Michigan Tech Graduate School Bulletin 2003-05

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Michigan Technological University is an equal opportunity educational institution/equal opportunity employer. In keeping with its responsibilities as an educational institution, Michigan Technological University is committed to a policy of affording equal opportunity to all of its employees, students, applicants for employment, and applicants for admission without regard to race, religion, color, national origin, age, sex, sexual orientation, height, weight, or marital status. The University is also committed to a policy of educating and employing handicapped individuals and veterans without discrimination. These policies are to be implemented with due regard for the relative qualifications of all involved. The Affirmative Action Officer is Sherry Kauppi, 207 Administration Building, 906-487-3310.

MichiganTech Graduate School **Bulletin**

Hello,

From the Graduate School Staff

Michigan Technological University has a proud tradition of excellence in science and engineering education. Since its charter in 1885 by the state of Michigan, Michigan Tech has expanded its education and research role to include graduate programs in forestry, humanities, social sciences, and business as well as all of the major science and engineering disciplines. The faculty and staff at Michigan Tech are here to help you complete your graduate program in a timely and rewarding manner. We look forward to working with you.

Our Mission

The mission of the Graduate School is to serve as a progressive and innovative unit of Michigan Technological University, enhancing the University's continuing role as the technological institution of the State of Michigan by

- preparing its graduate students to embark on a lifelong process of learning and exploring new knowledge
- assisting them in acquiring the skills necessary to become responsible leaders in society
- providing opportunities for graduate education to qualified individuals from all racial, ethnic, and gender groups
- providing our faculty with a full range of encouragement and support for research and scholarly activities
- stimulating research to advance the frontiers of knowledge and to enhance the application of knowledge for the betterment of society
- safeguarding the highest level of integrity in the conduct of research in the University

Our Vision

The University's research and graduate programs will be a home in which students and faculty are encouraged to pursue and create knowledge at its cutting edge, and a working laboratory in which knowledge is put to useful application for the benefit of society. The Graduate School will expand programs in areas outside of our technological emphasis and thereby contribute to the social and cultural enrichment of our students and our community. It will reach out globally with teaching, training, research, and service. It will strive for continued growth in ethnic, gender, and racial diversity. Through these accomplishments, it will be a nationally and internationally recognized leader in graduate education supported by vigorous research.

Graduate Programs

MTU offers discipline-oriented master's and doctoral degree programs in the University's colleges and schools as well as non-departmental master's and doctoral programs and graduate certificates. The graduate degrees offered at Michigan Tech are listed under Graduate Degrees and Programs. Detailed program descriptions can be found on the Web at the various departmental websites. The programs at Michigan Tech are administered by the Graduate School under the direction of the dean of the Graduate School with the advice of the Graduate Faculty Council. The council, comprised of elected members of the graduate faculty, helps to ensure the high quality of the graduate program and assists the dean in developing Graduate School policies and in administering graduate programs.

Graduate Faculty

University faculty members must be nominated for graduate faculty status by the department chair and the dean of their college or school, and approved by the dean of the Graduate School. This faculty also includes adjunct and ad hoc faculty whose expertise gives each program additional breadth and depth. Graduate faculty are eligible to teach graduate courses (5000- or 6000-level), serve as examining members on graduate committees, and supervise graduate students. Graduate faculty and their areas of interest are listed in this Bulletin under Graduate Faculty.

Research

Research is an essential part of graduate students' activities. Students receive research guidance and supervision from faculty advisors and graduate committees. Administrative assistance relating to research funding may be obtained from the Research and Sponsored Programs office. University research centers and institutes are described <http://www.admin.mtu.edu/research/vpr/center_institute.htm>.

University Policies and Procedures

It is your responsibility as a graduate student to be knowledgeable about and to comply with University, Graduate School, and individual program policies and procedures. This *Graduate School Bulletin* will familiarize you with the opportunities and graduate programs available at Michigan Tech and inform you about the policies and procedures under which these programs are administered. Information about other University policies is available in the MTU *Student Handbook*, <http://www.mtu.edu/studenthandbook/>.

Graduate course listings are available online at <http://www.admin.mtu.edu/em/students/plan/catalog/graduate/index.php>. Needed forms are available on the Web through the Graduate School home page. Questions can usually be answered by your major advisor or department graduate program coordinator. Contact information is listed under Where to Go and Who to See for Help in this *Bulletin*. If further clarification is needed, contact the Graduate School office (4th Floor, Admin Building, 906.487.2327.

Registration, class scheduling, and withdrawal procedures are the business of the Office of Student Records and Registration. Visit their Website at <http://www.admin.mtu.edu/em/> or consult the *Student Handbook* for those policies and procedures.

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Last Updated: 18 June 2004

Disclaimer

We will make every effort to provide accurate and current information regarding Graduate School and University policies. In order to do so, the on-line *Graduate School Bulletin* will be edited as changes occur. Michigan Tech's Graduate School thus reserves the right to change without notice statements in the *Graduate Bulletin* concerning rules, policies, fees, curricula, courses, and/or other matters. Also, the *Bulletin* provides general University information via links to other departments' documents. The Graduate School does not control edits and/or substantive changes to these secondary documents, which may be changed without notice.

The *Graduate School Bulletin* is archived at the beginning of each fall semester. Copies of earlier print *Bulletins* are available in the J.R.Van Pelt Library Archives (Call No. LD3315 .M52). Links to prior year on-line bulletins are included in the "Links" section of this document. Beginning with the 2003-05 *Bulletin*, these archived versions will be made available as printable .pdf files.

Last Updated: 18 June 2004

The following substantive changes have been made with the summer 2004 revisions to the Bulletin. Subsequent changes will be added and dated.

Medical Withdrawal and Late Drop Procedures

- Approval moved from Student Affairs to Graduate School

Change of Status

- New language regarding mandated shift from PhD to Master's

Grad Faculty Policy

- Rewrite to reflect current practice; clarification of adjunct/ad hoc

Provisional Plan C changes

- Language approved by GFC and Dean changing
  - Oral examination requirement
  - External on Plan C

Clarification, grades below B

- GPA—Grade Point Average: clarification of effect of grades below B on student standing and GPA

Non-degree graduate status

- New student status (coded as a new major NDG) for non-degree seeking students wishing to take grad classes

Disclaimer

- Language explaining new policy for updating and archiving the Graduate School Bulletin

Master's Path Program

- For students who have completed a three-year degree outside the US

Academic Probation

- Link provided to letter of notification from "Good Standing" section

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Last Updated:27 June 2004

Bulletin

Where to Go and Who to See for Help

To complete your degree in a timely manner, there are many things you should do for younelf. However, some things you can't do, like correct your tuition bill or your immigration status. Faculty and staff from all over campus are willing to help you.

Department Policies & Procedures

Graduate Program	Faculty Coordinator	Secrecy/Aide
Applied Science Education	Brad Baltensperger	Debbie Meyers
Biology	Don Lueking	Pat Asselin-Rastello
Business Administration	Jim Frendewey	Judy Chapman
Chemical Engineering	Joseph Holles	Alexis Snell
Chemistry	vacant	Celine Grace
Civil & Environmental Engineering	Neil Hutzler	Corrine Leppen
Computer Science	Jean Mayo	Sandy Kalcich
Computational Science and Engineering (EPD1)	Phil Merkey	Allyson Jabusch
Distance Learning	Varies with Program	Lynn Artman
Electrical and Computer Engineering	Ashok Goel	Michele Kamppinen
Engineering, Master of	Sheryl Sorby	Sherry Saarinen
Engineering Mechanics	Ghatu Subhash	Marlene Lappeus
Environmental Engineering, PhD (EPD2)	Neil Hutzler	Corrine Leppen
Environmental Engineering Science	Neil Hutzler	Corrine Leppen
Environmental Policy	Kathy Halvorsen	Lisa Dwyer
Forestry, Forest Science, Forest Molecular Genetics & Biotechnology	Peg Gale	Suzanne Knott
Geological Engineering, Geology, Geophysics	John Gierke	Amie Ledgerwood

Industrial Archaeology	Pat Martin	Lisa Dwyer
Mathematics	Jianping Dong	Margaret Perander
Mechanical Engineering	Ghatu Subhash	Marlene Lappeus
Materials Science and Engineering	Walt Milligan	Beth Ruohonen
Mineral Economics	Gary Campbell	Judy Chapmen
Mining Engineering	John Gierke	Amie Ledgerwood
Physics, Engineering Physics	Don Beck	Elizabeth Pollins
Rhetoric & Technical Communication-Humanities	Dennis Lynch	Marjorie Lindley
Sponsored Educational Programs	Varies with program	Lynn Artman

Graduate School Policies & Procedures

Graduate School Offices are located on the 4th floor of the Administration Building.
Assistant Dean of the Graduate School, Marilyn Vogler, Room 401

Application Process	Admissions Coordinator	Jill Pietila	Room 408
Billing/Support	Office Assistant	Carol Wingerson	Room 409
Blue Room Reservations	Office Assistant	Carol Wingerson	Room 409
Commencement	Assistant to the Dean	Nancy Byers-Sprague	Room 411
Degree Progress	Assistant to the Dean	Nancy Byers-Sprague	Room 411
Health Insurance	GSC Health Insurance Manager	Anne Hartingh	Room 407B

Outreach and Multiethnic Programs

International Exchanges and Services: Center for International Education, Admin. Room 131, 487-2160

Outreach/Multiethnic Programs: Betty Chavis, Alumni House Room 204, 487-2920

GRADUATE FACULTY

1. Membership

The Graduate Faculty consists of members of the academic faculty holding the rank of Lecturer, Assistant Professor, Associate Professor, or Professor who have been appointed by the Dean of the Graduate School. The Dean of the Graduate School may also appoint persons with a continuing appointment such as Research Professor or Research Scientist to the Graduate Faculty.

The Dean of the Graduate School may also grant adjunct graduate faculty status to Emeritus or retired faculty, to MTU faculty holding a rank with a prefix of part-time or visiting, and to Adjunct faculty (approved through Human Resources) whose primary appointment is not at MTU. These appointments are for one year and must be reviewed on an annual basis.

