Welcome!

Electrical Engineers (EE’s)
and
Robotics Engineers (RE’s)

Room 121: ECE Main Office – Maryann, Sarah, and Dr. Glen Archer, Interim Department Chair
Room 123: The ECE Learning Center – Coaching and help with ECE classes
Room 131: The Advising Office – Judy and Liz

Judy Burl, Academic Advisor, jmburl@mtu.edu, 487-2232  Contact Judy
Liz Fujita, Academic Advisor for Computer Engineers and ECE Outreach Specialist - Contact Liz  487-1161

We’re in “The ERK”
## Orientation week  Walk-in Hours

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<th>Monday</th>
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<td>12:30 – 5:00</td>
<td>1:00 – 5:00</td>
<td>9-1:30, 2- 4</td>
<td>1:00 – 4:00</td>
<td>9:00 – 11:30am</td>
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Join Judy with a [Google Hangouts advising appointment](#). 15 minutes or less.

- Choose a time-slot with label “New or New Student”.

Use your MTU email and calendar

E-mail Judy at [jmburl@mtu.edu](mailto:jmburl@mtu.edu) or 487-2232

Include your:
- first and last name,
- M# or the first part of it,
- advising question.
Ways to contact Judy

After Orientation Week: to meet with Judy:

1. Walk in to EERC 131 – usually 8:30 – 3:30pm
2. Schedule Google Hangouts meeting - Using your mtu.edu email & calendar
3. Go to EERC 121 or call 487-2550 to schedule an Advising appointment
4. Email Judy an advising question: jmburl@mtu.edu
5. Search 24/7 ECE Advising Blog (Search This Blog)
6. Join Zoom Advising Hours (beginning in Week 3)

Important Announcements: via eceadvise@mtu.edu

E-mail Judy at jmburl@mtue.du: Include Name, Major, part of M#, and your advising question.
Email me your phone # and best times and days to call back if you’d like a phone advising session.

ECE Advising Webpages
Finalize your schedule

• Registration will be open **Tuesday, All Day, through Wednesday at 5pm**

• 12 credits is minimum; 18 credits is the maximum

• You can add a course if you need more credits, such as a co-curricular activity or general education course.

• Do not drop or switch **MA, CH, PH, ENG courses**.

• Registration error? To request a schedule change:
  • **Send an email request to schedule@mtu.edu**. Include Name, M#, major, and course to be added or switched.
Engineering Cohort Schedule

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

These courses are taken together for Fall semester:

- **ENG1001**
  - MA1120, MA1031, or MA1032

- **ENG1101**
  - MA1160 or MA1161
  - CH1151 or PH1100

- **ENG1101**
  - MA2160
  - CH1151 or PH1100

- MA1030 students do not yet take an engineering course and are not in a cohort group.

- Students in a math course higher than Calc II are not in a cohort, but don’t change your ENG course.

- Students in **ENG1001** will take ENG1100 in spring to satisfy the ENG1101 requirement, then take ENG1102 next fall.

Spatial Visualization test: if you have not yet taken it:(email efadvise@mtu.edu w/?s)

- **Weds Aug 25, 2:00pm** in Rosza 208 - **Transfer students** (last chance Monday Aug. 30, 6pm Dow 641)
- **Tuesday Aug. 24, 3:15 pm** Fisher 135 - **First-time students** who missed the test on Sunday

Spatial Visualization course: **ENG1002**, one credit-supplements ENG1100/1101, if score is below 19.
AP Calculus Score: 3

If you scored 3 on the AP Calculus Exam:

**Earn a grade of C or higher** in your placement course:

MA2160  (Calculus AB exam)
May enroll in MA 2160, credit for MA 1160 awarded upon earning a grade of "C" or higher in MA 2160

MA3160  (Calculus BC exam)
May enroll in MA 3160, credit for MA 1160 and MA 2160 (8 credits) awarded upon earning a grade of "C" or higher in MA 3160

**For placement credit:** What if CD or D is earned? Must take prior course(s) or repeat placement course and earn a C or higher the 2\textsuperscript{nd} time.

