Academic Advising
Department of Electrical and Computer Engineering

Take *one* folder:

**CpE** – Computer Engineers

**EE** – Electrical Engineers

Pull out PowerPoint handout
ECE Main Office: Michele Kamppinen  EERC 121
Schedule appointments:  487-2550  &  EERC 121

Academic Advising Office:  EERC 131

Electrical Engineers
Judy Donahue
eceadvise@mtu.edu

Computer Engineers
Trever Hassell
tjhassel@mtu.edu

Important advising sites:
mtu.edu/ece/undergraduate/advising
blogs.mtu.edu/jmdonahu/  (ECE advisor BLOG)
mtu.edu/registrar/students/registration/

Fall Advising Meetings are required Sept/Oct/Nov
Undergraduate Advising

TUESDAY, JANUARY 20, 2015

Advising Reminders:

• Call 487-2550 to schedule Advising appointments.
• Dec 2015 graduates: Complete your graduation application
• Spring/summer 2016 graduates: Complete your graduation application
• Graduation checklist
• Spring Advising Meetings: All

Quick Links:

- Prepare for Registration
- UG Course Catalog
- Special Approval/Restriction Waiver
- Semester Planning Worksheet
- Transfer Credit Equivalency Link
- Graduation
- Curriculum Add/Drop Form
- Minor Audits

Additional Advising Resources

General Education
Transferring credits from elsewhere
Joining an Enterprise
Change major or add a minor
Repeating a Course

Academic Calendar

13 AUG
Session B ends
Tools for Staying on Track

Following degree requirements

**Catalog Term:**
- based on year you began at Tech
- your catalog term is Fall 2016, coded as “201608”
- Degree requirements are defined by catalog term

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

**“pdf” audit form**
- Official degree requirements document
- Access on Degree Services Website under “Majors”

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

**Interactive Audit:**
- Review your report each time you schedule or change classes
- Access in Banweb - Student Records
Electrical & Computer Engineering at Michigan Tech

Canvas Course: Advising for Electrical and Computer Engg

• Advising Syllabus - the academic advising process
• Canvas course to track steps through undergrad years to professional career
• Checklist / key advising steps
  • Create professional resume

When should I:

Study Abroad?  Create my resume?
Take a co-op?  Join a student organization?
Join Enterprise?  Apply for graduation?
See an advisor?
CS1121 Intro to Programming I
CS1131 Accelerated Intro to Programming

CS1131 (5) may be taken in lieu of both CS1121 (3) and CS1122(3).

CS1131 is offered in Fall only.

Ready for sophomore CS courses after CS1122 or CS1131.

EE majors considering a CS minor or CpE or CS major, should take CS1121 (may use in place of CS1111). Take the CS Knowledge Assessment if you’ve have previous programming experience.

CS Knowledge Assessment: online test
  • http://www.mtu.edu/cs/undergraduate/placement/
  • contact Ridwan Kahn at ridwank@mtu.edu or 209 Rekhi
CS1121 / CS1131: how to succeed
CS1111 – EE’s, semester 3

Go to all your lectures & labs and pay attention.

Start homework right away – DO NOT PROCRASTINATE!!

If you don’t understand something, get help right away.
- Instructor office hours
- CS Learning Center Rekhi 114

Do not copy code. Do your own work.
- Be able to develop your own logic steps and write your own code.
  \[ F^* \]
Not required, but may count as electives for CpE’s:

1) **CH1150/51** University Chemistry I - 2nd Discipline Math/Science Elective  
2) **ENG1102** Engineering Modeling & Design  
3) **MA3160** – Multivariable Calculus

**Are you on the fence about CpE or CS? Or sure of CpE?**

If you are certain you will not switch to a different engineering major in future, or are undecided between CpE and CS. It is safe not to take Chemistry and ENG1102. You can take a different math/sci elective later on. Take ENG1101 or ENG1001 & ENG1100.

Follow your flowchart.

**Are you on the fence about CpE or EE?**

or would you like the option of switching to any other engineering major or adding a double major?

