Michigan Technological University

Computational Science & Engineering

Graduate Student Handbook

2025 - 2026

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Welcome!

Welcome to the Computational Science & Engineering (CS&E) PhD Program at Michigan Technological University. The CS&E program is an interdisciplinary program, meaning the faculty and courses for the program coming from all the Colleges across the University.

The degree you seek will be challenging and give you opportunities to learn new skills, practices, and knowledge. The skills and knowledge will be the building blocks of starting a path of lifelong learning in the field of CS&E.

I encourage you all to interact with all your fellow students and faculty. Go beyond your comfort zone and work with different researchers (students, faculty, staff); you will have many opportunities to work in teams, reach up and pair with new students building both your technical skills and team-work and professional skills in the process. This is an opportunity to start building or expand your professional network.

The faculty and staff are here to help you succeed. Ask questions, reach out for help. Don't wait until the end of the semester if you need assistance.

This handbook is provided as a document to answer your basic questions. For more information, please refer to the CS&E website and reach out to your advisor or CS&E director.

We wish you great success in the CS&E PhD Program.

Sincerely,

Guy C. Hembroff, PhD
Director, Computational Science & Engineering Program

ABOUT THE CS&E HANDBOOK

This handbook provides information for graduate students in the Computational Science and Engineering (CS&E) Program at Michigan Technological University. It is focused on information unique to the program itself, and students are referred to the graduate handbooks from their home departments (which is home department of the major advisor) for practical information on offices, keys, computers, supplies, absence requests, teaching and graduate research assistant responsibilities, financial support, and so on. Students should familiarize themselves with this handbook, their home-department handbook, and the general regulations of the Graduate School as found in their *Academics* web pages http://www.mtu.edu/gradschool/administration/academics/, which covers policies and procedures, degree requirements, necessary forms, and more. The Graduate School website http://www.mtu.edu/gradschool/resources-for/students/ also contains a wealth of information for current students.

GENERAL INFORMATION

A. Program Structure

The CS&E program consists of faculty from multiple departments across campus. Questions or requests for more information can be directed to:

- Program Director: Dr. Guy Hembroff (hembroff@mtu.edu) – College of Computing – Applied Computing
- Program Coordinator: Shery Wyeth (syeth@mtu.edu) – College of Computing – Applied Computing

B. Graduate Forms

Copies of all graduate forms ("D-forms") should be shared with Shery Wyeth, as well as the graduate school, and copies should also be given to the administrative assistant in the home department.

C. Work Obligation of Teaching Assistants

Graduate teaching assistants generally are expected to devote 20 hours per week to their teaching obligations including office hours set aside to help individual students. Details of the TA assignments and work expectations are defined by the department overseeing the assignment.

D. Work Obligation of Research Assistants

On the average, students supported by graduate research assistantships are expected to work 40 hours per week (including approved course work) for the research project from which the stipend and tuition is paid. Since all support funds are derived from government or industry contracts and grants, it is the student's responsibility to perform assigned research tasks in a timely and professional manner. It should be noted that most contracts require formal progress reports on the research performed. The immediate supervisor of research assistants is their research advisor.

E. Safety

There are several safety policies and procedures in effect at Michigan Tech that particularly apply to graduate students such as those concerning general safety and hazardous waste. Annual online safety training is mandatory for all employees and will be communicated to you via email when assigned. Additional safety policies and training required to use research or teaching laboratories, or chemicals will be communicated and assigned by respective lab personnel. Please consult your research advisor regarding all applicable safety policies and procedures before beginning work.

For safety purposes, visitors are not permitted in research and instructional labs unless permission has been granted by the home-department chair; this includes spouses and children. There have been incidents in where unauthorized visitors, including children, have had accidents causing themselves harm. This rule is designed to prevent this type of tragedy.

For your reference, the Michigan Tech safety manual is available online at:
http://www.mtu.edu/ehs/documents/safety-manual/

F. Academic Integrity

The University and the CS&E program expect all students to maintain the highest level of academic and scientific integrity in all aspects of their studies, from class work to exams to research.

If you are unsure of or have specific questions about assignments, projects, examinations, etc., please ask your instructor.

A detailed booklet describing Michigan Tech's academic integrity policy and procedures, including definitions of plagiarism, cheating, fabrication, and facilitating academic dishonesty, is available from the Dean of Students office, or on the web at https://www.mtu.edu/senate/policies-procedures/list-policies/109.1/ All graduate students should carefully read this policy. Students must also view the orientation module on academic integrity at https://www.mtu.edu/gradschool/resources-for/admitted/**orientation**/online-**orientation**/. Further information on Scientific Misconduct Procedures may be found at https://www.mtu.edu/research/administration/integrity-compliance/misconduct/.