To start in an earlier Calculus instead of your placement course,

- E-mail schedule@mtu.edu, The Student Services Center to switch your calculus course

Questions: First-year Math advisor: Ann Humes, Fisher 205B, amhumes@mtu.edu or mathplacement@mtu.edu

Anyone: To challenge your math placement: Take ALEKS Assessment – Math Dept. website
Success in Calculus leads to Success in physics and future engineering courses

Calculus I students: (now and future semesters)

- PH2110 – University Physics 1 Workshop (add 2 credits)
  - Integrated with PH2100 – University Physics 1 lecture

- 2 credit active learning, mastery based course with no homework.

- Take in PH2110 and PH2100 in same semester

FYI!

- Students with grade C in Calc I – strongly encouraged to take PH2110

- Students with CD or D – required to take PH2110 with PH2100
Honors Physics option

- Honors Physics I: PH1160 and PH1161
  Mechanics (for Physics majors)
- PH1160 and PH1161
- Fall semesters only  
  *Lecture at 12:05pm MTWF, REMOTE*
- Calculus I (or beyond)
- see Instructor: Dr. Weidman, Fisher 106.  weidman@mtu.edu

May replace:  PH1100(lab) and PH2100

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<td><strong>Physics</strong></td>
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<td><strong>CRN</strong></td>
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<td><strong>Title</strong></td>
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<td><strong>Instructor</strong></td>
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<td><strong>Fee</strong></td>
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What classes could you add?

- CH1000 (Introductory) or CH1150/51/53 (University Chemistry)
- CH1153 – 1 cr. recitation to help with CH1150/1151
- UN1025 or UN1015
- PH1100 – Physics by Inquiry 1
- Critical and Creative Thinking Core course
- Social responsibility and Ethical Reasoning Core course
- HASS lower level elective course *(pay attention to which list)*
- ENG1002 – Spatial Visualization (counts in “free electives”)
- PE xxxx or Co-curricular course, Part of Term A and/or B
  - Try PE1010 – “Active Michigan Tech”

*Schedule of Classes* – look for open seats, and days/times
Part of Term: 1, A, B

Part of Term ‘1’ = full semester course
  Aug 30 – Dec 10 (finals week is Dec 14 – Dec 18)

Part of Term ‘A’ = Track A = 1st 7 weeks
  Aug 30 - Oct 15

Part of Term ‘B’ = Track B = 2nd 7 weeks
  Oct 19 – Dec 10

• Many PE or co-curricular courses are 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 18th.
Too many credits?

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

What class could you postpone?
- CH1000, PH1100, CH1150/51/53, 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, or during summer.
- UN1025 should be postponed if you plan to take language courses including 3000 level.
1. **Accelerated** - ½ semester each: MA2321 and MA3521
   - 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)**
   - Recommended if did well in Calculus I and II (B or higher)

2. **Normal Pace** - 1 semester each: MA2320 and MA3520
   - 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

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**EE Pre-requisite chain: 7 semesters:**

MA1160 → MA2160 → MA2321/MA3521 → EE2112 → EE3131 → Sr. Design 1 → Senior Design 2

**RE Pre-requisite chain: 6 semesters:**

MA1160 → MA2160 → MA2321/MA3521 → EE3160 → Sr. Design 1 → Senior Design 2

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**Electrical Engineers:**

EE2112 - Circuits II is gateway to 3rd year courses

**Robotics Engineers:**

EE3160 – Has Diff Eq as prereq
MA1030 – College Algebra I – take CH1000. Placement test required to switch into University Chemistry, CH1150/51 – email Jeremy Brown at jelbrown@mtu.edu to take the test.

MA1120 – Single-variable Calculus with Precalculus I
- Take CH1000 – Introductory Chemistry
  - 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 – University Chemistry
  - B or better in H.S. Chemistry and Algebra. Taking CH1153 is strongly recommended

MA1160 or higher:
- Take CH1100 & CH1151. CH1153 is recommended with University Chemistry. (recitation)
- Take CH1000 if you never took chemistry
- May switch to CH1000 if desired. May take the chemistry Placement Test to help you decide.