The Dean of the Graduate School may also grant ad hoc graduate faculty status to individuals from institutions other than MTU for a specific purpose, such as serving as a member of a particular student's advisory committee or teaching a particular graduate class. Ad hoc appointments terminate with the completion of the particular student and/or task for which the appointment was requested. Ad hoc faculty are considered external to the department for purposes of constituting examination committees.

Members of the graduate faculty who leave the University may, upon request of the chair of any department affected, remain on the graduate faculty in adjunct or emeritus status for a period of time sufficient for completion of any students they may be advising or serving on committees for.

Only graduate faculty are eligible to teach graduate courses (5000 level and above), serve as examining members on MS, MEngg, and PhD committees, and supervise master's and doctoral students.

Faculty who hold an adjunct appointment in a second department need not be nominated for graduate faculty membership by the adjunct department. Adjunct status within a department, however, means that a faculty member may not serve as the external examining member on committees for students in that department. They may, however, serve as an internal committee member for students in the department.

2. Qualifications of Graduate Faculty

A. Qualifications expected for graduate faculty appointment
   a. Experience and continued interest in the conduct of research
   b. The necessary background for, and a continued interest in, teaching graduate courses
   c. Continued interest in serving as a graduate student advisor

B. Evidence of qualifications

Faculty may meet the qualification requirements if they:

a. Are currently involved in research work or graduate instruction or in advising graduate students
b. Regularly publish articles in recognized journals having national distribution or books related to their field of study
c. Have earned the terminal degree in their field

3. Appointment procedures

Graduate faculty appointment and retention decisions are made by the Dean of the Graduate School with recommendations and advice from department heads/chairs, deans of colleges and schools, and the Graduate Faculty Council.

Recommendation for Graduate Faculty status is made in writing by the department head/chair of the appropriate unit or by the deans of the Schools of Business and Forestry. These recommendations are forwarded to the college dean, where appropriate, and then to the Graduate Dean.

4. Review of Graduate Faculty

It is expected that department heads/chairs/school deans will continually review the performance of all individuals holding graduate faculty status in their respective units using criteria outlined in part 2 above.

When, in a department head/chair/school dean's professional judgment, a faculty member holding a graduate faculty appointment is no longer satisfactorily functioning in this capacity, s/he must recommend that the individual in question be removed from graduate faculty status. The Dean of the Graduate School may also initiate the removal process in consultation with the appropriate head/chair/dean. The Dean of the Graduate School will act on recommendations with the advice and consent of the Graduate Faculty Council.

2/24/88
8/92 Update
10/03 Update

NOTES: Differences between **adjunct** and **ad hoc** status for members of the Graduate Faculty
19 February 2004

ADJUNCT faculty appointments are handled through Human Resources and require all the HR paperwork to be completed. ADJUNCT appointments are used for persons, generally from outside the University, who have a continuing relationship with a department at Tech. There may be occasions on which a person who is appointed to a faculty position in one MTU department would want or be expected to hold an adjunct appointment in another MTU department. These, too, must be processed through HR.

Faculty with a primary appointment AND grad faculty status in one department who also have an adjunct faculty appointment in another department do not need to be appointed to graduate faculty by the second (adjunct) department. A person simply is, or is not, graduate faculty. One is not graduate faculty in department A or department B.

We verify adjunct status through HR for purposes of determining eligibility to serve as the external/cognate member on examining committees. Except in very rare, pre-approved cases where no other suitable external can be found, adjuncts in a department MAY NOT serve as the external/cognate member of examining committees for

either Master's or PhD students in that department. DO NOT appoint someone an adjunct in your department so that they may serve as the external. This will disqualify them.

DO NOT use adjunct appointments for persons external to MTU who are serving *one* time as a committee member for *one* of your program's students, even if the person will be actively engaged with the student and committee for a lengthy period of time. If you want to bring in someone external to MTU to serve on a student's committee, either as an internal member or as the external member, fill out a Graduate Faculty Appointment form and submit it to the Graduate School. Ad hoc appointments do not currently need to go through HR. The form is at http://www.admin.mtu.edu/rgs/graduate/forms/GradFacultyAppointment.pdf

This is an excerpt from the letter the Graduate School sends to new ADJUNCT faculty who are appointed to grad faculty:

"Your adjunct status in __[Department A]__ means that except in those very unusual circumstances when no other suitable external can be found, you should not serve as the external examining member of committees for students in ___[Department A]_____. You are, however, encouraged to serve as an internal committee member for students in _____[Department A]__."

This is an excerpt from the letter we send to new AD HOC graduate faculty:

"Your nomination to ad hoc standing on Michigan Tech's graduate faculty for the purpose of serving on __[student's]_____ advisory/examination committee has been received from __[chair/program]___ and approved by the dean of the Graduate School. Your appointment extends until ___[student's first name]____ completes the degree.

The special expertise you bring is a valuable resource. We especially appreciate your willingness to serve in this capacity as we recognize it is an additional burden on your time. The student's department and major advisor are encouraged to locate funding to bring you to campus for the student's defense, and we hope at that time that you will be able to share your work through a seminar, lecture, or similar event on campus."

SUMMARY

Item	Regular	Adjunct	Ad Hoc
Need to involve HR in appointment	yes	yes	no
Is only for graduate faculty	no	no	yes
Appointment to GRAD FACULTY requires Grad Dean approval	yes	yes	yes
Appointment to FACULTY requires Grad Dean approval	no	no	n/a
Can be used by current MTU faculty	yes	yes	no
Grad faculty appointment has an end date	no	yes	yes
Grad faculty status may be renewed at request of chair	n/a	yes	yes
For one-time service on advisory/examination committee	n/a	no	yes
For repeated use as member of advisory/examination committees	n/a	yes	no
Can serve as external in own field/discipline/department	no	no	yes
May work for lengthy period with student including committee	yes	yes	yes
May be co-advisor	yes	yes	yes

May be advisor	yes	no	no

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Last Updated: 18 June 2004

Admission Requirements

To be considered for admission to the Graduate School as a regular student, the applicant must be

- the recipient of a bachelor's degree or its equivalent from an accredited institution,
- adequately prepared for advanced study in the chosen field of specialization as demonstrated by the previous program of study and the scholastic record, and
- recommended for admission by the head of the program or concentration.

Employee Admission—Any University employee may enroll in any graduate course, if properly qualified, subject to the approval of the appropriate supervisor. Employees do not pay the application fee.

Application Procedure

1. Obtain an application packet from the department of interest. Basic forms are available in the Graduate School and on the Graduate School Website at http://www.admin.mtu.edu/rgs/graduate/apply.html. Materials and forms specific to individual departments are available only from those departments and departmental Websites.

2. Complete all application forms and return them to the Graduate School office, along with the nonrefundable application fee. Distance Learning students should submit application materials to the Sponsored Educational Programs Office.

3. You may also apply online at http://www.mtu.edu/apply.

Note: The application fee is nonrefundable and cannot be credited toward tuition or any other fees. It must be paid in the form of a check or money order drawn on a United States institution or by an International Postal Money Order, payable in United States currency.

MTU graduate students applying for a different graduate program should fill out a new application for database purposes, but a second application fee is not necessary.

4. Request that the registrar of each college or university attended send official transcripts directly to the Graduate School. Transcripts of course work completed at Michigan Tech will be obtained by the Graduate School.

5. The Graduate School recommends that applicants take the general test of the GRE exam. It is not required by the Graduate School; however, it is required or encouraged by most departments. In some departments it is required if you wish to be considered for financial assistance. Test results should be sent directly to the Graduate School by ETS. Our code number is 1464.

6. Applicants whose native language is not English must supply results of an English proficiency

examination. Usually, the Test of English as a Foreign Language (TOEFL) is submitted. Although a TOEFL score of 550 (213 on the computer-based test) is recommended by the Graduate School, the applicant should also check with individual departments to determine if a higher TOEFL is required for admission to that department or program. Applicants who have completed a degree in the US may have the TOEFL requirement waived by the Dean of the Graduate School. This requirement may not be waived by departments, programs, or faculty. Note that the TOEFL is not required for Distance Learning students applying through a corporate partnered program.

7. Please read the departmental requirements carefully because procedures vary from department to department. Strong emphasis is placed on the statement of purpose. If reference letters are required, the application may not be reviewed by the Graduate Committee in the department until the forms/letters have been received.

8. Acceptance may be deferred for a period of 12 months, for example, from one fall term to the next. Deferral beyond this time is not allowed and admission will require a new application.

The Graduate School does not have application deadlines; however, some departments do have deadlines. Please consult individual departments regarding dates.

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Last Updated:30 June 2004

Gradstu-l

Gradstu-l is a moderated list set up by the Graduate School Office for official communications from the Graduate School and the Graduate Student Council. All enrolled graduate students or students who have received a waiver of continuous enrollment are automatically subscribed at the beginning of each term.

We will expect you to have received and read e-mails posted to this list. We might use it, for instance, for notices of registration deadlines, information about health insurance, and schedules for orientation. We therefore ask that you not unsubscribe.

Last Updated:24 June 2004

Freedom of Information Act and University Information

Michigan Tech is committed to maintaining a free exchange of information throughout the University community, and it is our general practice to release most types of information immediately upon request.

In addition, as a publicly funded institution, Michigan Tech is subject to the provisions of the state and federal Freedom of Information Acts (FOIA). FOIA requires the University to provide copies of most administrative documents, with the exception of certain legal and personnel records, to anyone filing a FOIA request. If you wish to file a Freedom of Information Act request, or if you would like to view University documents, contact the Office of the President, 487-2200.

Last Updated:24 June 2004

Financial Assistance & Opportunities

Graduate Student Support

The application forms for admission to the Graduate School are also regarded as application forms for assistantships. All students admitted to the Graduate School are considered for these awards, which are made by the departments. In general, departments make awards in March and April for the ensuing academic year. Recipients of awards are notified by the department as soon as the awards are made. All departments with graduate programs support students through teaching assistantships. Positions associated with research grants or contracts are often available in some departments and research centers.

