entitled “How to Transfer Credits from Elsewhere” located in the 2017 Spring Advising Series on the ECE Advising webpage.

1. Select course suitable for transfer.
   - General Education, Math Science are the most common.
2. You will need to find courses at another institution.
3. Let MTU Transfer Services know you are planning on taking courses over the summer. This is to ensure that you get pre-requisite waivers to register for fall.
4. After completing the course in the summer have your transcript sent to MTU Transfer Services. Failure to do so may result in some of your fall courses being dropped.
5. Note: (a) you need a ‘C’ or better, (b) you only get the credit, and (c) observe the Residency Requirements
6. Contact Information: Transfer Services
   - transfer@mtu.edu
GPA Calculations

There are 4 MTU GPA calculations.
1. **Cumulative GPA**: All of the courses you have taken at MTU
2. **Departmental GPA**: All of the EE course credits taken here at MTU.
3. **Engineering GPA**: A collection of your first year fundamental engineering courses that you have taken at MTU. These include:
   - ENG1101 and 1102 Engineering Fundamentals I and II
   - MA1160 and 2160 Calculus I and II
   - CH1150 and 1151 University Chemistry I and Lab
   - PH1100 and 2100 University Physics I and Lab
4. **Semester GPA**: The GPA based on any credit attempted in the previous semester

**Being in good academic standing.**
- To be considered in good academic standing you need to have your Cumulative, Departmental (16+credits) and semester GPAs all above 2.0

You must have a 2.0 GPA in both your Cumulative or Departmental in order to graduate.

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What if …… Co-op or Internship?

**Are you considering a Co-op or Internship?**

**Internship:**
- A internships is a working professional experience between you and an employer. There is no university involvement and no university credit is earned.
- Typically in summer semester only.

**Co-op:**
- A co-operative educational experience is a joint venture between yourself, the university, and your employer.
- It usually occurs during a fall or spring semester and frequently includes a summer internship.
- Although not required credits may be used as Technical Elective credit. Earn up to 2 credits (subject to departmental approval)
- You can find more here: [http://www.mtu.edu/career/students/jobs/co-ops/](http://www.mtu.edu/career/students/jobs/co-ops/)
- These will give you value practical experience to add to resume and can help shape your technical elective focus.
- Contact info: Career Services  
  220 Administration Building  
  Ph: 906-487-2313  
  Email: career@mtu.edu
What if ...... Study Abroad?

You considering a Study Abroad experience?

- You should refer to the presentation entitled "Study abroad Introduction" located in the 2017 Spring Advising Series on the ECE Advising webpage.
- You should also view the International Programs and Services (IPS) website: http://www.mtu.edu/international/study-abroad/program/
- They hold regular Study Abroad 101 workshops:
  - Tuesday 11am
  - Thursday 2pm
  - Walk-ins welcome, 200 Admin Building
- Fall, Spring, Summer programs; Apply in Sophomore year

You are interested in technical Study Abroad experience?

- France AMerican Exchange Program (FAME): Study abroad experience where your classes you will be taking apply toward your major courses.
- Courses are specific to the Junior Year courses. Apply in sophomore Year.

You are interested in Senior Design Study Abroad experience?

- European Project Semester (EPS) is designed to meet engineering degree senior design requirements with a mix of project-related courses and project organization/problem-based learning.
- Typical earned coursework includes EE3901, EE4901, and EE4901.
- Lower and upper division humanities credits may also be earned and transferred.

What if ...... Accelerated Masters, MBA?

Are you considering a Accelerated Masters?

- You should view the ECE departmental website: http://www.mtu.edu/ece/graduate/accelerated/
- It's possible to complete both a Master's and Bachelor degrees in 5 years.
  - Allows for 6 credits of 4000+ level ECE course to "double count" in both degrees!
  - Apply at the end of the Junior Year
  - Must maintain a 3.25+ Cumulative GPA during your undergrad courses.