ADVISORS

Advisors help students structure a program of study that addresses their needs and satisfies degree requirements. New students are usually assigned a research advisor before reaching campus, based on their research interests. If interests are still being explored, the program director acts as the initial advisor. Shortly after a research advisor is selected, an Advisory Committee is formed for each student. The Advisory Committee prepares a program of course study and research work that will lead to the desired graduate degree. It is up to the student and their advisor to fill out, get signed, and submit the appropriate forms to the department or Graduate School (D forms) at the appropriate times (see this link for current forms and instructions) http://www.mtu.edu/gradschool/administration/academics/forms-deadlines/

A. PhD Advisor

After a student selects a research advisor and committee, the Advisor and Committee Recommendation Form should be completed online, printed, signed, and filed with the program administrator, the home department, and Graduate School
http://www.mtu.edu/gradschool/policies-procedures/timelines/index.html

Students should meet with their advisors to determine what coursework should be taken: all electives should be discussed with and approved by the advisor. Students work closely with their advisors to define and make progress on a research project that eventually will serve as the basis of their PhD dissertation. Students are strongly encouraged to meet at least weekly with their advisors to ensure steady progress.

B. Advisory Committee

Each student accepted into the CS&E graduate program is required to have an advisory committee consisting of his or her graduate faculty advisor and a minimum of three other faculty members.
Before taking the Qualifying Exam, students consult with the research advisor to select Advisory Committee members. The committee is approved by the graduate program director and is formalized by submitting the associated form with the program administrator, home department, and Graduate School. The primary purpose of the Advisory Committee is to guide and monitor the research work of the student. **A graduate faculty member external to the home department is required**.

C. Policy for Changing Advisor

As a rule, students are encouraged to practice effective communication and openly discuss with their current advisor any possible significant changes (e.g., research project, advisor, institution, etc.). If there are compelling reasons for changing advisor during the graduate study, the student or the advisor can initiate the process to change advisor in consultation with the program director and home-department chair. If the student or advisor feels that there may be a conflict of interest on the part of the program director or department chair, an outside representative from the Graduate School can be requested.

If the student is under research support from the advisor, the support is not transferred to the new advisor. If the student is under TA support from the home-department, the support will be transferred to the new advisor depending upon home-department policy. If the student is receiving external funding support directly through fellowships such as from NSF or DOE, any fellowship-specific guidelines will be followed; if unspecified, the student will maintain the funding independent of the advisor, pending approval of the funding agency.

The student's course credits will be transferred to the new program if a program change is pursued. It is the responsibility of the student, however, to fulfill the degree requirements of the new program. If the student stays in the same program and pursues a change of advisor, his/her finished course work, qualifying exams, research proposal examination, and published papers will be counted toward the degree. However, the published papers with the previous advisor should not be a part of the thesis with the new advisor.

D. Annual Progress Report and Feedback

Each spring semester students in the CS&E graduate program are requested to submit an annual progress report. Written feedback on the report will be provided by the advisor and program director, at the end of the spring semester or shortly thereafter. If serious deficiencies are identified in a students work and/or progress, a plan for how to proceed will be developed and further feedback will be provided to the student within six months.

GRADUATE DEGREE REQUIREMENTS

A. Residency

University policy requires that doctoral students spend at least four semesters (including summer) on campus at Michigan Tech beyond attainment of a bachelor's degree or two semesters on campus at Michigan Tech beyond attainment of a Master's degree in a formal program of study and research under direct supervision. Continuous enrollment in the fall and spring semesters is also required. This requirement may be waived under special circumstances with pre-approval. See the Graduate School Catalog for details.

B. Coursework

A minimum of 30 course and/or research credits beyond the Master's degree, or a minimum of 60 course and/or research credits beyond the Bachelor's degree are required for the Ph.D. degree. The course work is determined by the student's Advisory Committee and early discussions with the committee in this regard are recommended.

Once students have a research advisor they may enroll in Doctoral Research. After all required courses are completed, and no later than the semester prior to the final oral examination, the Degree Schedule Form should be completed, reviewed by the director of the CS&E graduate program, and filed with the Graduate School.

Responsible Conduct of Research (RCR) Training is an important aspect of being an effective scholar and is mandatory whether a Master's or Doctoral degree candidate. Basic training must be completed within the first two semesters, or a registration hold will be placed on the student's account. Advanced training must be completed by the end of the third semester. Students may not enter Candidacy or graduate if RCR training is not complete.
http://www.mtu.edu/gradschool/administration/academics/resources/rcr/

C. Qualifying (Comprehensive) Examination.

The qualifying examinations (QEs), sometimes called prelims, is administered by the advisory committee, and consist of two basic sections: a computational part and a specialty part. The qualifying exams show that CS&E students have:

1. the intellectual potential to do doctoral research,
2. the computational background to do CS&E doctoral research, and
3. the special area background to do doctoral research in the chosen specialty area.

Items one and two are verified by the computational exams and items one and three are verified by the specialty exams. To ensure some uniformity while allowing for meaningful variations the format of the computational examination must be approved by the Advisor.

The computational part of the exam covers the computational background needed to do research in the area chosen by the student and advisor. It will usually consist of at least one exam that covers coursework. The Advisory Committee will determine the specific courses to be covered in the exam(s). The Advisory Committee working with the faculty writing and grading the exam(s) will determine if the computational exam(s) will cover only the course materials or also extra materials. If extra materials are covered, they should be explicitly known to the student at least eight weeks in advance of the exam.