If so, plan to take University Chemistry and ENG1102. Both courses are required for all other engineering majors including EE. Chemistry may be postponed.
CH1000 or CH1150?
Make sure you’re in the right chemistry

• Take CH1000 — If you did not take H.S. chemistry; or if you earned less than B grades in H.S. algebra or chemistry

• Take CH1150/1151/1153 — B or better in H.S. Chemistry and Algebra CH1153 is optional, and recommended

CH1000 does not count toward your degree. Take it if you plan to take CH1150/51/53 and you are not well-prepared for University Chemistry. CH1000 is “free elective” credits.

Go to Student Services Center to switch your chemistry course, this week. Admin Building
or email schedule@mtu.edu

Chemistry advisors: Lois Blau, Chem-Sci room 206A
Denise Laux, Chem-Sci room 607D
Honors Physics

- Honors Physics I: PH1160 and PH1161
  Mechanics (for Physics majors)
- PH1160 and PH1161
- Fall semesters only  Lecture at 1:05pm MTWF
- Calculus I (or beyond)
- see Instructor: Dr. Kostinski, Fisher 104

May replace: PH1100(lab) and PH2100
Linear Algebra and Differential Equations

MA2321 and MA3521: Accelerated - ½ semester each
- taken sequentially in same semester.
- must pass MA2321 to continue in MA3521
- may be difficult resulting in lower grades
- Take minimum of 14 credits (or risk Financial Aid)

MA2320 and MA3520 Normal Pace - 1 semester each
- Takes two semesters; Same courses at normal pace
- If you are planning more than 8 semesters
- If calculus II was difficult
- If you are ‘ahead’ in math
- Increase chances of earning higher grades

Prerequisite chain: Lin Alg → Diff Eq → Circuits II → EE3xxx
Pre-requisite Chain to graduation
With accelerated Linear Algebra & Diff Eq

Number of semesters:
MA1160/61 (7)
MA1032/1031 (8)
MA1030 (9)
Non-accelerated (8)
1. **12 credits Core:**

   UN1015  Composition (3)
   UN1025  Global Issues (3)  or 3000+ level language course
   One Critical & Creative Thinking course (3)
   One Social & Ethical Reasoning course (3)

   *It’s important to complete UN1015 and UN1025 in first year or else:*
   - low priority registration in 2nd year and beyond
   - unable to schedule upper level HASS/Gen Ed courses until they are both complete

2. **12 credits HASS electives as follows:**

   *At least 6 credits of HASS must be upper level (3000+)*
   - One course from Communication & Composition HASS list (3)
   - One course from Humanities & Fine Arts (HU/FA) HASS list (3)
   - One course from Social & Behavioral Science list (EC/PSY/SS) HASS list (3)
   - One course from any above HASS list or the restricted HASS list (3)

3. **3 units of co-curricular activities**
Interested in Modern Language courses?

1. A 3000-4999 level language course may replace UN1025, Global Issues
   • may postpone if need lower course(s) level first
   • up to nine language credits may count in general education
     1 level 3000+(3cr)  1 HASS-HU/FA (3cr.)  1 HASS-any (3cr.)

2. Language Minors:   French, German, Spanish   (18 – 21 credits)
   Language minor advisor:   French – Ramon Fonkoue rafonkou@
                            German – Karin Schlenker kbschlen@
                            Spanish - Leyre Alegre-Figuero lalegref@

3. Dr. Ramon Fonkoue, Walker 323, rafonkou@mtu.edu
   Language Placement questions:  TODAY!

   Language placement Advising & Placement Test - Walker 120 A
   French, German 2:30 – 4   Spanish 4 - 5:30

4. Placement credits awarded for ‘B’ grade or higher, in your language placement course.
Part of Term

Part of Term 1 = full semester course
Aug 29 – Dec 16

Part of Term A = Track A = 1<sup>st</sup> 7 weeks
Aug 29 - Oct 14

Part of Term B = Track B = 2<sup>nd</sup> 7 weeks
Oct 17 – Dec 16

• Many PE or co-curricular courses are ½ credit and offered in either Track A or Track B.
• Pay attention to the dates on the schedule of classes.
• Don’t forget to start attending a track B course the week of October 17th.