Are you interested in an MBA?

- Tech MBA® Program: Complete your MBA from MTU in as little as 3 semesters
  - Fall → Spring → Summer
- Contact info:
  Program Manager: Rebecca Middlebrook
  techmba@mtu.edu
What if …… link error?

You get a link error when registering?

• Some courses have require Lecture and lab sections.
• For Example: MA2160 Calculus II
  • You must register for the same lab and lecture (recitation)
    • MA2160 R01 and MA2160 L01
    • MA2160 R01 and MA2160 L02
• For Example: EE2174 Digital Logic and Lab
  • You must register for the lecture and a lab section.
    • EE2174-0A and (EE2174 L01 or EE2174 L02 or EE2174 L03 or ....)
  • EE2174-0A

• If you get an error
  • First check schedule of classes → pre-reqs or required co-req
  • If the source of the error is still unknown, send your advisor a brief email w/ the exact error you are getting and the courses you are trying to register for (w/ CRN).

What if …… adding/dropping a class?

Adding after Week 1? Or Week 9 for track B course?

• Non-first years students need to complete the add/drop form with instructor signature.

You are struggling in a class this semester?

• You are only allowed a maximum of 3 attempts to pass a course.
  • Withdrawing from a course with a “W” does not count as an attempt
  • Special permission is required for 3rd and final time attempt.
  • Dean of Student
  • Financial Aid
  • Academic advisor
• If you are behind or not doing well in a course, talk with your instructor, and/or your advisor.

Drop Dates: If you need to drop a course, you will need Orange Add/Drop Form

• Full Semester Course: Week 10
  • Friday March 30th @ 5pm is the final day to drop a course with “W”.
• Track B Semester Course:
  • Friday April 13th @ 5pm is the final day to drop a course with “W”.

Date: March 5th, 2018
Slide: 17

Date: March 5th, 2018
Slide: 18
What if ...... join Enterprise process?

You want to join enterprise: You may chose to get started with project work early...

- To Find/Join an enterprise:
  1. Meet with the faculty advisor of the enterprise you wish to join
  2. Obtain their signature on the Special Approval waiver form.
  3. Bring completed form with appropriate signatures to the Student Services Center in the Admin Building.
- The faculty advisor is the instructor who is listed in the Schedule of Classes. Search for subject "Enterprise".
- Use the ECE Enterprise Registration Guide
- Register for ENT1960, if in Calc II (7 semesters till grad.)
- Register for ENT 2950, if in Diff. Eq (6 semesters till grad.)
- Register for ENT 2960, if in Circuits II (5 semesters till grad.)
- Only ENT3950, ENT3960, ENT4950, ENT4960 counts towards degree completion (4 semesters or less before graduation)

What if ...... Enterprises?

You want to join enterprise: You may chose to get started with project work early...

**ECE Department Enterprises:**
1. BMSE – Blue Marble Security Enterprise  L02  (Dr. Glen Archer EERC 629)
2. WCE – Wireless Communication Enterprise  L03  (Kit Cischke EERC 520)
3. HEV Hybrid Electric Vehicle  L04  (MEEM and ECE)  (Bob Page MEEM 604)
   - Includes ACE – Automotive Computing Enterprise  (Dr. John Lukowski EERC 233)
4. Robotics Systems Enterprise  L15  (Dr. Glen Archer EERC 629)

**Other Departments:**
1. Aerospace  (Dr. Brad King  MEEM 1014)
2. Advanced Metalworks  (Dr. Paul Sanders  M&M 603)
3. Formula SAE  (Dr. James DeClerck  MEEM 927)
4. Husky Games  (Dr. Scott Kuhl  Rekhi 210)
5. Humane Interface Design  (Dr. Robert Pastel Rekhi 204)
6. International Business Ventures  (Dr. Warrington  M&M 722)
7. Supermileage Vehicle  (Rick Berkey  M&M 722)
   and many more....
What if ...... repeating a course?