It is often the case that a computational exam corresponds to a prelim exam given in the home department. For example, many CS&E students take a computational exam that covers the algorithms course offered in the Department of Computer Science. In this case, the corresponding CS&E exam must be taken at the same time as the departmental exam. Usually, it will be the case that the faculty who prepare the departmental exam will prepare and grade the corresponding CS&E exam. The Advisor should coordinate with the respective departments to arrange for a reasonable exam schedule for the CS&E student. The specialty exam will test the student on the principles of the specialty area in which the research will be performed. The advisory committee will contribute questions for the specialty exam. After all parts of the computational exams are taken and graded, the Advisory Committee will meet to decide which of the following three possible exam outcomes is appropriate.

Pass: A pass means that, based on the exam results, the Advisory Committee judges that the student has the intellectual potential and the computational background to do CS&E doctoral research in her/his chosen area. Having the “computational background” does not mean that the student knows all that needs to be known to do the research. It does, however, mean that the student has mastered enough preparatory material so that the research can begin soon. It also means that the student will be able to reach the necessary computational maturity in time to do the research.

Conditional Pass: A conditional pass means that, based on exam results, the student demonstrates potential but lacks the necessary groundwork in some significant area. A conditional pass allows the student to make up this deficiency. The student will be given explicit written instructions as to what needs to be done to obtain a pass on the computational exam and will be given adequate time to satisfy those requirements. The deadline for meeting the requirements of a conditional pass must be given in writing to the student. After the student has completed the required work or after the deadline has passed, the Advisory Committee will decide if the requirements have been met. If so, the student will receive a pass; if not, the student has failed the computational exam. In deciding pass or conditional pass, an Advisory Committee vote of 75 percent is required.

Fail: A fail means that, based on the exam results, the Advisory Committee either judges the student has not demonstrated the intellectual potential to do doctoral research or has not shown the necessary computational background to do research in the chosen area. Each part of the exam may be taken a second time.

D. Research Proposal Exam (Preliminary Exam) and Petition to Enter Candidacy

The Research Proposal Examination is taken after the Qualifying Examination has been passed. It is administered by the student's Advisory Committee for the purpose of reviewing and evaluating the student's proposed plan for research. Once a student has identified a research problem in consultation with his or her research advisor, has become familiar with the related literature, and has devised a plan for research, the Research Proposal Examination should be scheduled. A paper describing the proposed research, not exceeding 15 pages in total length, should be distributed to the Advisory Committee two weeks prior to the scheduled exam. The student should prepare a 30-minute talk outlining both the problem and the proposed research methods. The remainder of the exam will be devoted to questions and answers related to the proposed research. Although no special form is needed for scheduling this examination, please consult the CS&E program administrative assistant to schedule a room, advertise the talk to the program, home-department, and University community, and prepare the Report on Research Proposal Examination. The Advisory Committee will be given the Evaluation of Graduate Learning Objectives (GLO) to complete during the Examination. Both Report and Evaluation forms are retained for departmental records.

Following the proposal defense, the Advisory Committee may recommend changes and/or ask for additions to be made to the dissertation proposal. Depending on the magnitude of the recommendations, the committee may:

- require a second public dissertation proposal presentation;
- ask the student to make the changes/additions in writing and submit them to the committee for approval;
- or may simply ask the student to make note of their suggestions.

Upon successful completion of the Research Proposal Examination, the student completes the Petition to Enter Candidacy for signed approval of his or her advisor and submits it to the Graduate School.

E. Doctoral Dissertation and Final Oral Examination

The research conducted by the student will be presented to the Advisory Committee as a written dissertation. An oral presentation of that dissertation will be made following the completion of the written work. The dissertation is acceptable if the advisor and at least two of the remaining three members of the Advisory Committee concur on its acceptance. The oral defense is open to the university community.

The final examination may be scheduled any time after a period of two academic semesters following the successful completion of the Research Proposal Examination and upon completion of the dissertation in satisfactory form. It is the responsibility of the student to be aware of the most current policies and rules regarding graduation (check with the Graduate School and their website). Two weeks prior to the final examination a completed draft of the dissertation, prepared in accordance with the manual “Instructions Concerning the Preparation of Theses and Dissertations”, must be submitted to the Graduate School along with a completed Pre-Defense Form. The student is responsible for obtaining all necessary signatures on this form, as well as scheduling a room for the defense with help from an office assistant as needed. The dissertation is also distributed to the Advisory Committee at this time.

Two weeks before the oral examination, the student submits a defense title and abstract to the CS&E administrative assistant so that announcements can be sent to the department and University community.

The day of the defense, the student brings the Report on Final Oral Examination for subsequent approval; the Advisory Committee completes the Evaluation of Graduate Learning Objectives and Assessment of Final Defense for program record. Following the oral defense, the Ph.D. candidate incorporates all corrections and suggestions of the Advisory Committee into the final dissertation.