EE1110, Essential Math – Track A
EE1111, Intro to ECE – Track B
Finalize your schedule

• Registration will be open Wednesday 8 am – Thursday at Noon

• 12 credits is minimum; 18 credits is the maximum

• Some changes may be made at your Online Resources Team Meeting Weds AM at 10 or 11
• UN1000 – ExSEL Program – Frameworks for Success
  • section can be switched if needed (go to Admin bldg.-Student Services)
  • cannot be dropped

• UN1010 – Learning Community – Creating your Success
  • cannot be dropped or switched

Questions: see Ms. Heather Simpson, 130 Admin
hsimpson@mtu.edu
Engineering Cohort Schedule

Do not drop or change a cohort course !!!!!!!!!!

Go to the Student Services Center, Admin Bldg,
if a course you NEED is blocked by your cohort schedule.

These courses are taken together for Fall semester:

<table>
<thead>
<tr>
<th>MA1030 or MA1031 or MA1032</th>
<th>MA1160/1161</th>
<th>MA2160</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG1001</td>
<td>ENG1101</td>
<td>ENG1101</td>
</tr>
<tr>
<td>PH1100</td>
<td></td>
<td>PH1100</td>
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</tbody>
</table>

Spatial Visualization test: TODAY at 4pm - FISHER 135 (or Friday 12:30)
Spatial Visualization course: ENG1002, one credit

Students w/o ALEKS/AP/TR, take the ALEKS math assessment
Wednesday Aug 24, 3–5 pm in Rekhi 215 or Thurs. 7 pm.
Need more credits?

What classes could you add?

- CH1000 or CH1150/51/53 or a math/science elective
- UN1025 or UN1015
- Critical and Creative Thinking Core course
- Social responsibility and Ethical Reasoning Core course
- HA SS lower level elective course \textit{(pay attention to which list)}
- EE1111 – Introduction to ECE, 1 credit
- PE xxxx .5 credit, Part of Term A and/or B
Too many credits?

See Judy or Trever if you want less credits in your first semester.

What class could you postpone?

  CH1000, CH1150/51/53, CS1121, or a HASS list course

Do not postpone chemistry if considering Biomedical Applications concentration (EE’s)

You might want a light semester to start with. (12 – 14)

It might be best to take less credits and earn higher grades.

Taking a high number of credits can lead to stressful loads and risking failure of a class. You won’t know your ideal credit load until you’ve completed a semester or two.

Do NOT to postpone UN1015 and UN1025. Take in first year.
Course Drop Dates check all at Registrar’s Web Site

Last Day to Drop “Without a Grade” recorded:
• Full Term Course – Friday, September 16
• Term A course – Wednesday, September 7
• Term B course – Wednesday, October 26

Mid-term grades available after 5 pm, Monday October 17th.
  UN = Unsatisfactory (less than C grade)
  SA = Satisfactory (C or higher)

Last Day to Drop – grade of “W” shows on transcript
• Full Term Course - Friday, November 4 - WEEK 10
• Term A course – Friday September 30
• Term B course - Friday, November 18

Dean of Students: 906-487-2212 (special circumstances)
First-year student permission to Drop/Add

After classes begin, use this form if you need to add or drop a course. Available in the Advising office – EERC 131 and online – Registrar’s Website.
Special Approval or Restriction Waiver Form

Special Permission
Enterprise enrollment
Class Restriction
Pre-requisite waiver
Major Restriction

Bring completed form with appropriate signatures to the Student Services Center in the Admin Building.
Engineering Design Requirement
3 Options – choose one

1. Senior Design project – year long project in senior year sponsored by industry
   EE4901 + EE4910

2. Enterprise project work – 4 semesters at junior and senior levels
   ENT3950, ENT3960, ENT4950, ENT4960

3. EPS – European Project Semester
   EE3901 + EE4901 + EE4910 + ?HASS credits
Electrical & Computer Engineering at Michigan Tech

ECE Enterprises
Undergraduate Research and Development

Blue Marble Security—BMSE (L02)
Advisor: Dr. Glen Archer, EERC 629 gearcher@mtu.edu

Wireless Communication—WCE (L03)
Advisor: Mr. Kit Cischke, EERC 520 cmcischk@mtu.edu

Robotics Systems—RSE (L15)
Advisor: Dr. Glen Archer, EERC 629 gearcher@mtu.edu

Hybrid Electric Vehicle—HEVE (L04) (ECE and M.E.)
Dr. John Lukowski, EERC 223 jtlukows@mtu.edu
Mr. Bob Page, MEEM 604 rwpage@mtu.edu

First-year enterprise course number: ENT1960, 1 credit for Spring 2017. Take ENT1960 with Calc II.