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

CH1153 is highly recommended with CH1150/1151. Add it on Tuesday or Wednesday.

Send an email request to switch your chemistry course:
email schedule@mtu.edu

Chemistry advisor: Mr. Jeremy Brown, jelbrown@mtu.edu
Computer Programming courses

CS1111 – Introduction to Programming in C/C++  (Offered by the department of Applied Computing)
is required for:
   Electrical Engineers – take in semester 3
   Robotics Engineers – take in semester 1 (fall 2020)

CS1121+CS1122 (or CS1131) – Introduction to Programming I and II– (java)
   EE’s: Take instead of CS1111 if you are considering
      - Computer Science minor
      - Computer Engineering double major or primary major
      - Would like additional programming classes
         Judy likes to recommend: CS1121, CS1122, and CS1142.
   RE’s: Keep CS1111 this semester, and add CS1131 next fall. (or CS1121 in spring)

Review your plans with Judy before changing your programming course.

CS Knowledge Assessment: online assessment for students who know how to program:
   •  http://www.mtu.edu/cs/undergraduate/placement/
   •  To take the assessment, email Professor Leo Ureel at ureel@mtu.edu
Michigan Tech courses
How to succeed

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
- Go to the Learning Center (each department has one!)

Do not copy code. Do your own work.

Be able to develop your own logic steps and write your own code.

Violation of academic integrity = F*
1. **Cumulative GPA** – all courses taken at Michigan Tech under the Normal grade mode (A – F)

2. **Departmental GPA** - “EE” courses (min. 16 credits completed)

3. **Term GPA** - most recent semester courses

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<th>GPA</th>
<th>Outcome</th>
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<tr>
<td>3.5+</td>
<td>Graduate with honors</td>
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<tr>
<td>3.0+</td>
<td>Get job interviews 😊</td>
</tr>
<tr>
<td>Below 3.0</td>
<td>May have difficulty finding co-ops/jobs</td>
</tr>
<tr>
<td>2.75+</td>
<td>Eligible for Study Abroad programs</td>
</tr>
<tr>
<td>Below 2.0</td>
<td><strong>Probation 😞</strong></td>
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2 consecutive semesters on academic probation leads to suspension.

*Suspension can be appealed – implement changes to improve.*

Midterm grades available online Monday, Oct 18th, after 5pm
Waino Wahtera  Center for Student Success
Admin 130  487-3558

Success Coaching:
487-3558
130 Admin Bldg

• UN1000 – ExSEL Program – ‘Frameworks for Success’
  • section can be switched if needed (go to Admin bldg.-Student Services)
  • cannot be dropped
  • See Jeanne Watts if you wish to join ExSEL or email: exsel@mtu.edu

• UN1010 – Themed Community – ‘Creating your Success’
  • cannot be dropped or switched

UN course questions: Ms. Jeanne Watts, 130 Admin
exsel@mtu.edu  487-3558

• HON1150 - Pavlis Honors College – ‘Creating Your Path’

Pavlis program questions: email: honors@mtu.edu or go to: www.mtu.edu/honors
Course Repeat

Why?
- Improve GPA
- Pass a failed, required course
- Get back into Good Academic Standing if on probation

Course Repeat Rules:
1. Most recent grade counts.
2. 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’d like 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. deanofstudents@mtu.edu

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

Student Mental Health & Well-being
3rd Floor of the Admin Building
487-2538
counseling@mtu.edu

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.

Get the MySSP App!! Free confidential help and resources for MTU students.

Covid-19 updates and information are from MTU Flex; MTU Flex Website
3 – minute break ~ Stretch ~ Enjoy husky dog photos

A bit about huskies:
- they love to run.
- can run long distances with little food.
- closely related to wolves.
- friendly to strangers. (not the best watchdog?)
- famous for sled dog races and saving children in Nome Alaska.
- some have piercing blue eyes.