After passing the oral examination, the student submits to the Graduate School the Report on Final Oral Examination. Candidates who do not pass the first time may take the final examination again. If the second try is not successful the student is dropped from the program.

Students can familiarize themselves with the deadlines, dissertation submission policies, and necessary graduation forms via the Graduate School’s website
http://www.mtu.edu/gradschool/administration/academics/timeline/dissertation/

Note to All Students: It is the responsibility of each CS&E graduate student to be familiar with program and home-department policies, as outlined in this handbook and the home-department graduate handbook, and with Graduate School policies as outlined in the Graduate School Catalog. It is the responsibility of each graduate student to be sure that Doctoral (D) forms are completed and authorized in a timely fashion and are filed with the program administrative assistant and/or Graduate School as prescribed.

Note to International Students: Visa requirements for international students often change. International students should stay well informed of current visa requirements through International Programs & Services or the Graduate School related to timelines and possible changes of status after graduation.

TIMELINE TO DEGREE

	When:
Advisor and Committee Recommendation Form	BY END OF FIRST ACADEMIC YEAR naming research advisor and advisory committee
Responsible Conduct of Research	BASIC by end of first academic year ADVANCED by end of third semester
Report on Qualifying Examination	WITHIN FIRST TWO YEARS in PhD program Submit advisory committee approved form to home department and graduate school
D5 Degree Schedule*	SEMESTER COURSEWORK IS COMPLETE or SEMESTER BEFORE petition to enter Candidacy
D6 Report on Research Proposal Examination*	UPON PASSING ORAL RESEARCH PROPOSAL EXAM Submit advisory committee approved form to home department and graduate school
Petition to Enter Candidacy* *** These three forms are often submitted**	ONE WEEK PRIOR to the first day of classes in the semester student plans to enter Candidacy **at the same time**
D7 Pre-Defense Form	TWO WEEKS PRIOR TO ORAL DEFENSE Submit with draft copy of dissertation to graduate school & advisory committee
D8 Report on Final Oral Examination	DAY OF DEFENSE Complete for advisory committee signatures following oral defense
Approval of Dissertation, Thesis, Report	COMPLETE ALL REVISIONS, obtain advisory committee approvals, submit form to graduate school. WITHIN ONE WEEK submit dissertation, thesis, report to Digital Commons & ProQuest
Workspace Cleanout Form	BEFORE GRADUATING/LEAVING
Survey of Earned Doctorate; Exit Survey	BEFORE COMPLETING DEGREE

Current versions of all tracking forms are available online at:
http://www.mtu.edu/gradschool/administration/academics/timeline/dissertation/

ADDITIONAL HELPFUL INFORMATION

Listed below are several items to assist you in your orientation at MTU and the CS&E program. Some require your personal attention; others are informational only.

STUDENT RESOURCES

Graduate Student Government - See: https://gsg.mtu.edu/

Your home department's GSG student representative will communicate information regarding travel grants, social activities, opportunities, research colloquium and other important information. They can be used as a contact to communicate suggestions, complaints, and help to answer questions.

INTERNATIONAL PROGRAMS & SERVICES OFFICE (IPS)

All international students are required to report to International Programs and Services, Administration Building, Room 200 if you haven't checked in already. Bring your I-20 or DS-2019, passport and visa.

HOUSING INFORMATION

On-campus: http://www.mtu.edu/housing/ Off-campus: http://usg.mtu.edu/usg/housing/

HuskyCard: STUDENT IDENTIFICATION CARD

All students are required to have a HuskyCard for identification and swipe access to buildings, parking lots, and residence halls *if applicable*. HuskyCards are issued at the HuskyCard Service Center in the IT Service Center, 1st floor of the Van Pelt and Opie Library. **A valid government-issued photo ID is required**, such as a driver's license, a state ID or a passport.

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REGISTRATION/SCHEDULING

You may register online using the Banweb system or register in person at the Registrar's Office, Room 130 of the Administration Building.

TUITION PAYMENT

After scheduling courses, go to MyMichiganTech to receive a copy of your schedule and tuition bill. You may pay your student bill online with American Express, MasterCard or Discover (2.3% transaction fee applies) or e-check, or at the Cashier's Office located within the Student Financial Services Center in the Administration Building. Note: Credit/debit card payment not taken at Cashiers Office or by phone.

For supported students only (GTA/GA/GRA): After scheduling courses, go to Banweb to view a copy of your schedule and tuition bill. Computer fees and tuition for up to 10 credits will be paid by the Applied Computing department for fully supported students. You are responsible for the student voted fees such as the Student Activity Fee, and Experience Tech Fee, etc.

GTA/GRAs – IF YOU EXCEED 10 CREDITS, YOU WILL PAY THE EXTRA TUITION.

CONTINUOUS ENROLLMENT

Students must be enrolled every academic-year (fall and spring) semester until they complete their degree. "Completing" a degree means successfully completing all required courses, turning in all paperwork, and, if required by the degree program, defending and turning in a final version of a report, thesis or dissertation. Graduate students are **not** required to register for summer session to fulfill the continuous enrollment policy.

