First-year Spring Advising Meeting

Electrical Engineering – Spring 2020

Have your flowchart handy

Agenda:

• Choose fall classes
• What is a waiver
• Taking summer classes
• How to join enterprise
• Programming course(s)
• Course drop deadline current semester
• Other advising topics:
  • EE Concentrations, minors, co-op, study abroad

Links: See the Slides .pdf version of this presentation to use relevant links

You may need to adjust volume on some slides.

Write down your questions as you go.

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EERC 131

jmburl@mtu.edu

Appointments: 487-2550
REGISTRATION DATES

- Initial Fall Registration is open **March 15 – March 29**

- Fall registration closes March 29, then *re-opens approx. March 31* and will remain open until fall classes begin.

- **Your Registration Start Date/Time:**
  - Based on the number of credits you’ve *completed*.
  - See [Registration Priority Schedule](#).

- Summer registration is open until classes begin
- Summer classes begin and end:
  - **Track A:** May 11 – June 26
  - **Track B:** June 29 – Aug 14

Mark Your Calendars!
Choose your courses & Check Prereqs

Key to note: Differential Equations is a prerequisite for EE2112.

Consider:
Normal-paced
Lin Alg & Diff Eq

Link to Schedule of Classes  Link to online Course Descriptions

Consider taking a class in summer to avoid an 18 credit semester in Spring of 2nd year.
How to register in Linear Algebra and Differential Equations:

**MA2321 and MA3521** accelerated – *both in Fall*

- Take Linear Algebra & Diff Eq before taking MA3160
- MA2321(track A) *is the pre-requisite* for MA3521(track B)
- Register for **both** CRN’s MA2321 and MA3521 *else “Link Error”* 81181 and 81184
- Take at least **14 Credits** *(financial aid safety net with accelerated courses)*
  
  OR

**MA2320 (Fall) then MA3520 (Spring)** *separate semesters*

- May or may not add a semester to graduation plans.
- You cannot take EE2112, Circuits II, until Differential Equations is *complete*.
- If you are NOT strong in Math, do not take accelerated courses.
Click CRNs to see course details (such as pre-requisite, co-requisite, restrictions)

CS1111: Choose any lab section (L01 or L02 or L03) with the lecture section R01.
(CS1121, CS1131, CS1122 – same. Choose any lab section)

EE/CpE double majors: start with (CS1121, then CS1122) or CS1131
CS1121, CS1131, CS1122, see advisor for help.
WHICH PROGRAMMING CLASS?

CS1111 – Introduction to Programming in C/C++
CS1121 – Introduction to Programming I (java) May replace CS1111
CS1122 - Introduction to Programming II (java) May count in Approved Electives
CS1131 – Accelerated Introduction to Programming (For students who already know programming)
CS1142 – Programming at the Hardware/Software Interface (may count in SELECT)

Link to Course Descriptions

EE Majors:
- Take CS1111, C programming.
- ‘C’ is the best language for Electrical Engineers to know.
- If considering a CS minor or CpE/EE double-major, or want additional programming skills, take CS1121 or CS1131 instead of CS1111.
- Additional programming skills desired? Take CS1121, CS1122, CS1142.

CS Minor and CpE/EE Double-majors:
- Start with CS1121 or CS1131
- If you’ve completed CS1121, take CS1122 next.
- If you’ve completed CS1131, consider CS1142 next.
Registration Form for approvals and waivers

Registration error?
- Instructor/Dept approval
- class restriction
- major restriction
- prereq/coreq
- time conflict
- Class capacity (Full)

1. Print waiver form - Registrar’s webpage
2. Take form to instructor for approval
3. If approved, take signed form to the Student Services Center – Admin Bldg (Registrar’s Office)
4. Most enterprises require this form

Full section? what to do:

For full EE courses, see or email Judy.

For out-of-department courses:
- find another section
- wait for a seat to open (watch often)
- postpone/switch with a future course
- contact the course instructor or advisor in that department.
WHAT IS ENTERPRISE?

Add project-work and business skills to your undergraduate experience.