Local Event:
- Copper Dog 150 – Calumet, MI March 4 – 6
Canvas Course:
2021 Incoming Electrical and Computer Engineering

- First year key advising information
- Follows the Advising Syllabus (in your folder)
- Quizzes are really checklist items
- Important items such as:
  - How to register
  - Become familiar with University Policies
  - How to run your Degree Audit Report
  - Etc...
- 2nd year rolls into a Canvas Course which follows the Advising Checklist on the Advising Syllabus

When should I:
- Study Abroad?
- Add a minor?
- Take a co-op?
- Create my resume?
- Join Enterprise?
- Join a student organization?
- See an advisor?
- Apply for graduation?
Tools for Staying on Track

Catalog Term is Fall 2021, coded as “202108”

- Access on Degree Services Website under “Degree Audits”
- Defines the official degree requirements
- Nationally accredited

Online Degree Audit report:

u.Achieve interactive audit report – Degree Services Office
- Review your report each time you schedule or change classes
- Access in: Banweb - Student Records

Questions? Confused?
Ask your academic advisor

HU2642 is not a HASS course; excess credit
General Education
24 Credits + co-curricular

1. Core: 4 courses:
   - UN1015 Composition (3)
   - UN1025 Global Issues (3) or a 3000+ level language course
   - Critical & Creative Thinking course (3)
   - Social & Ethical Reasoning course (3)

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

2. HASS: 4 courses from elective lists as follows:

   At least 6 credits of HASS must be upper level (3000+)
   - Communication & Composition HASS list (3) choose one course
   - Humanities & Fine Arts list (3) choose one course
   - Social & Behavioral Science list (3) choose one course
   - any above HASS list or the restricted HASS list (3) choose one course

3. 3 units of co-curricular activities

   Where? Find the general education lists:
   1. Registrar’s website: Core and HASS Lists
   2. Look in your degree audit report
      - Can click on course for details
Interested in Modern Language courses?

UN1025, Global Issues will not be needed if you plan to earn 3000+ level language credits.

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. Take Language Placement test online.

3. Placement credits awarded for ‘B’ grade or higher, in your language placement course.

4. Language Minors:  French, German, Spanish  (18 – 21 credits)

5. Language minor advisor: Dr. Maria Bergstrom, Walker 316, mjbergst@mtu.edu

Questions:  Open House TODAY!  2:30 – 4:30pm – Walker Building
Course Drop Dates

Last Day to Drop “no grade” recorded:

• Full Term Course – *Friday, September 17*
• Term A course – Wednesday, September 8
• Term B course – Wednesday, October 27

Last Day to Drop – grade of “W” shows on transcript

• Full Term Course - *Friday, November 5* - *WEEK 10*
• Term A course – Friday October 1
• Term B course - Friday, November 19

A “W” grade does not affect the GPA.

How To Drop a course: Use *First-year student Permission Form* starting Monday, August 30th

Dean of Students:  [deanofstudents@mtu.edu](mailto:deanofstudents@mtu.edu) 906-487-2212  (special circumstances after the drop deadline)

to earn: to receive as return for effort. source: https://www.merriam-webster.com/dictionary/earn
Starting Monday, August 30th:
First-year student permission to Drop/Add Form

Waiver Form Instructions:
1. Complete your ID and correct course/section information
2. Obtain appropriate signature(s)
3. Bring the form to the Student Services Center in the Admin Building 130
   Or email to: schedule@mtu.edu

Full section? : see the department which offers course
ECE Enterprises

Undergraduate Research and Development

Blue Marble Security – BMSE (L02)
Advisors: Dr. Glen Archer, EERC 629 & 121 gearcher@mtu.edu

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

Robotic Systems – RSE (L15)
Advisors: Dr. Jeremy Bos, EERC 623 jpbos@mtu.edu

IT Oxygen – ITOE (L10)
Advisors: Nagesh Hatti, EERC 712 nhatti@mtu.edu

Open Source Hardware – OSHE (L33)
Advisors: Rick Berkey, M&M 722 rjberkey@mtu.edu and Shane Oberloier, EERC 518 swoberlo@mtu.edu

First-year enterprise course number: ENT1960, 1 credit for Spring 2022,
or take ENT2950 in fall 2022, if you want to join early. Otherwise, begin enterprise in fall of Junior Year with ENT3950.