Regular assistantship appointments are for half-time work (20 hours/week), but departments can divide appointments, resulting in three-quarter time, half-time, or quarter-time appointments (with proportional adjustments of the stipend and tuition & fee support). Students' work load assignments, including teaching preparation and grading of papers, should not exceed the level of their appointments.

Support includes stipend, a proportional amount of tuition and academic fees for full-time enrollment. Student-voted fees—for instance, the student union expansion and student activities fees are not generally covered by support. All supported students must be registered as full-time graduate students.

Co-ops and Internships

Graduate students may seek placement in co-ops with corporations and service groups and receive academic credit as well as the co-op salary. The Career Center assists students looking for co-ops, internships, and employment following degree completion. Check the Website at http://www.ucc.mtu.edu/students.asp. See also the Graduate School procedures at http://www.admin.mtu.edu/rgs/graduate/forms/co-opform.pdf and visa issues at http://www.mtu.edu/cie/is/imm_cpt.html.

Need-based Financial Aid

To be considered for need-based financial aid, e.g. federal student loans and Graduate Assistance in Areas of National Need (GAANN Fellowships), students must submit the Free Application for Federal Student Assistance (FAFSA) to the federal processor with Michigan Technological University listed to receive the result (federal school code 002292). You have the option of applying over the Internet, http://www.fafsa.ed.gov, or using the paper form. To assure optimum processing, file the FAFSA by March 15. Awards will be determined approximately July 1, when cost of attendance and resource information is available.

Financial assistance is awarded for one academic year at a time. After January 1, you must reapply utilizing the FASFA or Renewal FAFSA provided by the US Department of Education.

For more information regarding financing opportunities available through the Financial Aid Office, visit http://www.admin.mtu.edu/finaid/finaid.htm.

Loans

Loans are available to graduate students who meet the scholastic and loan program requirements.

Federal Stafford Loans—Students may be eligible for a student loan from the William D. Ford Federal Direct Loan Program. The FAFSA or FAFSA Renewal form is the application form needed. The annual loan limit for subsidized and unsubsidized Stafford Loans is up to $18,500 each academic year (only $8,500 of this amount may be in subsidized loans). Students may borrow up to a cumulative maximum of $138,500 as a graduate or professional student (only $65,500 of this amount may be in subsidized loans). The graduate debt limit includes Stafford Loans received for undergraduate study.

Federal Perkins Loans—These loans are provided by federal and University funds. Students may borrow up to a cumulative maximum of $20,000 as an undergraduate and $6,000 per year as a graduate student for a maximum cumulative total of $40,000, provided they demonstrate financial need. As long as the borrower is engaged in at least half-time study, there is no interest or repayment. Interest begins nine months after the borrower ceases to be at least a half-time student and may extend over a maximum period of ten years. Minimum payments are required. Deferment of repayment is permitted for certain kinds of federal and volunteer service.

Work-Study Programs: Michigan and Federal

These programs provide financial assistance through employment on campus. Every effort is made to place students in jobs related to their skills, interests, and field of study. Work-study participants generally are employed ten hours per week. Money awarded for a work-study job will be paid through biweekly paychecks after the work has begun.

Bureau of Indian Affairs Program

Financial assistance based on need is available to students who are enrolled Native American tribal members. Students should contact their tribal education office for application procedures.

US Army Reserve Officers Training Program (ROTC)

The Department of Military Science offers instruction in leadership, management, and general military subjects. The U.S. Army provides two-year Army scholarship opportunities to graduate students. Students must attend a five week summer training session, for which they receive a $750.00 stipend and 10–12 credit hours for the first two years of Army ROTC at Michigan Tech. Two-year scholarships are awarded upon the successful completion of the summer training. Students must have a 2.5 GPA, meet all medical and physical requirements, meet an age requirement of 25 years old or less by June 30 of the year of completion of degree and commissioning. Veterans are given waivers up to 30 years of age.

Financial Aid Policies

Satisfactory Progress Policy Statement

Federal financial aid regulations require students to make satisfactory progress to remain eligible for financial aid. Financial aid programs affected by this policy include:

Federal and Michigan Work-Study	Federal Perkins Loans
Federal Direct Subsidized Loans	Federal Direct Unsubsidized Loans

This policy defines the minimum requirements for financial aid eligibility at MTU. Note that other types of financial aid (e.g., scholarships) may have more stringent requirements.

Students who do not meet the **GPA requirements** after **any semester** are not considered to be making satisfactory progress, and the affected financial aid for subsequent semesters will be canceled with the following exception. Students who do not meet the GPA requirement after their **first semester** at MTU will be placed on financial aid probation, and will remain eligible for financial aid for one semester. Students not meeting the **schedule of credits passed** after **spring semester** are not considered to be making satisfactory progress. **Both GPA and credits passed requirements must be met for aid to be reinstated.**

Graduate students receiving any kind of financial assistance, including fellowships and assistantships not listed above, are required to maintain, at the end of each term, a cumulative grade point average (GPA) of at least 3.0. Failure to do so will result in the student being placed on financial aid probation and may result in the loss of funding. After receiving notification of probation, graduate students must meet with their graduate program director as soon as possible to plan a course of action for resolving the situation.

Every student must adhere to the following schedule of credits passed, even if the academic major is changed. Audits (U or V) do not count toward credits passed. To reference credits passed, access your Unofficial Transcript at the Records and Registration website http://www.admin.mtu.edu/em/.

Semesters full-time at MTU	Master's credits passed at MTU	PhD credits passed at MTU
1	4	4
1.5*	6	6
2	8	8
3	12	12
4	16	16
5	20	20
6	24	24
7	28	28

8	32	32
9	no aid	36
10	no aid	40
11	no aid	44
12	no aid	48
13	no aid	52
14	no aid	56
more than 14	no aid	no aid

*half-time example
Credits passed include Progress grades (P). Audit grades (U or V) do not count as credits passed.
Note: For the complete statement, see http://www.admin.mtu.edu/finaid/documents/satprogpolicy.pdf.

Eligibility Defined

All students, regardless of whether they are receiving aid, have a limited number of semesters for which they are eligible for such aid. For example, undergraduates who have attended MTU for 8 full-time semesters may be eligible for another 4 semesters of aid, regardless of whether or not they have received aid in the past. The record of full-time semesters increases by one for every semester an undergraduate student is enrolled for 12 or more credits at the end of the official add period. If an undergraduate student is enrolled for 6 through 11 credits, the full-time semesters increase by one-half. Full-time semesters will not increase during the semesters undergraduate students carry fewer than 6 credits.

M.S. and Ph.D. students' records of full-time semesters increase by one each semester in which they are enrolled for 9 or more credits at the end of the official add period. If an M.S. or Ph.D. student is enrolled for 5 through 7 credits, the full-time semesters increase by one-half. In all other cases, full-time semesters are not increased.

Credits passed include progress grades (P). GPA is calculated using all courses, which appear on the graduate transcript.

Appeals and Reinstatements

Because financial aid dollars are applied to the first billing each semester, and the progress status is not determined until semester-end grades are processed, necessary adjustments will appear on a subsequent billing of the semester following a change of progress status.

If completion of temporary grades (I or X) or other transcript changes (e.g. grade changes) warrant reinstatement, the student should notify the Financial Aid Office before the end of the semester following unsatisfactory progress.
Students not meeting the satisfactory progress requirements because of mitigating or extenuating circumstances may request reinstatement of financial aid by submitting a Satisfactory Progress Appeal Request Form along with the specified documentation. This form can be obtained from the Financial Aid Office or downloaded from the Financial Aid Office website. Appeals should be submitted to the Financial Aid Office no later than Tuesday of the first week of the semester following unsatisfactory progress. If a student's appeal is approved, when appropriate, the full-time semesters will be adjusted allowing

continued eligibility.

Financial Aid Refund/Repayment Policy

A tuition/fee adjustment, according to a schedule available in the Office of Student Records and Registration, may be required for students withdrawing from the University. The adjustment will appear on the student's subsequent billing statement. Non-tuition refunds will be prorated according to the week of withdrawal. Withdrawing students must repay any financial aid that exceeds the charges incurred for the term.

Return of Title IV Funds

Students who completely withdraw from all courses prior to completing more than 60 percent of a semester will have their eligibility for aid recalculated based on the percent of the semester completed. This policy shall apply to all students who withdraw, drop out, or are dismissed from the University and receive financial aid from Title IV funds. The term "Title IV Funds" refers to the following Federal financial aid programs:
Federal Direct Unsubsidized Loan
Federal Direct Subsidized Loan
Federal Perkins Loan.

Title IV aid is earned in a prorated manner on a per diem basis up to and including the 60 percent point in the semester. Title IV funds and all other aid is viewed as 100 percent earned after that time. The percentage of Title IV aid earned shall be calculated as follows:
(Number of days completed by the student) / (Total number of days in the semester*) = Percent of Title IV aid earned
*The total number of days in the semester includes weekends, but does not include any scheduled breaks of more than five days.

A student's withdrawal date is determined by the University as (1) the date the student began the University's withdrawal process or officially notified the Office of Records and Registration of intent to withdraw; or (2) the midpoint of the semester for a student who leaves without notifying the University; or (3) the student's last date of attendance at a documented academically related activity.

University's Portion to be Returned—The percentage of Title IV aid unearned (i.e., to be returned to the appropriate program) shall be 100 percent minus the percent earned. Any unearned aid to be returned by the University is the lesser of (1) the entire amount of unearned aid or (2) the total institutional charges multiplied by the percentage of unearned aid. Unearned Title IV aid shall be returned according to the following priority up to the amount received for the semester (1) Direct Unsubsidized Loan; (2) Direct Subsidized Loan; (3) Perkins Loan.