- **Project teams**
  - May begin as early as first or second year (ENT1960, ENT2950, ENT2960)
  - May complete engineering design requirements (ENT3950, ENT3960, ENT4950, ENT4960)
  - May practice business and leadership skills

**ECE Department Enterprises:**
- BMSE – Blue Marble Security **L02** (Dr. Glen Archer EERC 629)
- RSE – Robotic Systems **L15** (Dr. Jeremy Bos EERC 623 or Dr. Tony Pinar EERC 731)
- WCE – Wireless Communication **L03** (Mr. Kit Cischke EERC 520)
- ITOE – IT Oxygen Enterprise – L10 (Mr. Nagesh Hatti EERC 712) Not approved for Engineering Design yet. but can be taken at 2000 and 3000 levels.

**Other enterprises:**
- Aerospace
- Advanced Metalworks
- Green Campus Enterprise
- Supermileage Vehicle
- Innovative Global Solutions
- Open Source Hardware
- SENSE

- Register in ENT2950 if you have six semester left
- Use ENT1960 if you have 7 semesters left

Many more… Visit the enterprise website
ENT course# depends on # semesters you have remaining at Tech.

- Obtain instructor signature using the Approval / Waiver form
- Register in ENT2950 if you have six semester left (if taking Circuits 1, EE2111, in fall)
- Use ENT1960 if you have 7 semesters left (if not ready for Circuits 1 in fall)
TAKING CLASSES DURING SUMMER?

If you have time to attend a class and put in the effort:

Where?

- Online through Michigan Tech or on-campus (search Schedule of Classes)
  - Track A or Track B or full summer
  - Community college or college near you for transfer credit

Why?

- To get ahead or get caught up
- To lighten future semester course loads (such as semester 4 on the flowchart)
- To repeat a course for better understanding and/or improve your GPA (CD or lower)
  - Third attempt form is required if the class was taken twice before

Summer course suggestions:

- Composition
- Global Issues
- Your next Math course
- University Chemistry
- General education course – ensure it is one that you need.
SUMMER CLASSES?

Notify transfer@mtu.edu if you are taking summer courses elsewhere that are prerequisites to courses you need in fall. Temporarily “In Session”. Send final transcript upon completion.

Michigan undergraduate schools:
Complete a Guest Application – Registrar’s website

Transfer Equivalency List – Look for previously evaluated courses

Send syllabus to transfer@mtu.edu for evaluation (if course is not listed on the equivalency list)

A grade of “C” or higher is required to transfer a course to MTU

MTU Transfer Services
Student Services Center, Admin 110
487-3323
transfer@mtu.edu
BSEE CONCENTRATIONS

- Biomedical Applications
  - Take BL2010 and BE2400 in Fall of 2nd year; Take BL2020 in Spring of 2nd year.
  - Can delay one year

- Environmental Applications
  - Take CEE3503 in Spring of 2nd year or CEE3501 in Fall of 3rd year
  - Take CEE3502 in Spring of 3rd year.

- Enterprise
  - Take ENT2961 in semester 3 or 5 and ENT2962 in semester 4 or 6.
  - Choose Enterprise project work for your Engineering Design Option. Take ENT3950 in Sem. 5

- Photonics
  - Take EE2190 in spring of 2nd year. Prerequisite is Diff Eq. Co-requisite is PH2200(Physics II).

- Electric Power Engineering
  - Take EE3120 in semester 4, 5 or 6.

To “Add” a concentration, submit a request online in the Curriculum Change Portlet in MyMichiganTech. Meet with Judy for planning help.
INTERESTED IN PHOTONICS?

**EE 2190 Introduction to Photonics**

- Spring of 2nd year
- Prereq: Diff EQ
- Co-req or pre-req: PH2200 Physics II

- If NOT doing the concentration, Introduction to Photonics may apply as
  - “EE Elective credit” or “Approved elective credit” or “free electives”
  - Limit of 6 cr. of 2000 level EE electives with the BSEE, no concentration.
- Join SPIE – Student chapter of the International Society of Optics and Photonics
  - activities and research – for information, contact Mike at mamaurer@mtu.edu or Evan at ejgawron@mtu.edu or ops-officers-l@mtu.edu
MINORS

- Aerospace Engineering
- Computer Science
- Electronic Materials
- Mathematics
- Nanoscale Science & Engineering
- Physics
- Data Acquisition and Industrial Control
- Art
- Economics
- Enterprise
- Ethics and Philosophy
- French, German, or Spanish
- Music
- Theatre Arts
- Writing

More! Find Minor requirements on the Degree Services website

Minor Advisors List

ECE Advising Blog

(Just passed half-way … keep taking notes)
HOW TO ADD:
MINOR, CONCENTRATION, DOUBLE MAJOR ETC...