To Join: Meet with enterprise advisor, use waiver form, register in course that pertains to semester and section number.
Electrical & Computer Engineering at Michigan Tech

Concentrations vs. Focus Areas

**EE concentrations**
- Biomedical Applications
- Environmental Applications
- Photonics
- Enterprise
- Electric Power Engineering 2017-18

**CpE concentration**
- Enterprise

1. Get appropriate flowchart
2. See Judy or Trever, EERC 131 for questions
3. Complete [Curriculum Add/ Drop Form](#) to add a concentration
4. Concentration is listed on the diploma

**Focus Areas: (area of specialty)**
- Power and Energy
- Control
- Signal processing
- Photonics
- Electromagnetics
- Electronics
- Communication
- Embedded systems
- Computer security

- Mix and match
- Not listed on diploma
- Highlight on resume

EE’s => EE Electives
CpE’s => CpE Technical Electives
Interested in Photonics?

- EE majors can earn a concentration in Photonics
- Join SPIE to be more informed and involved
- Take Introduction to Geometric and Wave Optics (EE3090) in semester 5 (fall of 3rd year)
- If you decide to pursue the concentration
  - Follow EE – Photonics flowchart
  - Different set of required courses
  - Same total number of credits (128)

The photonics area deals with controlling light energy.

- Robotic sensing and vision
- Medical imaging and instrumentation
- Outer Space photography
- Sensing and communication

EE Majors

Dr. Chris Middlebrook, EERC 623
Dr. Durdu Guney, EERC 729
Dr. Mike Roggemann, EERC 503
Accelerated Masters Program

• MS Electrical Engineering
• MS Computer Engineering
• Future: MS Cyber Security
• Apply after completion of junior year core
• Maintain minimum cumulative GPA of 3.25
• Double-count 3 to 6 undergraduate credits toward a masters in The ECE Department.
More to Think About

- **Student Organizations**
  - IEEE - Institute of Electrical & Electronics Engineers – EERC 809
  - SPIE – photonics activities – EERC SB 24
  - NSBE – National Society of Black Engineers
  - SWE – Society of Women Engineers
  - HKN – Eta Kappa Nu – ECE Honors Society

- **Undergraduate Research**

- **Study Abroad** – many countries
  
  200 Admin Building
  
  Tuesdays at 11am   Thursdays at 2pm

  Study Abroad Fair – Sept. 21, Fisher Hall 10am-2

- **Career Center offers**: 220 Admin Building
  - Career and interest explorations  MyPlan
  - Co-op experience - suggested after Circuits I or II
  - UN2525 Career Development class 1 cr.

- MBA in one year after BS – see MBA advisor early on
More to Think About

Degree Services website for program requirements:

Minor Expo – Oct. 6th, 4-5:30pm, MUB

• Minor
  • Remote Sensing, Nanotechnology, Mathematics, Data Acquisition and Industrial Control, Aerospace Engineering, Electronic Materials, Music, Art, Physics, Languages, etc...

• Double major (takes less than 32 credits to complete 2nd major)
  • CpE and EE
  • CpE and CS

• Second BACHELORATE Degree (32 or more credits needed to complete 2nd degree)
  • EE and Mechanical Engineering
  • Any two majors that takes 32 or more additional credits to complete.
Read & know your Course Syllabus.

Go to all your lectures & labs and pay attention. Take notes.
- root of most academic problems (you don’t want to go there)

Read emails daily – especially from instructors, advisors, and the Dean of Students Office. Use Canvas messages.

Make plenty of time for studying and homework. 30-45 hrs
- Start homework early – DO NOT PROCRASTINATE !!

Do your own work. Do not copy. Practice, practice, practice!
- Be able to solve math problems & develop your own code.
- Practice math problems until you can do them in your sleep.