EMPLOYMENT INFORMATION

Michigan Tech Career Services at www.mtu.edu/career/students/ provides information that may assist students in locating employment.

International students ON-CAMPUS EMPLOYMENT

-International students must limit on-campus employment to 20 hours per week while school is in session.

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NOTE: Students on J-1 visas must report on-campus employment to IPS.

-You cannot work off-campus without prior approval from IPS.

You will need to apply for a Social Security Number if you have an on-campus job offer. Bring your job offer letter to IPS for further instructions.

APPLY FOR SOCIAL SECURITY NUMBER (SS# or SSN)

IPS has all the details on employment options. Before accepting any kind of job, contact IPS to find out if your visa allows you to work, and about other forms and requirements that may be required including applying for a Social Security Number (SSN). Please request a receipt confirming the SSN application, and return receipt Shery Wyeth in EERC 416, if you have been hired by a CoC program. For all other Colleges, please confirm with your home department.

PAYROLL/PAY CHECKS

Please see Shery Wyeth (syeth@mtu.edu) to be set up on hourly payroll immediately upon hire in order to avoid a delay in pay. Pay disbursements are issued every two weeks. Direct deposit can be set up online in Banweb under Employees, Pay Information, Direct Deposit allocation.

Fellowship recipients are paid monthly as a non-payroll disbursement. Direct Deposit can be set up for non-payroll payments online in Banweb under Employees, Non-Payroll Direct Deposit Destination.

KEYS AND AFTER-HOURS ACCESS

Swipe card after-hours access to the Rekhi Hall building and computer labs will automatically be provided to all enrolled students. A key or card access that opens graduate student offices and/or labs will be issued to each graduate student who will require access to those rooms.

VEHICLE REGISTRATION/PARKING

See the Transportation Services website at http://www.mtu.edu/facilities/services/transportation/ for detailed information regarding the vehicle registration process, parking fees, and rules/regulations regarding parking. Vehicle registration/parking permit purchase is online at Purchase Permit. Bring your vehicle registration and your picture ID to Transportation Services, 100 Administration Building, to pick up your parking permit. During off-hours (4pm-7am weekdays) and all weekend, core campus parking lots and parking meters are open for parking (exception is handicap and designated parking spaces).

WINTER PARKING RULES

To allow for snow removal, parking is prohibited on campus between 2:00am and 7:00am, from November 1 through April 30 (regardless of if there is/isn't snow on the ground). Exceptions: Campus housing residents may park in their designated lots. Those needing to park on campus overnight can ask for and receive a special overnight parking permit from transportation services. If it is after 5 p.m. on weekdays, on a holiday, or on weekends, contact Public Safety and Police Services for parking permission. If you have car problems and are unable to move your vehicle, contact Transportation Services at 487-1441 during regular business hours (8am-5pm, Monday-Friday), and after hours, holidays, and weekends call Public Safety before the 2:00 a.m. deadline at 487-2216.

PHOTOCOPYING (DUPLICATING)

There are on-campus printers available for students at the following locations.

FAX MACHINE

The College of Computing (CoC) will allow you to send and receive faxes. Our fax number is (906) 487-2284. The fax machine is in the CoC main office, 221 Rekhi Hall.

MISCELLANEOUS

Listed below are some miscellaneous rules, suggestions, and guidelines. Some have **strong penalties, so read them over carefully.**

FOOD/DRINK

Eating or drinking is prohibited in all laboratories and computer areas. Violators will lose computer and lab use privileges.

GRADUATE OFFICES/CUBICLES

You may complement the MTU furniture in your office/cubicle with your own, but do not move furniture from office to office/cubicle without permission. You may not live in your office/cubicle. Do not prepare or store food in your office/cubicle. If you are not on campus for a semester, inform your advisor that you will not be here and leave your office/cubicle in a neat condition. Upon leaving MTU for other than a summer semester, you must completely clean out your office/cubicle. Always keep your office neat. If you will not be enrolled for a summer semester, please inform your advisor so you do not lose your office/cubicle.

REKHI HALL 2ND FLOOR SOCIAL AREA

The second floor open social area in room 216 of Rekhi Hall is available for faculty/staff/students. Please respect this area by cleaning up after yourself - there is no maid service. Please dispose of your leftovers/garbage, clean up any spills and/or crumbs after eating, and thoroughly wash and put away any dishes/utensils used. Do NOT leave dirty dishes in the sink; Do NOT put any food down the sink drain.

SMOKING

Michigan Tech is a **smoke-free** campus.

ADDITIONAL SAFETY & TRAINING INFORMATION

Emergency procedures

In the event of an emergency, Dial 911 from any phone on campus or personal cellular phone. The red phones by the elevators, and the phones inside the elevators, have a direct line to Public Safety and Police Services

Fire

In the event of a fire or fire alarm, evacuate the building by following exit signs and using stairways. All rooms should have an evacuation plan affixed to, or near, the door if you are unfamiliar with the building. Do not use the elevators to egress the building as power may be disrupted and you may be trapped inside.