Add:  minor, concentration, major (for a double-major), or second degree

Change: major

Drop:  minor, concentration, major (double-major), second degree

Meet with the advisor of the program you plan to add.
Must meet any requirements by the department.

Submit a Curriculum change request in MyMichiganTech.
Approval of the program advisor is required.

Minor requirements (audit) will show in your major degree audit.

Instructions
GENERAL EDUCATION

KEY: Use your degree audit report to verify your course choices
✓ Do not take courses that are not on the Core or HASS lists.

1st year- UN1015 and UN1025. Upper level language course may substitute for UN1025.

2nd year Core- Critical & Creative Thinking (3 cr.) Select one course from:
FA2330, FA2520, FA2720, FA2820, HU2130, HU2324, HU2501, HU2503, HU2538, HU2700, HU2820, HU2910, SS2300

2nd year Core- Social Responsibility & Ethical Reasoning (3 cr.) Select one course from:
EC2001, ED2000, PSY2000, SS2100, SS2200, SS2400, SS2500-SS2505, SS2600, SS2610, SS2700

3rd & 4th year: 12 credits HASS (may be taken earlier)
✓ at least 6 credits of HASS coursework must be level 3000-4999. See HASS lists on the web and in your Banweb degree audit report.

1. HASS Communication & Composition list, 3 cr.
2. HASS Humanities and Fine Arts (HU/FA) list, 3 cr.
3. HASS Social & Behavioral Science (EC/PSY/SS), list 3cr.
4. HASS from any above list or HASS restricted list, 3 cr.

✓ 3 units of Co-curricular courses (physical education, music lessons, bands)
HOW TO RUN AND ACCESS YOUR:
DEGREE AUDIT REPORT

- Login to MyMichigan Tech
- Current Students tab, Academic Information,
- Click ‘Undergraduate Degree Audit
- Then click “Run Audit”

- Click on the link for your major: Bachelor of Science in Electrical Engineering

Click here for .pdf tutorial
TO BE SAFE:
REVIEW DEGREE AUDIT REPORT

- Open all sections
- Review each section – what courses count?
- Look for your completed and registered courses
- Scroll down to view each Gen Ed section

**General Education Requirements: Core**

- 12 credits required; complete 3 credits from each area
- Courses used to satisfy General Education requirements may not be used to complete major requirements

**Composition (1010)**
- 3.0 credits
- 3.0 credits added, 1 course taken
- F12H UNI 1010

**Critical and Creative Thinking**
- 3.0 credits
- Course list:
  - SS 2400
  - SS 2400

**Social Responsibility and Ethical Reasoning**
- 3.0 credits
- Course list:
  - EC 2001

**Humanities/Fine Arts**

- Needs: 3.0 credits
- Course list:
  - FA 2100
  - FA 2100

**Social and Behavioral Science**

- Needs: 3.0 credits
- Course list:
  - EC 2001

**Communication and Composition**

- Needs: 3.0 credits
- Course list:
  - FA 2100

- 12 credits required
- 6 of the 12 credits must be upper division (3000-4999)
- Repeatable courses may not be repeated for GenEd
- A minimum of 2 credits must be taken in:
  - Communication and Composition
  - Humanities/Fine Arts
  - Social and Behavioral Science
REPEATING A COURSE
GRADE OF “CD” OR LOWER

- May repeat course with a grade of CD or lower.
- The most recent grade is used in your GPA calculation. Even if the previous grade was higher.
- Maximum of 3 attempts to pass a course. (Try to complete 1st or 2nd try!)
- “W” grade does not count as an attempt. (Withdraw)
- Permission from the Dean of Students, Financial Aid and your academic advisor is required to repeat a course a 2nd and final time (the third attempt to pass). (try hard not to need a 3rd attempt at a course)
- On the Web: course repeat policy

- Take a repeat seriously, start from scratch, attend all classes.
SHOULD I DROP A COURSE? HOW?