Student's Portion to be Returned—When the total amount of unearned aid is greater than the amount returned by the University from the student's account, the student is responsible for returning unearned aid to the appropriate program(s). The same priority as above would be used. Any loan funds that must be returned by the student will be repaid according to the terms of the promissory note.

Return of Non-Title IV Funds
The portion of state, university and other assistance that must be returned will be calculated based on the particular program's return policy. The student will be billed for any amount due to the University resulting from the return of Title IV and Non-Title IV funds.

Assistantships

If you are awarded an assistantship of any sort, you will receive biweekly checks. Some portion of your tuition and fees is paid depending on the amount of support you receive, but you will always be responsible for paying several student-voted fees. If you don't receive a bill, you should check with the Cashier and pay these fees, thereby validating your enrollment, keeping your classes, and avoiding late fees.

If your department has not notified the Graduate School office (GSO) about your assistantship by the time bills are mailed, you will be billed for tuition. At the payment deadline, the Cashier's Office will have the most up-to-date support information, and your bill will be handled accordingly. However, if the GSO has still not been notified of the award by the payment deadline, you are responsible for your tuition. You will get a refund when your sponsor notifies the GSO that the award has been made.

Any supported student must be full time (link & scroll down). If you are supported at 20 hours per week, your support pays standard full-time tuition plus some fees. You are responsible for paying for any credits over the department cap that you enroll for, as well as for student activity fees. Note, too, that the 9 credits required for full-time status may include regular graduate course work and research credits, courses in other departments, audited courses, PE, modern languages, fine arts, ESL, undergraduate courses, and so on.

If you are on partial support, you must still be registered as a full-time student, but only a portion of your tuition and fees will be paid by your support. You are responsible for the rest. Support for 10 hours per week, for example, covers 50 percent of tuition and fees for 9 credits; support for 5 hours per week covers 25 percent of tuition and fees for 9 credits.

Teaching Assistantships (GTA, GTI)

Teaching assistantships are awarded by the department requiring instructional services. GTAs assists a faculty member in teaching. GTIs have full responsibility for the course(s) they are assigned to teach. The appointment is usually for the academic year of two semesters. Some opportunities exist for summer teaching assignments. The award includes a stipend plus payment of standard tuition and fees. All duties associated with a standard appointment are expected to total an average of not more than twenty hours per week and may include teaching, grading, or otherwise helping professors with their teaching. Teaching assistants must be registered as full-time graduate students.

Research Assistantships (GRA, GA, GACS)

Research assistantships, usually associated with a specific research grant, contract, or internally supported research project, are awarded by the professor/department supervising the research activity.

The appointment is usually for the academic year, but frequently includes the summer term. The award includes a stipend plus payment of standard tuition and fees. Time devoted to the research activity is expected to total an average of twenty hours per week, though in cases where the research is related to the student's thesis or dissertation, additional time is expected to meet requirements for research credits in which the student is enrolled. Research assistants must be registered as full-time graduate students. Coding indicates external support (GRA), internal support (GA) or cost share support (GACS).

Administrative Assistantships (GADE, GADI)

Administrative assistantships are awarded by the departments to assist in their efforts to further develop graduate programs and enhance research. Students' duties may include, for instance, system administrator or journal editing responsibilities. The hours, stipend, and tuition support are the same as for a teaching assistant. Administrative assistants must be registered as full-time students. Coding indicates external (GADE) or internal (GADI) sources of funding.

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Last Updated:24 June 2004

MichiganTech Graduate School Bulletin

The Proposal Incentive Award Program

The Graduate School offers the Proposal Incentive Award program to encourage students to be proactive in seeking external funding. The Graduate School pays eligible graduate students incentive awards up to $100 for preparing and submitting research and or fellowship proposals to agencies external to the University. Guidelines and application forms are available at http://www.admin.mtu.edu/rgs/graduate/forms/ProposalIncentiveProgram.pdf.

Fellowships

Departments, schools and colleges, and the Graduate School award a variety of highly selective fellowships to incoming and continuing graduate students. Those awarded by departments and may be available to master's as well as doctoral students.

The Graduate School awards a variety of fellowships through the Michigan Tech Fund, including dissertation fellowships for doctoral students. Either the chair of the department or program or the student's advisor makes nominations for these fellowships to the dean of the Graduate School.

In addition, Michigan Tech students have been successful in obtaining external fellowships from granting agencies such as NASA and NSF.

King-Chavez-Parks Scholarships and Fellowships—Michigan's King-Chavez-Parks Future Faculty Fellowship Program assists African American, Latino/Latina, and Native American students, groups which remain underrepresented in higher education. The purpose of the King-Chavez-Parks Future Faculty Fellowship Program is to increase the pool of minority candidates pursuing faculty careers in the state of Michigan, or in a state with an official reciprocity agreement. Future Faculty Fellows are eligible to pursue a master's or doctoral degree at public universities in Michigan. If a fellow does not complete the degree, or does not secure a teaching position at a Michigan college or university or in a state with an official reciprocity agreement, the fellowship converts to a loan which the fellow repays to the state of Michigan. Awards are made to master's candidates in amounts up to $15,000 and to doctoral candidates in amounts up to $35,000 using criteria set forth by the contracts drawn and distributed by the King-Chavez-Parks Initiative.

Michigan Indian Tuition Waiver (MITW) Program—If you are enrolled in a federally recognized tribe and have been a resident of the state of Michigan for at least one year, you may apply to receive the Michigan Indian Tuition Waiver. This means that your tuition charges for attending graduate school at Michigan Technological University will be paid.

Miscellaneous Awards

Several other kinds of awards are available to Michigan Tech graduate students:

- Fall Poster Session awards
  - Research travel awards in small amounts may be made by the Graduate School to assist students who need to be on location elsewhere for thesis or dissertation research and have no other source of funding.
- Graduate Student Council travel grants

The Graduate School provides funding for the Graduate School Council (GSC) Travel Grant program. GSC solicits applications and awards the grants each semester. Detailed information and applications are available from each department's GSC representative or via the Websites of the GSC and the Graduate School. Each term, following a drawing, the GSC notifies graduate students who will receive the travel grants via written memo. Procedures are sent with the memo. The students complete all travel-related paperwork with the assistance of their department coordinator. Forms are then submitted to the GSO for verification and approval.

External Support Opportunities

MTU is a participant in the following consortia which provide financial and research support to students in the sciences and engineering.

National Physical Science Consortium

The National Physical Science Consortium (NSPC) is a unique partnership between industry and higher education. Established in 1987, the NPSC is headquartered in Los Angeles. The NPSC has one primary objective: Increase the number of qualified U.S.-citizen PhD's in the physical sciences and related engineering fields, emphasizing women and historically underrepresented minorities. NPSC accomplishes this by awarding doctoral fellowships to outstanding students and by facilitating research and employment opportunities. Strengthening diversity among US scientists and engineers is more than a worthy goal; it is an imperative. The United States has long led the world in advancing the physical sciences. But if we are to continue competing on a global scale, we must be able to train and recruit a diverse pool of qualified scientists.

Initially funded by the National Science Foundation, the Lawrence Livermore National Laboratory, and the US Department of Energy, the NPSC is now self-sustaining through annual membership fees from employer members and a modest endowment. Since granting its first fellowship award to seven young scholars in 1989, the NPSC partnership has provided fellowships to nearly 300 aspiring scientists and engineers. Of these, nearly half are minorities and three-quarters are women. By helping to provide a continuous source of US-born scientists, employers and universities can achieve diversity and balance in our nation's scientific community. In turn, the NPSC is helping today's promising young scientists – tomorrow's science leaders – to realize their dreams.

For more information about the NPSC and its programs, contact Marilyn Vogler, assistant dean of the Graduate School, or visit the NPSC website at http://www.npsc.org/.

Oak Ridge Associated Universities

Since 1994, students and faculty of Michigan Technological University have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 85 colleges and universities and a contractor for the US Department of Energy (DOE) located in Oak Ridge, Tennessee.

ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the ORISE Catalog of Education and Training Programs, which is available at http://www.orau.gov/orise.htm.

For more information about ORAU and its programs, contact David D. Reed, Vice President for Research and ORAU Councilor for Michigan Technological University, or visit the ORAU Home Page at http://www.orau.org.

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Basic Expenses

The basic estimated expenses of a full-time graduate student living in a University residence hall are shown below. When estimating annual expenses, students should figure in travel and personal allowances based on their own situations. Although the University researves the right to change fee schedules and other student charges without advance notice, every effort is made to maintain high academic standards and adequate living facilities at the lowest possible cost to the student.

Tuition and Fees*	basic	Engg, CS	Peace Corps Appl Sci Ed	Peace Corps Engineering
tuition/AY semester	3,888.00	4,288.00	2,682.00	3,082.00
summer tuition	432	632.00	298.00	498.00
Computing, lab, & course fees (avg, per term)	518	518.00	518.00	518.00

Cost of Living	standard expenses for all students		add for PhD
GSC cost of living avg @ 774/ month (2001)	Academic Year	Summer	Acad Yr
avg cost / month @ $845	7,605.00	2,535.00	
insurance	506.00	169.00	
books & supplies	450.00	150.00	400.00
student fees (by term)	269.00	100.00	
travel for conferences, etc.			1,000.00
Total expenses minus tuition & fees	8,830.00	**2,954.00**	**1,400.00**

Master's	basic	Engg, CS	Peace Corps Appl Sci Ed	Peace Corps Engineering
Tuition and fees Academic Year	8,812.00	9,612.00	6,400.00	7,200.00
Tuition and fees Summer	950.00	1,150.00	816.00	1,016.00
Cost of living Academic Year	8,830.00	8,830.00	8,830.00	8,830.00
Cost of living Summer	2,954.00	2,954.00	2,954.00	2,954.00
Subtotal Academic Year	17,642.00	18,442.00	15,230.00	16,030.00
Subtotal Summer	3,904.00	4,104.00	3,770.00	3,970.00
Total 12 Months	21,546.00	22,546.00	19,000.00	20,000.00

PhD	basic	Engg, CS
Tuition and fees Academic Year	8,812.00	9,612.00
Tuition and fees Summer	950.00	1,150.00
Cost of living Academic Year	10,230.00	10,230.00
Cost of living Summer	2,954.00	2,954.00
Subtotal Academic Year	19,042.00	19,842.00
Subtotal Summer	3,904.00	4,104.00
Total 12 Months	22,946.00	23,946.00

* This does not apply to Distance Learning students.