If you don’t understand something, ASK and get help right away.
- Instructor office hours - Learning Centers - NOT from friends

Use the Learning Centers – weekly appointments or walk-in hours.
- Sign up early for Math/Chem Learning Center weekly coaching.

If you think you’re in the wrong level of a course, see your instructor right away – especially for math courses.

Freshmen year: Check Mid-Term grades online 5:05pm: fall- Oct 17 & spring- Feb 27
- Satisfactory (S) or unsatisfactory (UN)

If something happens to you, contact the Dean of Students 487-2212.
What are your priorities?

1. Class attendance
2. Homework
3. Review class material
4. Studying for exams/quizzes
5. Learning Center
   Getting help

GPA: 

Take the reigns; you are in control of your own success.
1. Cumulative GPA
2. Departmental GPA (min. 16 cr) “EExxxx”
3. Term GPA (or semester GPA)

All 3 GPA’s must be at least 2.0 to remain in Good Academic Standing.

- 3.5+ ➔ Graduate with honors
- 3.0+ ➔ Get job interviews 😊
Below 3.0 ➔ May have difficulty finding co-ops/jobs
- 2.75+ ➔ Eligible for Study Abroad programs
Below 2.0 ➔ Probation 😞

2 consecutive semesters on probation leads to suspension.

Midterm grades available online Monday, Oct 17th after 5pm
Course Repeat Rules: (blog post)
1. Courses with CD or less may be repeated.
2. Most recent grade counts, even if lower than prior.
3. No more than three attempts per course.
4. Special permission is required for 3rd and final attempt.

Advice:
1. Do not skimp on a class you are repeating. Go to all your classes and re-do all the homework from the start.
2. Meet with your advisor if you need to raise your GPA and/or are considering repeating a course.
If something happens to you, such as a medical or family emergency and it causes you to miss classes, contact the Dean Of Students Office as soon as possible.

If you have a learning Disability and need accommodations, contact Christy Oslund in the Dean of Students Office.

Counseling Services

3rd Floor of the Admin Building

If you become overwhelmed, stressed out and stop going to classes or doing homework, we have counseling services to help students deal with stresses that interfere with college work and the enjoyment of life in general.
Quiz

- Where are official degree audits/requirements? [Degree Services website]
- What tool will you use to track degree progress? [Interactive Audit report]
- If you repeat a course, which grade counts, the highest or the most recent? [Most recent (even if it’s lower)] Attempt limit 3
- If you have a crisis that causes you to miss classes, who do you contact? [Dean of Students, 487-2212]
- Can you take any Humanities course for General Education? [No! Choose course from correct list]
- Can you take a course if you failed it’s pre-req? [NO!]
- What is the minimum GPA needed to remain in Good Academic Standing? Cumulative, Semester and Departmental: 2.0
- Which courses are used in Departmental GPA? EE
- What is minimum GPA to graduate with honors? 3.5
- How do I verify that a course will count? Interactive Audit When? [Before classes begin]
- Do not drop a cohort course!

- First-year Fall Advising Meetings (required)

  EE’s - individual meeting w/ Judy
  CpE’s – group meeting w/Trever

  ** Bring your advising folder to your academic advising meetings.

- Orientation handouts are available in Canvas & on the ECE Advising webpage
Orientation week Advising Office Hours EERC 131:

Just Walk In (no appointment needed)

Monday 3 – 5pm
Tuesday 8 am – 5 (Judy 8 – 3:30)
Wednesday 8 am – 5
   Thursday, Go to:
      • Registrar’s Office, 1st floor Admin Bldg. for help w/ schedules
      • Walker 316 for Gen Ed courses – Maria Bergstrom, Humanities advisor
      • Judy and Trever available via emails as time & internet service allows
Friday morning 8:30 – 11:30am

Judy: eceadvise@mtu.edu
Trever: tjhassel@mtu.edu
Include in your e-mails:

- Student ID Number “M-number” (or 3 digits)
- Major
- First and Last Name

- ASK your advisor, not your friends: EERC 131

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

Questions? See us after this or in
EERC 131 or e-mail one of us.