Decide:

- Mid-term grades of satisfactory or unsatisfactory are available in MyMichiganTech Monday, March 2\textsuperscript{nd}, after 5pm.
- If you are behind or not doing well in a course, talk with your instructor and then your academic advisor.

How to Drop a course:

- Use the orange drop/add permission form (Advising Office)
- Instructor and advisor signatures are required.
- Friday, March 27\textsuperscript{th} is LAST DAY to drop. Get form done well in advance of 5pm.
- After March 27\textsuperscript{th}, no drops are allowed for low grades.

Permission from Dean of Students Office is required to drop a course if you had extenuating circumstances beyond your control. Call: 487-2212. Email: deanofstudents@mtu.edu

Click here for Add/Drop Deadlines
Track B Classes begin Monday, March 2\textsuperscript{nd}.

- Can add courses until Thursday, March 5\textsuperscript{th} (use orange permission form)
- March 20 is deadline to drop Track B courses without a grade.
- April 10 is deadline to drop Track B courses with a “W” grade.
- After April 10\textsuperscript{th}, no dropping of Track B courses, except in extenuating circumstances beyond a student’s control. (such as hospitalization)

**Track B: Don’t forget:**

PE courses – track B - if you registered
CO-OP

- **Valuable** experience to add to your resume
- Helps with **career path** and **focus area** choices

- **UN3002** – 1 or 2 credits co-op experience
  - One semester plus a summer
  - EE majors: co-op credits may count as free or approved electives
  - CpE majors: co-op credits may apply as free electives or technical electives

- **How?**
  - Career Fairs, Industry Days, Search in Handshake

- **Co-op Office:** 487-2313  Admin 220  career@mtu.edu
COE scholarships for study abroad

- Study Abroad 101 workshops:
  - 2 pm Tuesdays
  - 11 am Wednesdays
  Just walk in – no appointment needed - M&M 722

- Fall, Spring & Summer programs
- Apply in sophomore year, or choose a program
- Enhance your resume
  - Semester Six - France-American Exchange Program (FAME)
  - European Project Semester (EPS)
    - senior design project (earn credit for EE3901, EE4901, EE4910)
- Study abroad coordinator: Ms. Vienna Chapin M&M722

Ciao!
ACCELERATED MASTERS

“5-YEAR MASTERS”

- Possible to complete BSEE and MSEE or BSCpE and MSCpE in 5 years.
- 6 credits of 4000+ level ECE coursework may be applied to MSEE or MSCpE.
- Remaining 24 credits may be completed in one year.
- Apply at end of Junior year
- Maintain undergrad cumulative GPA of 3.25 +

Non-accelerated masters in EE or CpE requires 3.0+. 30 credits needed.

(Airly over ... hang in there)
ECE LEARNING CENTER  EERC 123

Coaches available:

- Sunday – Thursday  6:00 – 8:00 pm
- Monday – Thursday  1:00 – 4:00 pm

- Open 24/7 for studying
- Help with EE2174, EE2111, EE2112, and if coaches have completed EE3171, EE3131, etc., math and programming skills
- See your instructors for help during their office hours
- Other Department Learning Center locations
- Multi-literacy Center - Walker 107 – help with writing and communication for ALL CLASSES.

Online info
ECE Advising Webpages

EE Flowcharts

CpE Flowcharts

Double-major flowchart

ECE Faculty

Degree Services
• audits-major & minor requirements
• Submit your online degree audit report

General Education requirements and co-curricular lists

Dean of Students

Student Success Center

Registrar’s Office
Prepare for Registration Approval / Waiver Form

Schedule an Appointment with your advisor, call: 487-2550 or go to: EERC 121
Judy’s Advising Office during initial registration period:

March 16th – March 27th
- quick registration questions
- course drop procedure
- academic or college life concerns

See Judy the next morning after you register, if you have registration problems you cannot solve.

Walk-in hours: M – F, 8am – 4pm (gone for occasional meetings)

For long-range planning of future semesters or a Degree Audit review, schedule an Appointment before March 6th or after March 27th.
EERC 121 487-2550.

The End.