Tuition and Fees

Financial Obligations

Having fulfilled all other requirements, a student is eligible for registration or graduation only if all financial obligations to the University have been met. Student Records and Registration, on notice from the Accounting Office, will withhold transcripts and grades, and deny registration to a student who owes money to the University. Scheduled classes will be dropped if the amount due is not cleared by the due date. Also, students with an outstanding balance will not be permitted to schedule classes.

The University offers both an installment prepayment plan, whereby tuition, fees, and room and board are billed monthly with no service charge, and a deferred payment plan. Contact Accounts Receivable for further information: 906-487-2243.

Fees

Tuition/Fees—All charges for tuition, fees (including computer access and individual course/lab fees), and room and board are payable each term and will be charged and due prior to the posted final payment date.

- Payments may be made after the Cashier's Office window has closed by using the drop box located in the main lobby of the Administration Building. Payments will be processed the next business day.
- Payment is declared void if a check is returned for insufficient funds. A $35 tendering fee plus applicable late fees will be assessed.
- Authorized financial aid, except employment, will be credited against the balance due.
- A check with restrictive notations can be accepted only for the purpose noted.
- Courses taken for audit are charged the same fees as courses taken for credit.

Lab/Course and Computer-Access Fees—All enrolled MTU students are required to pay their academic departments a fee for basic computing. In addition, if required of the course, a student will be assessed a lab/course fee and will be liable for this fee if the course is not dropped by the fifth day of class. Co-op students, student teachers, and off-campus students may be exempt from the computer access fee.

Miscellaneous Fees

Apartment Rent Payments—Daniell Heights rent payments are due on the first of each month and payable by the fifth of each month without a penalty. Bills are not issued. A late payment will be assessed per your contract.

Thesis and Dissertation Fees—A per copy fee is charged for the binding of theses and dissertations and is payable at the time of submission. Minimum fee is $18 per copy with additional charges for color and/or special printing.

Dissertation Microfilming Fee—PhD candidates must have their dissertations microfilmed and entered in Dissertation Abstracts International. The fee is $55 for either paper copy or ETD.

Inspection Trip Fee—A service charge is made for students required to take certain courses involving inspection trips

Late Payment of Fees

Students registering or validating billing statements after the posted final payment date are required to pay the amount due plus a $100 late enrollment registration fee. This policy is for all fees included in the University's combined billing program. No student registering or paying fees late may be excused from paying the late registration fee, nor will the fee be refunded.

Refunds of Tuition/Fees

Students will be assessed tuition according to the number of credits for which they are registered on the fifth day of instruction. The adjustment will appear on the student's subsequent billing statement. Non-tuition refunds will be prorated according to the week of withdrawal. The bursar determines whether extraordinary circumstances warrant exceptions to the refund policy in individual cases.

Change of Credit Status—Refunds for enrolled students who change credit status downward or drop a course with a course/lab fee will have tuition and course/lab fees refunded according to the following schedule. Accelerated courses and summer term adjustments of tuition assessments are calculated on a pro rata basis.

Time of Status Change	Refund Percentage
On or before 5th day of class	100%
After 5th day of class	0%

University Withdrawal

Students withdrawing from the University or dropping all courses will receive a refund according to the following schedule. Unpaid charges such as library fines, traffic fines, lab deposits, and other penalties (excluding housing deposits) shall be deducted from the refund. Students who withdraw from the University must complete a withdrawal form from the Office of Student Records and Registration and obtain the required signatures as indicated.

Time of Withdrawal	Refund%*
1st week	90%
2nd week	80%
3rd week	70%
4th week	60%
5th week	50%
6th week	40%

7th week or later	0%

*Room and Board—Refunds of residence hall room-and-board charges will be prorated on the basis of the number of weeks used.

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On-Campus Academic Programs

Graduate Degree Programs

Graduate programs generally have sufficient flexibility to permit tailoring study plans to individual needs. The programs available at MTU are listed on this page. Graduate students wanting to also pursue a certificate listed below should check with the GSO. Additional information is available on department Websites.

Master of Engineering

Master of Engineering (non-departmental)
Civil Engineering
Environmental Engineering

Master of Forestry

Master of Science (Professional Master of Science)

Master of Science

Applied Ecology
Applied Science Education
Biological Sciences
Business Administration
Chemical Engineering
Chemistry
Civil Engineering
Computer Science
Electrical Engineering
Engineering Mechanics
Environmental Engineering
Environmental Engineering Science
Environmental Policy
Forest Ecology and Management

Forest Molecular Genetics and Biotechnology
Forestry
Geological Engineering
Geology
Geophysics
Industrial Archaeology
Materials Science and Engineering
Mathematical Sciences
Mechanical Engineering
Mineral Economics
Mining Engineering
Operations Management (not currently accepting applications)
Physics
Rhetoric and Technical Communication

Master's International Program (MIP)

Students may earn an MS in Forestry; Civil Engineering, Environmental Engineering; or Geological Engineering, Geology, Geophysics (Mitigation of Natural Geological Hazards) in conjunction with the US Peace Corps, combining academic study with supervised, practical field experience and research. After completing two semesters of on-campus academic work, students serve two years with the US Peace Corps. Students return to campus for one additional semester. Contact the Department of Civil and Environmental Engineering, the Department of Geological and Mining Engineering & Sciences, or the School of Forestry and Wood Products for additional information.

Master's Path Program (for students who have completed a three-year bachelor's program outside the US)

Some colleges and universities outside the US are moving to a three-year bachelor's degree and a five-year master's degree. After obtaining the three-year degree in their home country, many students would like to go abroad to pursue a high-quality master's degree, gain international experience, and perfect their English. The Michigan Tech Master's Path Program allows students to pursue a master's degree directly, rather than requiring they first complete a bachelor's program at a US institution. The Master's Path Program is offered in twenty-two disciplines in the sciences, engineering, forestry, communications, and social sciences.

Doctor of Philosophy

Biological Sciences
Chemical Engineering
Chemistry
Civil Engineering
Computer Science
Electrical Engineering

Engineering (non-departmental)
Computational Science and Engineering
Environmental Engineering
Engineering Physics
Forest Molecular Genetics and Biotechnology
Forest Science
Geological Engineering
Geology
Industrial Heritage and Archaeology
Materials Science and Engineering
Mathematical Sciences
Mechanical Engineering-Engineering Mechanics
Mining Engineering
Physics
Rhetoric and Technical Communication

Certificate Programs

Certificates can be obtained concurrently with an undergraduate or graduate degree or can be obtained by part-time students without enrolling in a degree program. All students must, however, comply with the procedures for admission to Michigan Tech.

Graduate Certificates

Graduate Certificate in Sustainability—This Certificate formally recognizes curricular breadth in the following areas: i) policy, societal, and economic systems, ii) environmental systems, and iii) industrial systems. The student has the opportunity to achieve specialized education in engineering, forestry, science, social sciences, humanities, business, and economics. Further information: http://www.sustainablefutures.mtu.edu/grad_certificate_for_web.htm.

Undergraduate/Graduate Certificates

Design Engineering—Contact the College of Engineering

Industrial Forestry Certificate—designed to give students a working knowledge of critical aspects of business and forestry. Contact the School of Business and Economics or the School of Forestry and Wood Products.

International Business Certificate—includes modern language, international affairs, and international business and economics. Contact the School of Business and Economics.

Media —Contact the Humanities Department

Mine Environmental Engineering Certificate—Through this curriculum, mining engineering students gain knowledge and develop skills necessary to solve problems in the area of environmental impacts of

mining. Contact the Department of Geological and Mining Engineering Sciences.

Modern Languages, Literatures, and Area Study Certificate Programs and Proficiency Certificates
Certificates and advanced certificate are available in Modern Languages, Literatures, and Area Study (in French, German, or Spanish) to students who meet specified course requirements. Students who want an advanced certificate must first complete the Certificate in Modern Languages, Literatures, and Area Study. Contact the modern languages faculty in the Department of Humanities.

In addition, the following proficiency certificates are available:

- Certificat Pratique de la Chambre de Commerce de Paris—certifies French proficiency adequate for business
- Zertifikat Deutsch*—certifies German proficiency adequate for work; Zentrale Mittelstufenprufüng*—certifies German proficiency adequate for university work
- Prüfung Wirtschaftsdeutsch International*—certifies German proficiency adequate for business. (*Tests for these certificates are provided through the Goethe Institute and are recognized worldwide.

Writing—contact the Department of Humanities.

Teacher Certification Program

Michigan Tech offers programs leading to Michigan Secondary School Teacher Certification with majors and minors in biology (clinical laboratory science), chemistry, computer science, earth science, social studies, English, mathematics, science, and physics. Students with undergraduate degrees combine a sequence of professional education courses with student teaching to get teacher certification at the secondary school level. Contact the Department of Education for specific requirements.

Non-Degree Graduate Option

Students who have completed a bachelor's degree or the equivalent may wish to take courses for graduate credit without enrolling in a specific degree program. This might, for instance, be to meet employer or certification requirements, to facilitate a research exchange, or to transfer graduate credits to another university. This option might also be used by students who are in the process of applying for a degree program but who wish to begin taking courses immediately. For more information click here.

International Programs

Center for International Education (CIE)

The Center for International Education provides service-oriented leadership in support of Michigan Tech's goals and priorities in the areas of international programming, education exchange, and student and faculty services. More than 575 students from seventy-two countries are enrolled at MTU. In addition to sponsoring many international events on campus, CIE offers students opportunities to study, conduct

research, and/or intern abroad as part of their educational experience.