You are considering repeating a course?
- You may repeat courses that you earned CD or lower.
- The most recent grade is used in your GPA calculation. Even if it is lower.
- Review the ECE Advising webpage on repeating a course.
- Maximum of 3 attempts to pass a course.
- Withdrawing from a course does not count as an attempt.
- Special permission from the Dean of Students, Financial Aid and your academic advisor is required to repeat a course a 3rd and final time.

Would like to get help with your courses?
- ECE Learning Centers:
  - Typical hours: Su 6pm-8pm; M-R 1-4pm and 6-8pm
  - Help with EE1110, EE2174, EE2111, EE2112, EE3131, math and programming skills
- Awesome crew of upper-class students
- Most departments have a Learning Center
  - Math, Physics, Chemistry, etc.
  - [http://www.mtu.edu/success/academic/support/learning-centers/](http://www.mtu.edu/success/academic/support/learning-centers/)

What if ......

Thinking of adding a minor? Commonly taken minors:

**Technical:**
- Electronic Materials
- Mathematics
- Nanoscale Science & Engineering
- Physics
- Remote Sensing

**Non-Technical:**
- Art
- Economics
- Enterprise
- Ethics and Philosophy
- French, German, or Spanish
- Music

Want to add minor/major?
- Complete a Curriculum Add/Drop Request via the Curriculum Change Portlet in MyMichiganTech
- Besure to contact the advisor of the minor/major BEFORE requesting a change.

Where can I find more information regarding minors?
- [http://www.mtu.edu/registrar/students/major-degree/minors/](http://www.mtu.edu/registrar/students/major-degree/minors/)

Computer Engineering majors are not allowed minors in Computer Science or Electrical Engineering
Special Approval/Waiver Form

- Special Permissions:
  - Enterprise enrollment
  - Class Restriction
  - Pre-requisite waiver
  - Major Restriction

Bring completed form, with appropriate signatures, to the Student Services Center in the Admin Building.

What if ...... How to succeed?

General Course Approaches:
- Before Class: Read book/review and class notes
- During Class: Take good notes, ask questions, be engaged
- After Class: Review your class notes and examples
- When studying avoid distractions such as:
  - Phones, facebook, TV, Internet,...

Homework
- Review your lecture examples before starting HW
- Start as early as possible
- Form study groups

Getting Help
- Instructor Office hours
- Learning Centers (if applicable)
- ECE Study groups
- Waino Wahtera Center for Student Success
  - Academic Support
  - Mentoring Support
What if ...... advising question?

You have an advising question?
- If it is a straightforward question, send an email to advisor.
  - Plan for (at least) one full business day for reply
- If it is not straightforward, then schedule appointment (see below).
- Any communication with advisor include:
  - Your Full Name w/ Mnumber
  - A clear, but brief, description of your question/situation.

Need an appointment?
- You can schedule an appointment or walk-in, whichever your prefer.
- ALWAYS bring your advising folder (w/ your flowchart)
- To schedule an appointment:
  - Call 487-2550 or go to EERC 121 (Main Office).
- Spring 2018 Office Hours below (general)
  these hours will changed each semester
  - T,R : 8:30am-10:30am
  - M,W,F: 2:00pm-4:30pm
- Do not send a note asking for their available times.
  You will get instructions to “Call 487-2550 or go to EERC 121 (Main Office)”

Presentation Wrap-Up

- Know how to navigate your online degree audit (DARS)
  - You are responsible for meeting YOUR Degree Requirements

- Include in your e-mails:
  - First and Last Name
  - Student ID Number “M-number”

- ASK your advisor, not your friends:
  - Trever J. Hassell, P.E.
  - EERC 131
  - Office: (906) 487-2240
  - Email: thassel@mtu.edu

- To schedule an appointment,
  - Call 487-2550 or go to EERC 121 (Main Office)

"Bad planning on your part does not constitute and emergency on my part" Anonymous (Proverb)