Treat all fire alarms as the real thing - don't assume it is a drill! The building must be evacuated, and everyone should meet outside, in front of the Rekhi Hall building, at least 50 feet away from building.

Accidents

Major injuries– Dial 911 for ambulance or go to emergency at UP Health System located in Hancock
Minor injuries– Use the UP-Health Systems or Aspirus walk-in clinic.

- An ***Incident and Injury Report Form*** is required for all accidents. This form is in Banweb and is filled out by the injured person's supervisor (TAs are defined as the supervisors of their teaching labs). The incident report form must be filled out, and submitted, within 24 hours of the injury.
- There are first aid kits in the CoC the main office Rekhi Hall 221 with Band-Aids and other minor items.
- ***All accidents need to be reported; not to assign blame, but to correct the safety hazards***. Accidents include personal injury, fire, flood, chemical spills, and "near misses".

Lab Safety

Training courses

All supported graduate students (GRA's, GTA's, Graders, & Fellowships) are required to complete online training courses. These course modules vary depending on the job responsibilities of each student. Supported graduate students will receive an email from UL Pure Safety notifying him or her of the required module and includes a deadline date. The username and password will be your MTU username and password. All training should be completed in a timely manner.

Lab coordinator

All of our labs have a sign posted on the door with pertinent safety information, including the name and contact information of the person responsible for that particular lab.

Two-person rule

Two or more authorized people need to be present at all times if working in any teaching lab. No exceptions!

Housekeeping

- Labs must be kept neat and aisle-ways unobstructed. Do not store anything in aisle-ways or hallways so as to prevent egress from the building in the event of an emergency.
- No food or drink in any teaching lab.

Clothing

- No Sandals or bare feet in any lab! Footwear will provide some protection if something heavy falls on your feet.
- No long hair, jewelry, ties, gloves or other loose clothing around rotating machines.

Children

- No child under the age of 12 is permitted in any lab unless he or she is enrolled in an MTU program and authorized by the department chair. Anyone between the ages of 13 to 16 must be supervised at all times.

Electrical safety

Lethal Voltage and Current

- As little as 50 volts can kill under the right conditions. Generally anything above 25ma is considered dangerous since it can potentially cause the heart to go into ventricular fibrillation, which can happen in as little time as ¼ second. Currents in the range of 70ma to 300ma are potentially fatal without immediate first aid. With currents through the body of greater than 25ma you may not be able to "let go".

Working on Electrical circuits and systems

- Only personnel with special training may work on energized high voltage circuits (>50 volts). Procedures have been put in place and can be found here: Electrical Safety Work Practices as well as MTU's Lock out Tag out program: Hazardous Energy Control Program.

Electrical components

- Electrical components can also be a cause of serious injury. A **resistor** that is operated over its power rating can burn causing a fire or burst causing sparks and flying debris. **Capacitors** can explode causing the end cap to shoot out with enough force to damage one's eye.

- Make sure you understand electrical components before using them.

Batteries

- Batteries can explode due to escaping hydrogen gas, especially during charging; ensure adequate ventilation and keep away from ignition sources.
- Always keep a cap or protective cover over the positive battery terminal, which will prevent the terminals from shorting if something is accidentally dropped.
- Always have a neutralizing agent, such as baking soda, available.
- Always read and understand the manufacturer's recommendations before charging any type of rechargeable battery.

Other electrical equipment

- Always operate equipment in accordance with the operating manuals and observe safety cautions.

- Under no circumstances are you to remove protective covers or cases. If the equipment is faulty, do not attempt to fix it yourself - contact Sherry Wyeth in Rekhi Hall 226.

Other safety information

Slips and Falls

- Use caution, especially in winter, as floors are likely to have wet spots and be slippery.
- Sidewalks may be icy so slow down and take smaller steps. Use handrails on steps and stairs.

Storage

- Do not store anything within 18 inches of a sprinkler head. Use a ladder or approved step stool to reach high items. Don't stand on swivel chairs or desks!

Lifting

- No heavy lifting - get help (improper lifting is one of the biggest causes of accidents at MTU).

Cuts and Lacerations

- The biggest cause of injury on campus is cuts and lacerations. Please be mindful of your appendages when opening boxes, dealing with broken sharps, and using tools and utensils.

- Details on all safety policies are located on MTU's Environmental Health and Safety (EHS) website.

COMPUTING CONTACTS

Information Technology – Help Desk – Library, 1st Floor
(906) 487-1111 it-help@mtu.edu

COMPUTING FACILITIES

Wireless Round Lounge
Rekhi Hall 201 - available 24/7

Other computer locations across campus: Find a computer lab

General info for Graduate students: Student Resources

How do I get Computing Access?

Your account and ID card access are automatically enabled/disabled based on whether or not you are enrolled for the current semester.
If you are not enrolled in the current semester and need access, your advisor will need to send a request to.it-help@mtu.edu to grant access.