ESL Programs

The Center of International Education offers ESL training and support for both undergraduate and graduate international students.

Japan Center for Michigan Universities (JCMU)

JCMU is a unique consortium of fifteen state-of-Michigan universities that allows students to spend a summer, a semester, or an academic year at the Center in Hikone, Japan. Students study Japanese language and culture intensively and may take such elective courses as Japanese business, history, religion, and so on. No prior knowledge of Japanese is required, and scholarships are available.

Council on International Educational Exchange (CIEE)

Through CIEE, students can earn university credit by participating in semester, academic year, and summer programs. Financial aid does apply to most international study programs.

International Exchanges

MTU maintains cooperative agreements with several institutions of higher learning to expand international educational cooperation through exchanges of students, faculty, and administrators. Programs are available in over twenty countries around the world.

International Research and Exchanges Board

Through IREX, graduate students and faculty may participate in research-related exchanges in the newly independent states of the former Soviet Union.

Bahamian Field Station

By agreement with the Bahamian Field Station, students of biological sciences may participate in field work on San Salvador Island in the Bahamas.

Summer Internships

In conjunction with the German Academic Exchange Service and the American-Scandinavian Foundation, MTU coordinates summer internships that allow students to work in their fields in Germany and in the Scandinavian countries.

International Scholarships, Fellowships, and Research Funding

CIE provides detailed information on the many types of funding available to all students and faculty who wish to pursue their learning abroad.

Off-Campus Programs - Sponsored Educational Programs Office

Michigan Tech promotes knowledge enrichment and personal development through credit courses and

programs, as well as noncredit courses and seminars offered via distance delivery technologies to individuals and corporate sponsors. The Office of Extended University Programs facilitates the organization and delivery of MTU distance learning programs. Currently all distance programs are site specific. The BSE, MSME, and PhD degree programs are available through corporate sponsorship and at select community colleges within Michigan. Delivery methods include satellite, videotape, videoconferencing, and video streaming.

Michigan Tech is linked with several consortia that provide distance education courses to major industries and to students throughout the world. These include the Association for Media-Based Continuing Education for Engineers (AMCEE), National Technological University (NTU), and the Michigan Virtual University.

For more information contact Sponsored Educational Programs at 1.800.405.4678 or visit us at http://www.admin.mtu.edu/disted. E-mail inquiries should be made to disted@mtu.edu.

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Last Updated:7 July 2004

Distance Learning Graduate Programs

Two options exist for pursuing a master's degree through distance learning; a coursework option and a partnered research option. You should select the option that best fits your goals and situation. The partnered research program is the only option available at the doctoral level. Distance learning delivery is only available to individuals living in the north central region or to employees of corporations headquartered in the north central region. An exception is made for members of the armed forces who may participate in the program from any location in the world if they previously met the north central region residency requirement. The North Central region for NCA accreditation includes the following states: Arkansas, Arizona, Colorado, Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, Oklahoma, New Mexico, South Dakota, Wisconsin, West Virginia, and Wyoming. Certain other enrollment limits may apply. Students who apply and are accepted as Michigan Tech graduate students and later want to change status from an on-campus to a DL student or vice-versa may be required to reapply to the degree program.

In addition, Michigan Tech is linked with several consortia that provide distance education courses to major industries and to students throughout the world. These include the Association for Media-Based Continuing Education for Engineers (AMCEE), National Technological University (NTU), and the Michigan Virtual University.

For more information, contact Sponsored EducationalPrograms at 1-800-405-4678 or visit us at http://www.admin.mtu.edu/sep. E-mail inquiries should be made to disted@mtu.edu.

Coursework Master's Degrees **(Provisional—awaiting University Senate approval)**

The coursework option (Plan D) for the Master's Degree meets the needs of individuals who for a variety of reasons might not have the opportunity for corporate sponsorship in a partnered program or interest in a research degree. Individuals who pursue a Plan D program are required to satisfactorily complete 30 credits of specified coursework. At least 1/2 of the credits in the coursework only program must be taken from Michigan Tech. Regularly scheduled courses, taught by Michigan Tech faculty, and delivered at a distance are considered to be "in residence" for the purpose of Plan D. Satisfactory completion requires that a student must receive a grade of "B" or better in every course of the degree program. All application and admission criteria and time limits for completion remain the same as for any graduate program at MTU. These are available in the Graduate Bulletin, http://www.admin.mtu.edu/rgs/Bulletin/gradweb/index.html.

The costs associated with distance learning delivery result in higher fees than for on campus master's degree programs. At present MTU offers only Mechanical Engineering and Electrical Engineering (Power emphasis) master's coursework degrees through distance learning. Coursework master's may also be offered with cooperating partners under the auspices of a partnered agreement, as explained below for research degrees.

Partnered Research Master's and PhD Degrees

This option is for research degrees offered under the auspices of a contractual agreement with a cooperating partner in industry, government, or the non-profit sector.

The heart of this option lies not only in the student-advisor mentoring relationship, but also in opportunities for students to work together and for the advisory committee to meet with the student. Distance learning research-based degrees at both the master's and doctoral level are designed to ensure fidelity to these relationships and thus maintain the high standards of MTU graduate degrees. At the same time, we recognize the need for flexibility in providing access to our programs. Thus, although our partnered programs involve some time in residency on the MTU campus in Houghton, that time may be accumulated in a variety of ways. The public defense of theses, dissertations, reports, and projects must occur on campus. Currently all programs require the coursework final examination and oral defense to occur on campus. Students in partnered programs may take up to 1/2 of the required coursework credits from other universities provided the course plan is approved in advance of course registration.

Master's Partnered Option

A distance option is available in some programs for students who are employees of cooperating industrial, government, and organization partners and who meet admissions requirements. Each agreement is site- and program-specific, particularly with regard to how the student-advisor relationship will be maintained, but all generally involve the following conditions:

- approval of the site facilities (laboratories, libraries, computer facilities, etc. as appropriate to the program)
- appointment of a qualified on-site co-advisor to adjunct graduate faculty status
- periodic visits to the MTU campus in Houghton at specific mileposts in the degree, e.g., orientation; proposal defense; study weeks; thesis, project, or coursework defense

Agreements may also include additional requirements, e.g., MTU faculty time on site with the student, summer school residency, video-conferences for periodic reviews, etc. Master's students should expect to spend a minimum of 3 weeks in residence on the MTU campus in Houghton during the course of their degree. Residency length may vary by program. All residency weeks must be documented on the M-OC form.

Doctoral Partnered Programs

A distance option is available in some programs for students who have already earned a master's degree; who are employees of cooperating industrial, government, and organization partners; and who meet admissions requirements. Each agreement is site and program specific, particularly with regard to how the student-advisor relationship will be maintained, but all generally involve the following conditions:

- approval of the site facilities (laboratories, libraries, computer facilities, etc. as appropriate to the program)
- appointment of a qualified on-site co-advisor to adjunct graduate faculty status
- all degree exams (qualifiers, preliminaries, comprehensives, and dissertation defense and oral examination)

are conducted on the MTU campus. No exception to this requirement may be granted. Repeated exams, if required, must also be taken on campus. Doctoral students are expected to spend a period of residency on campus at the time of each exam as detailed in specific program guidelines (generally 1-2 weeks). These visits must be documented on the D-OC form.

- additional periodic visits to the MTU campus in Houghton.

- MTU advisor will be supported by the partner and will spend substantive time on site at the student's research facility

- some remote programs require one or more semesters in residence on the MTU campus, which can be met by enrollment in the full (12-week) summer term.

Doctoral students should expect to spend a minimum of 6 weeks in residence on the MTU campus in Houghton during the course of their degree. Residency length may vary by program.

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Last Updated:24 June 2004

Non-Degree Graduate Status

Students who have completed a bachelor's degree or the equivalent may wish to take courses for graduate credit without enrolling in a specific degree program. This might, for instance, be to meet employer or certification requirements, to facilitate a research exchange, or to transfer graduate credits to another university. This option might also be used by students who are in the process of applying for a degree program but who wish to begin taking courses immediately.

Conditions of Non-Degree Graduate (NDG) Admission:

- Graduate-level courses will appear on the transcript as, and be transferable as, graduate level credits.
- Students who are not concerned about graduate standing may apply through the undergraduate admissions office and will be charged at the undergraduate rate.
- NDG students are not eligible for financial assistance for coursework taken as a non-degree student.
- While no TOEFL or GRE scores are required for admission as a NDG, students whose academic or language proficiency is not sufficient for acceptable participation in the chosen class will be advised to register for a lower-level class and/or will be expected to take language courses concurrent with the NDG enrollment.
- Admission to a regular graduate program will require submission of a standard application for admission; no additional application fee will be required.
- Some programs limit the number of NDG credits that may be applied toward a graduate degree and thus, not all credits taken as a NDG student will necessarily be applicable to, or counted toward, a graduate degree(s).
- The department will evaluate for inclusion on the degree schedule any NDG credits the student wishes to have count toward a degree.

Admission Process for Non-Degree Seeking Students (Graduate Status)

Applications for admission as a non-degree student with graduate standing are reviewed by the Graduate School (GSO). Departmental approval is not required as it is for applications to a graduate program, though the GSO may request review by the academic department. A completed application for non-degree graduate status includes:

- Application Form
- Application Fee
- Proof of Bachelor's Degree

If you are participating in an exchange program or other formal program such as an employment training series, a statement explaining your situation will assist us in making certain your coursework at MTU meets your requirements and expectations. Distance Learning students should submit application materials to Sponsored Educational Programs.

Academic History

A transcript documenting receipt of a bachelor's degree or equivalent must be attached to this application. Alternatively, a letter certifying receipt of the degree or a diploma will be considered proof of a bachelor's degree. Photocopies are acceptable. MTU grads need not supply a transcript.

Transcript

Courses taken prior to approval of the application may in some cases be used toward a graduate degree at Michigan Tech if applicable. However, these courses will be recorded as undergraduate credits and will not transfer as graduate courses without authorization and associated tuition adjustments.