To Join: Meet with enterprise advisor, use the Approval / Waiver form, register in course that pertains to semester and section number.

Link to all Enterprise Teams on the Enterprise Program website

Down the road…
Degree Services website lists **program requirements**:

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

- **Concentration for the BSEE**
  - Photonics
  - Electric Power Engineering

  - Enterprise (RE and EE)
  - Environmental Engg. Applications
  - Biomedical Engg. Applications

- **Double major examples** - if takes less than 32 credits to complete 2\textsuperscript{nd} major.
  - EE + CpE – approx. 19 credits additional (take CS1121 in first year)
  - RE + ? – yet to be determined based on student interest
  - EEEB and EBE
  - others

- **Additional Baccalaureate Degree ("2\textsuperscript{nd} degree")**
  - EE and Mechanical Engineering
  - If it takes 32 or more additional credits to complete a 2\textsuperscript{nd} major.
More to Think About

• **Study Abroad** – many countries, [Web link](#)
  722 M & M Building.
  
  E-mail questions to studyabroad@mtu.edu
  Vienna Leonarduzzi, Program Coordinator

• **Career Center offers:** 220 Admin Building
  • Career and interest explorations
  • Co-op experience - suggested after Circuits I or II or later
  • Career related **workshops** and **advising**;
  • **Handshake** for job searching
  • **Industry Days**

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Virtual **Career Fair** Fall 2021:
Weds. Sept 22 and Thurs. Sept 23
Student Organizations

- Join IEEE to be connected to the largest professional society in the world and have access to the Student Projects Lab, room 809
- Join SPIE to be more informed and involved in Photonics activities and research
- NSBE – National Society of Black Engineers
- SWE – Society of Women Engineers
- Eta Kappa Nu (HKN) – IEEE Honors Society - you may be invited to join in Sophomore, Junior or Senior year for earning a high cumulative GPA and are in the top 10, 25 or 33% of your class.

Attend K-Day for information on student orgs

Many more!
You are responsible for your own Success

- Class attendance and homework:
  - Read, know and keep each Course Syllabus.
  - Go to all your lectures & labs and pay attention. Take notes.
  - Attendance is the root of most academic problems (you don’t want to go there)

- Read mtu.edu 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.

- First year Mid-Term grades – view online evenings of: fall- Oct 18 & spring- Feb 28
  - Satisfactory (S) or unsatisfactory (UN)

- If something happens to you, contact the Dean of Students 487-2212.
Quiz

• Where are official degree audits/requirements? **Degree Services website**
  In Banweb: **Online degree Audit report**

• What is the best tool to track degree progress? **Degree Services website**
  In Banweb: **Online degree Audit report**

• If you repeat a course, which grade counts, the highest or the most recent? **Most recent** (even if it’s lower) How many attempts? **3**

• If you have a crisis that causes you to miss classes, who do you contact? **Dean of Students Office, 487-2212** May use: **MySSP App** to reach out.

• Can you take any Humanities course for General Education? **No! Choose courses from the HASS lists**

• 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? **2.0 each**

• Which courses are used in Departmental GPA? **EExxx**

• What is minimum GPA to graduate with honors? **3.5**

• How do I verify that a course will count? **Online Degree Audit** Report When? **Begin**

Before classes or anytime!
Do not drop or change Cohort courses:
1. MA, ENG, CH, PH
2. Might not get back into a cohort
3. Go to the Registrar’s Office if you need cohort change

Bring your laptop to first day of ENG1001 or ENG1101!

Mid-term Grades:
1. First-year students
2. SA-Satisfactory Progress or UN-Unsatisfactory Progress
3. Monday, Oct. 18th after 5pm – available to view. Spring – Monday, Feb. 28th
4. Two or more UN grades – Meet with Judy or someone at the Success Center

Fall Academic Advising Meetings:
1. First-year students and new transfer students
2. Individual meeting with Judy
3. Bring your Advising Folder
4. Scheduled by our department before registration opens for spring