Lab & Building Hours

24-hour access

Your Husky Card gets you in the door provided you are registered for the term.

Logging on to the Systems

Userid

Your email address without the @mtu.edu

Domain to use is: MTU

ISO Password

This was mailed to you from the university. It is the password you use in email, Banweb, MyMichiganTech

Domain to use is: MTU

Changing Your Password

Passwords can be changed from the following web: http://mylogin.mtu.edu/

Email

Accessing your email: gmail.com

Userid@mtu.edu

ISO password

Your email address: userid@mtu.edu

Wireless Access

Rovernet wireless access available.

See IT Help Desk in the Library for assistance, if needed

Remote Access

· IT Customer Service - located in VanPelt Library, 1st floor

Important Rules

· Your account is for **your** use only
· Do NOT install software on the lab PCs / Do NOT reformat PC's
· Be considerate of others
· NO food or drink in the labs

Getting Computer Help

IT Help Desk in the Library - Hours and services are posted on IT Support Resources for Students

· Instructor for course related questions
· Other students
· Send email to it-help@mtu.edu

GTA GUIDELINES

International students must take the Language Assessment administered by the Center for Teaching and Learning to be eligible for a GTA position. Please contact the Center for Teaching and Learning at 487-1001 or stop by their office, Room 226 J. R. Van Pelt and Opie Library, to set up an appointment, or if you have questions about this assessment.

All students with current GTA assignments must attend the GTA training program offered by the Center for Teaching and Learning to be eligible for a GTA position.

All new GTA's are required to complete GTA training through the Center for Teaching and Learning during their first semester as a GTA. The most common way to complete this training is to enroll in a 1 credit, non-billable course (ED0510 - GTA Training) that will meet on either Monday or Wednesdays from 3-5 PM in MEEM, Room 405 during THE FIRST 7 WEEKS of each semester (09/03-10/18 this fall). Failure to complete ED0510 in the first semester will jeopardize your reappointment as a GTA. Enrollment in ED0510 course is by permission only. Contact Jeff Toorongian at jetooron@mtu.edu to register (include your M-number), or with questions. If your schedule absolutely will not allow you to take ED0510, you should contact Mike Meyer to explore other ways to complete this training. Information about curriculum is available at www.mtu.edu/ctl/for-graduate-teaching-assistants/curriculum/.

A GTA must be enrolled for a minimum of 9 credits, except in summer when the minimum is 1 research credit or 1 course. All summer GTAs must be enrolled for at least 1 credit. Do not plan travel dates for semester breaks that will require you to leave before the semester concludes or return after the next semester begins. You are expected to be available and prepared for labs/classes on the first day of the first week of the semester.

See Shery Wyeth (Rekhi 226 for payroll inquires. See Staff in the CoC office, 221 Rekhi Hall, for supplies.

You will receive occasional emails from our administrative staff. The staff will not trouble you with inconsequential requests. If they send you a request by email, you are expected to respond promptly and courteously.

SUPPORT

Candidacy (Reduced tuition rate): Candidacy allows you to register for nine credits (full-time) at a reduced tuition rate. Students are eligible for full-time candidacy at the start of the first semester following completion of the following required milestones:

Master's candidates - Must complete all required courses as well as the required number of credits for their degree (30 minimum). Final Degree Schedule (M4) must be received by the Graduate School.

You must complete the Petition to Enter Candidacy and submit the form to the Graduate School at least one week prior to the first day of classes in the semester you plan to enter candidacy to enter full-time candidacy. Permission to enroll in a candidacy course is granted by the Graduate School after the petition is approved. For more information and access to the petition form see: https://www.mtu.edu/gradschool/policies-procedures/academic/candidacy/

This policy helps faculty who are supporting graduate researchers on external funding and will help self-supported students remain full-time and international students who must remain full-time for immigration purposes.

The standard GTA teaching assignment is four two-hour sections or equivalent. Grading for labs, homework and reports is part of the work for each course. A GTA is expected to work an average of 20 hours per week.

At the beginning of each semester, you will schedule a meeting with Dr. Hembroff or the faculty member who will be responsible for the course you are assigned. You will be informed of your specific responsibilities and the instructor's expectations at this time. Successful performance in the courses is essential for your continued support as a graduate teaching assistant.

CLASS OR LABORATORY PREPARATION

Meet periodically as specified by the professor(s) in charge to discuss:

Course Outline
Lab Experiments
Homework Assignments
Examinations
Make-Up Procedures Grading
Pre-Lab/Homework Procedures

Perform each assigned laboratory/homework assignment yourself before the class meets. This will ensure your ability to answer any questions students may have concerning the lab/homework and that needed equipment is present and working. This step is critical to your success as GTA. You must follow, as closely as possible, the prescribed program in each course. Discuss any deviations with faculty and other teaching assistants in the lab before you go ahead. GTA's in multi-section labs need to coordinate grading to have uniform grading practices.