Cost of Study

Prior to formal approval of the application for non-degree graduate status, course registration will be billed at the **undergraduate** rate. Once NDG status has been approved, **all** credits taken will be billed at the graduate tuition rate.

Tuition for 2004-2005 is $432 per graduate credit hour. All graduate students, regardless of residency, will pay the same tuition, except that Distance Learning students will be billed at a different rate.

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Last Updated:28 June 2004

Degree Requirements—General

Attainment of a graduate degree demonstrates that a person has reached prescribed milestones in the pursuit of knowledge beyond the bachelor's degree. Satisfactory completion of the master's and/or doctoral degree is characterized by a greater level of independent research compared to the undergraduate educational experience. In an age of accelerating development, it is important that degree requirements be completed in a timely manner so the student remains abreast of, and contributes to, new knowledge.

Credit Requirements

Thirty credits beyond the bachelor's degree are required for most master's programs, though some require up to 32 credits. The distribution of credits among coursework, practicum, and research credits will vary depending on the master's plan chosen. For details, see the degree requirements for individual programs.

Thirty credits beyond the master's degree are required for the PhD.

Audit and pass/fail courses may not be used toward the total number of credits required. The only non-graded credits that count toward a degree are research credits, which are graded satisfactory/ unsatisfactory.

Credit Definition

Academic advancement by students is measured in terms of semester-hour credits or simply credits. One credit should average 3½ hours of a student's time per week for one semester. Depending on course requirements, these3 ½ hours may all be spent in the classroom or laboratory or may be divided between home study and class or laboratory attendance. One hour in class and 2½ hours in individual study is a typical division. Students should multiply the course credits by 3.5 to determine the demands the course will place on their time during a typical week of the semester. For example, in MA5524 Functional Analysis (a 3-credit course with no lab), one would expect to spend 10½ hours per week on the course (3 hours in class and 7½ hours out of class).

Graduate Credit Courses

No course numbered below 3000 can be counted toward a graduate degree, with the exception that Peace Corps Master's International students may use 2 credits of language courses below the 3000 level. Courses numbered in the 3000 and 4000 series are intended primarily for upper-division undergraduate students but are available to graduate students for graduate credit with their department's approval, indicated by signature on the degree schedule. Although courses numbered in the 5000 series are intended primarily for graduate students, they are also available to qualified senior students. Courses numbered in the 6000 series are available only to advanced graduate students.

Residency Requirements—Academic

Master's students must complete a minimum of two-thirds of the course work in residence at MTU. Provisional language, when approved, will change this to one-half. The thesis credits must be supervised by MTU graduate faculty.

Doctoral students must spend at least four semesters on campus at MTU beyond attainment of a bachelor's degree, or two semesters beyond attainment of a master's degree, in a formal program of study and research under direct supervision of a given program/department.

Different residency requirements apply to partnered off-campus programs.

Time Limits

All work for the master's degree must be completed within five calendar years of the first enrollment in the degree program. All work for the PhD must be completed within eight calendar years of the first enrollment in the degree program. Requests for extension must be approved by the advisor, department chair, and Dean of the Graduate School.

Degree-Specific Requirements

The links below provide degree-specific requirements and a timeline for completion of each degree. Please also check with your department, however, since requirements beyond the minimum may vary from department to department or program to program.

- Master of Engineering
- Master of Science
- Master's Path (for students who have completed a three-year bachelor's outside the US)
- Doctor of Philosophy

Last Updated:1 July 2004

Master of Engineering Degree

The Master of Engineering degree is intended to be a terminal professional degree where the candidate demonstrates advanced ability in course work and with advanced engineering design project, or practicum. The master of engineering student must do the following:

- file a preliminary Degree Schedule form
- choose an advisor and advisory committee
- complete a written and oral report on a practicum
- file a final Degree Schedule form
- fulfill the campus residency requirement
- finish the degree within the prescribed time limit
- file a successful practicum report form.
- Forms on-line at http://www.admin.mtu.edu/rgs/graduate/trackingforms.html

In addition to the Graduate School requirements, which are described below, individual departments may have higher standards. Students are expected to know their department's requirements. Currently, there are master of engineering degrees in civil engineering and in environmental engineering, as well as a non-departmental master of engineering administered through the office of the dean of engineering.

Grades—All grades must be B (3.0 on a 4.0 scale) or better in the major subject area. The department chair can approve no more than 6 credits of BC (2.5) or C (2.0) in a cognate department. The student must maintain a cumulative GPA of 3.0 or better in all courses taken as a graduate student.

Campus Residency Requirement—A minimum of one-half of the course work credits must be taken in residence at MTU.

Time Limit—All work required for the Master of Engineering degree must be completed within five calendar years of the first enrollment in the degree program.

Advisor

Initially the advisor may be the department's graduate coordinator, but as soon as possible, and by the end of the first semester in residence, a permanent advisor should be chosen. This MTU graduate faculty member advises the student on course selection and choice of practicum experience. The advisor is an important factor in the graduate student's timely and successful completion of his or her program of study.

Advisory Committee

The Advisory Committee is nominated by the chair of the major department, usually in consultation with the advisor, and approved by the College of Engineering. At least two of the three examiners must be members of the graduate faculty and one of the graduate faculty members must be from outside the major

department.

Degree Schedule

The Proposed Degree Schedule and Work Plan form (MEng1), available from the College of Engineering and on the Grad School "forms" web page, is used to list all the courses that the student will use for the Master of Engineering degree. The completed form must be approved by the student's advisor and department, the College of Engineering, and the Graduate School office during the first semester of enrollment.

The Final Degree Schedule form (MEng2), available from the College of Engineering and on the Grad School "forms" web page, must be filed during the first week of the second term in residence. It lists all the courses applied to the Master of Engineering degree, gives the advisory committee membership, provides an abstract of the practicum, and is endorsed by the student, the advisor, the department chair, the associate dean of engineering, and the dean of the Graduate School.

Changes in the Final Degree Schedule—Any changes must be approved. The chair of the major department must send a memo to the dean of the Graduate School.

Course Work

Courses taken must meet certain requirements, described below, and they must be approved by the advisor and the department chair. Courses taken while an undergraduate at Michigan Tech may be used for graduate degree credits if the Senior Rule form (available from the department secretary) has been appropriately filed. Courses taken while a post-grad may be used on the Degree Schedule with departmental approval. The minimum requirements are as follows:

Course work	26–28 credits
Practicum	2–4 credits
Total (minimum)	30 credits
Distribution of course work credit	
5000–6000 series (minimum)	12 credits
3000–4000 level (maximum)	14 credits

Master of Engineering Practicum—The practicum is an advanced independent study for students in the master of engineering program. The student in consultation with the advisor develops and executes a project demonstrating capabilities in problem solving, communication, and decision making. The practicum can be completed on campus or at the site of a Michigan Tech corporate partner. Students must submit a written report and make an oral presentation related to their project to their Advisory Committee.

The successful on-campus oral presentation will be evaluated by the committee on the MEng3 form, Report on Practicum.

Timeline to Degree—Master of Engineering

First reconcile this suggested chronology with your department's requirements. The sequence may not be the same as written here. When you consult your advisor for your degree schedule, take this timeline to

the meeting so you and your advisor are in agreement on your plans.

The degree will be granted at the end of the semester in which all courses have been satisfactorily completed and forms MEng1, MEng2, and MEng3 have been submitted and approved.

Date	Completed	
		Enrolling for the first time— If you do not have a faculty advisor to help you choose courses, consult with Dr. Sheryl Sorby, Associate Dean of Engineering.
		Make sure the GSO has official final transcripts showing proof of your previous degrees if they are not from Michigan Tech.
		Fill out the Patent, Research, and Proprietary Rights form in your department office.
		If your research involves animal subjects, human subjects, or recombinant DNA, you just obtain approval from the appropriate administrative review committee (s). Applications for approval(s) may be found on the Research Website. If you need further assistance, please contact the Research Compliance Administrator by phone 906.487.3403.
		Inform the Office of Student Records and Registration of any changes in your status, address, student identification number, expected graduation date, etc.
		MEng1, Proposed Degree Schedule and Work Plan***—**This form is due early in the first semester and is prepared in cooperation with your advisor. It establishes preliminary plans for your course work and nominates a committee to complete your advising and practicum report.
		MEng2, Final Degree Schedule—This form is due in the first week of your second term of enrollment. After you submit your Final Degree Schedule, you will receive a signed copy in return that includes Graduate School forms to help you finish your degree. All your grades in the courses used must be B or better in your major subject, and your cumulative GPA must be 3.0 or higher.
		Set up an appointment with your committee to report on your practicum.
		MEng3, Report on Practicum—This form is due when you have completed your practicum, including the oral presentation to your committee.
		The Goal: Graduation—no more than five calendar years after you started graduate school. Your graduation date is the end of the term in which you complete all degree requirements. Your transcript will not indicate your degree until about four weeks after the next term begins. Your diploma will be mailed to you about 90 days after the term ends if you have completed and submitted your Life After MTU form. You may request a degree certification letter as soon as your degree is completed.
* All these forms can be sent to the GSO by your department's graduate secretary via campus mail. Copies of signed forms will be returned to you and the department. Be sure to keep a file of your paperwork.		

Master of Science Degree

The master's degree demonstrates advanced ability, usually in both course work and research. The master's student must complete the following:

- choose an advisor
- file a Degree Schedule form (M4)
- complete one of three option plans: Note that plans B, C and/or D are not offered by all departments.

  plan A—thesis and course work
  plan B—report and course work*
  plan C—course work only*
  plan D—off-campus / distance* See additional details about program requirements here.

- complete an oral examination
- fulfill the campus residency requirement
  (Distance Learning students must document time on campus.)
- finish the degree within the prescribed time limit
- submit an approved document in plans A & B
- Forms are available on-line at http://www.admin.mtu.edu/rgs/graduate/trackingforms.html

In addition to the Graduate School requirements, which are described below, individual departments may have higher standards. Students are expected to know their department's requirements.