Check all the lab equipment before the lab/homework begins. After the lab/homework is over, make sure all the equipment is accounted for and turned off. Either put each equipment item away neatly or restore it to its original position in the laboratory. The laboratory doors, cabinets, etc., should be locked at all times when the laboratory is not in use unless otherwise specified. Turn off all equipment at the end of each class period, including the computers. Shutting down the computers will refresh the configuration control software and get rid of any unauthorized student files before the next class period. This discourages cross talk between students that might be misunderstood as academic dishonesty.

Do not allow students to browse in the supply cabinets for components. Part of your preparation for the lab should be to locate the required components and make them available to the students. NEVER allow students to return components to the supply cabinet. Do not allow students to remove components from the lab.

COURSE PROCEDURE

For most courses – refer to the Canvas course at https://mtu.instructure.com/login for policy and curriculum information.

Safety and good course practices should be constantly emphasized. Your course instructor will provide you with suggestions, which may include handing out "Safety Practices to be Observed in the Laboratories of the Department of Applied Computing."

During the first course meeting, the students should be informed of the grading and attendance policy. This is your first and best opportunity to set expectations. The professor in charge of the course will provide you with this policy. This must include a definition of and the penalty for cheating, late work, and unsafe behavior. Refer students to the Academic Honesty Link on the lab web site – show the video on the first day of class.

No course instructor should leave the lab unattended for long periods of time while experiments are being performed. If it is necessary to leave for more than five minutes, a qualified stand-in should be found.You must maintain a current and accurate record of student attendance and grades.

The specified experiments for course are not to be changed, nor should any parts be omitted without the

consent of the professor in charge. Of course, suggestions for improvements are always welcome.

It is quite important to inform students the following week if their lab report/homework assignment was not turned in or if they are delinquent in any other way. Provide timely feedback on student progress. Inform your students that eating and/or drinking is prohibited in all laboratories and computer area.

GRADING PROCEDURES

The grading procedure for each laboratory is determined by the faculty instructor for the course. Grades, in general, should include performance in the lab, hand-in material from work done at home, attendance, short tests and possibly a lab final examination. The faculty coordinator will provide you with additional guidance.

The final lab grades are due on or before the time the final course exam is given. Always be prepared to justify the grades you give. All grades are maintained electronically using "Canvas". The professor in charge of the course will enable you to access the courses grade book. You will assign grades in consultation with the faculty instructor. Do not depart the local area until all your grades are properly recorded in the course grade book and all final grades are submitted electronically.

Students should turn in their work in the laboratory or Canvas as specified, and all graded reports and other materials should be returned to the student in the same way. Laboratory reports are to be returned to the students in the next week. It is your responsibility to grade reports promptly. **Do NOT ask the Office Assistants to hand materials out to the students and do not pile things in the halls**.

Laboratory grades may NOT be posted outside your door. Do not post grades or leave piles of graded work for students to browse through. Do not discuss grades of one student with another. Refer to FERPA agreement for more information.

Keep a record of student attendance. You must verify that students attending your lab are enrolled in your section. Occasionally students may request to work in your section to make up work from other sections; you may allow this if there is room available.

TEACHING HINTS

Treat the students with respect. Be polite to them. Avoid sarcasm. Don't lapse into crude or obscene language or profanity. You have an obligation to teach the students the proper mode of expression. Be precise, concise, and technically correct in your speech and demand the same of the students.

You are in a position of power, so avoid any appearance of abusing that power. Do not ask any of your students for a date. Do not accept offers for dates from your students. Avoid even the perception of unfair treatment in the classroom.

Respect the lab equipment and lab space you use and make sure the student treats the equipment and space with respect.

If you do not understand the theory of what you are teaching, you should seek faculty guidance. You should never go to class unprepared and uncertain of the theory upon which that class is based. You should strive to keep well ahead of the class.

Continuously **practice** and **preach** safety. Do not tolerate unsafe practice.

OTHER RESPONSIBILITIES

You are expected to remain on campus until your last lab/course section meets and all of your gradesare turned in. Do not submit your final grades electronically without consulting the lab coordinator.

Expect to teach your lab the first week of classes unless instructed otherwise.

All GTAs are expected to meet their classes suitably dressed, well groomed, and on time. (And stay until the lab session is over and/or all students are gone.)

No laboratories are to be canceled, except by the professor in charge of the course. If you know in advance that you are unable to meet your laboratory, you must find a substitute and inform the professor in charge of the course. In an emergency, notify the CoC office that you are unable to meet your laboratory.

You are requested to reserve at least four hours a week for consultation with students having difficulties. The times selected for consultation should be announced to each section at the first-class meeting and also posted on your office door.

Be sure to clearly specify all due dates for lab reports, homework assignments, etc., and specify the penalty for late or missing material. This should be done well in advance of the due date.

All GTAs should determine the location of first aid kit, power sources, circuit breakers, fuses, fire extinguishers, fire call boxes, and anything pertaining to the safe and efficient operation of the lab prior to the lab meeting. You won't have time to do this in an emergency so take care of it before the first lab period.