Master's Path Program—See additional details about program requirements here.

Grades—All grades must be B (3.0 on a 4.0 scale) or better in the major subject area. The department chair can approve no more than 6 credits of BC (2.5) or C (2.0) in a cognate department. The student must maintain a cumulative grade point average of 3.0 or better in all courses taken as a graduate student in order to remain in good standing.

Campus Residency Requirement—A minimum of one-half (provisional) of the course work credits, i.e., non-research credits, must be taken in residence at MTU. Off-campus programs have comparable site-specific requirements.

Time Limit—All work required for the master of science degree must be completed within five calendar years of the first enrollment in the degree program.

Advisor

Initially the advisor may be the department's graduate coordinator, but as soon as possible, and no later than the end of the second term in residence, a permanent advisor should be chosen. This MTU graduate faculty member advises the student on course selection and choice of research topic and supervises the research experience. The advisor is an important factor in the graduate student's timely and successful completion of the program of study.

Degree Schedule

The Degree Schedule form (M4) is used to list all the courses that are to be applied to the degree requirements, including those yet to be taken. The completed M4 should be submitted in the term prior to the defense term. It must be approved before the defense is scheduled.

The courses listed on the M4 must meet certain requirements, described in each option below, and they must be approved by the advisor and the department chair. Courses taken while an undergraduate at MTU may be used for graduate degree credits if the Senior Rule form (available from the department secretary) has been appropriately filed. Courses taken while a post-grad may be used on the Degree Schedule with departmental approval.

Changes in the Degree Schedule—Any changes must be approved. The chair of the major department must send a memo to the dean of the Graduate School requesting changes.

Options

For plans A or B, the scope of the research topic for the thesis or independent project should be defined in such a way that a full-time student could complete the requirements for a master's degree in twelve months or three semesters following the completion of course work by regularly scheduling graduate research credits. The thesis or report must be prepared in a style appropriate to the discipline. Following the defense the corrected Plan A thesis, as approved by the committee, is submitted to the Graduate School office as a .pdf file on CD for printing and binding. A single paper copy of the corrected and approved Plan B report is submitted to the Graduate School. The J. Robert Van Pelt Library archives all master's reports and theses. Plan C coursework papers are not submitted to the Graduate School and are not retained by the Van Pelt Library.

Plan A: Thesis Option—This plan requires a research thesis prepared under the supervision of the advisor. The thesis describes a research investigation and its results. The minimum requirements are as follows:

Course work (minimum)	20 credits
Thesis research	6–10 credits
Total (minimum)	30 credits
Distribution of course work credit	
5000–6000 series (minimum)	12 credits
3000–4000 level (maximum)	12 credits

Plan B: Report Option (Not offered by all departments)—This plan requires a report describing the results of

an independent study project. Of the minimum total of 30 credits, at least 24 must be earned in course work other than the project.

Course work	24 credits
Report	2–6 credits
Total (minimum)	30 credits
Distribution of course work credit	
5000–6000 series (minimum)	12 credits
3000–4000 level (maximum)	12 credits

Plan C: Course Work Option (Not offered by all departments)—This plan requires the minimum 30 credits be earned through course work.

Distribution of course work credit	
5000–6000 series (minimum)	18 credits
3000–4000 level (maximum)	12 credits

Oral Examination

PROVISIONAL LANGUAGE CHANGE – SEE TEXT BELOW

Examination by and approval of a faculty committee is required for awarding a master's degree. This committee will examine the general professional knowledge, course work, and (in plans A and B) the written documents of each master's candidate. The defense is scheduled and the committee nominated via the Scheduling of Final Oral Examination form (M5), which must be in the Graduate School office two weeks prior to the defense date.

Examination Committee—Must be nominated by the chair of the major department, usually in consultation with the advisor, and approved by the dean of the Graduate School. At least three of the four examiners must be members of the graduate faculty and one of the graduate faculty must be from outside the major department.

Recommendations, approved by the Dean of the Graduate School 17 May 2004, and subject to University Senate agreement would make the following changes:

- eliminate the general requirement for an oral examination for Plan C master's students. Each department will establish their own policy regarding Plan C oral examinations; and
- change the general policy regarding make-up of the Plan C examination committee for those departments that opt to keep the oral examination, by removing the requirement that at least one member of the committee be external to the department.

Thesis or Report

Distribute copies to the Examining Committee at least two weeks prior to the examination date.

Defense—Must be scheduled and the committee nominated via the Scheduling of Final Oral Examination form (M5). The committee's written evaluation must be filed on the Report on Oral Examination form (M6). The student must be enrolled to defend.

Timeline to Degree

First reconcile this suggested chronology with your department's requirements. The sequence may not be the same as written here. When you consult your advisor for your degree schedule, take this timeline to the meeting so you and your advisor are in agreement on your plans.

Date	Completed	
		Enrolling for the first time—Get into course work under the direction of your departmental graduate coordinator.
		Make sure the GSO has official final transcripts showing proof of your previous degrees (if they are not from MTU).
		Fill out Patent, Research, and Proprietary Rights form in your department office.
		Get a Social Security Number if you will be getting a GRA or GTA, or otherwise working.
		Start looking for a **faculty advisor** for research projects; she/he should be chosen **by the end of the second term** in residence—your department will have its own way of handling this.
		If your research involves animal subjects, human subjects, or recombinant DNA, you must obtain approval from the appropriate administrative review committee(s). Applications for approval(s) may be found on the Research web site. If you need further assistance, please contact the Research Compliance Administrator by phone 906-487-3403.
		Inform the Office of Student Records and Registration of any changes in your status, address, student identification number, expected graduation date, etc.
		During the semester prior to your defense (or earlier), complete the **M4, Degree Schedule*** in consultation with your advisor—if there are problems, you have a term in which to correct them. Because it is approved by your advisor/coordinator and your department chair, any changes must also have their approval. If credit transfers are necessary, use the Transfer Credits form.
		At least two weeks prior to your defense, complete **M5, Schedule of Oral Examination**, in consultation with your whole committee. This names your four-member examining committee and schedules your oral examination. (Check departmental policy on choosing your committee.)
		At least two weeks prior to your defense, distribute readable copies of the thesis/ report to the examining committee.

		Oral Examination—Faculty and students will be invited to hear at least your presentation. It is wise to attend a few of these early in your tenure at Tech. Some departments also require a couple of preliminary seminars during your research. The examination for the course work option varies with the programs allowing this option. Take your **M6, Report on Oral Examination**, to the exam for signatures. (Your advisor/department may retain your M6 for up to one week following the defense while you make corrections; research grades are not changed until the M6 is in the GSO.
		Submission of final document (Plan A & B)—Make corrections as indicated by your committee. Get the new original signed. Plan B report: 1 copy to the GSO, in a sturdy binder suitable for archiving in the Library. (Your advisor/department may want more copies.) Plan A thesis: The Graduate School requires the approved copy converted to .pdf and saved on CD. Instructions for payment and submissions are on the invoice and Heckman bindery form you will receive when you defend.
		The Goal: Graduation—no more than five calendar years after you started Graduate School. When you have completed your degree requirements, you can usually receive a certification letter immediately. Your transcript will indicate degree granted by the 4th week of the next semester. Your diploma will be mailed to you about 90 days after the term ends. Leave a valid address with the Graduate School.
		Be sure the GSO and your advisor are aware of your commencement plans at the **beginning** of the commencement semester.
* All these forms can be sent to the GSO by your department's graduate secretary via campus mail. Copies of signed forms will be returned to you and the department. Be sure to keep a file of your paperwork.		

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Last Updated:1 July 2004

Master's Path Program – for students who have completed a three-year bachelor's program outside the US

Background

Some colleges and universities outside the US are moving to a three-year bachelor's degree and a five-year master's degree. After obtaining the three-year degree in their home country, many students would like to go abroad to pursue a high-quality master's degree, gain international experience, and perfect their English. The Michigan Tech Master's Path Program allows students to pursue a master's degree directly, rather than requiring they first complete a bachelor's program at a US institution. The Master's Path Program is offered in twenty-two disciplines in the sciences, engineering, forestry, communications, and social sciences.

Application Process

Students apply for graduate admission using the international forms, specifying "Master's Path." Applications must be approved by both the department chair and by the Graduate School.

- Suggested minimum admissions criteria
- Completion of recognized three-year degree in appropriate area
- Statement of purpose, application fee, official transcripts
- Three letters of reference
- Adequate academic achievement in pursuit of the three-year degree
- GRE/general test results, if required by department,
- Proof of English proficiency TOEFL (at least 550 written or 213 computer-based) or ILETS (a score comparable to TOEFL requirements)

Master's Path Curriculum

Students who hold a 4-year bachelor's degree are required to take at least 30 semester credits beyond the bachelor's for their master's degree. Students entering the Master's Path Program with a 3-year bachelor's degree will be required to take additional credits depending on their preparation in the chosen field of study. The transcript of each accepted student is reviewed by the departmental graduate committee, which delineates the specific course requirements needed for completion of the master's degree.

Based on the specific MTU degree program, the student's focus, and the transcript review, a set of bridge courses, required in addition to the 30 credits, is defined. Courses on the student's transcript that have been taken beyond the requirement of their 3-year bachelor's degree may be evaluated for transfer into the master's curriculum. Bridge courses are integrated into the Master's Path curriculum, which is normally completed within 24 months. Students typically will take a mix of graduate and bridge courses during their first one or two semesters. Students in the Master's Path Program may take an hourly, salaried job on campus during their first term of residence, provided it does not slow progress toward their degree. (A limited number of hourly research, teaching, and service jobs are available.) Following the successful completion of their first term, they may, at the discretion of their advisor, be eligible for a research and/or

teaching stipend.

Doctor of Philosophy

The doctor of philosophy degree is a research degree. It is awarded in recognition of demonstrated mastery of subject matter in a chosen field of study and demonstrated competence in the conduct of an individual research investigation that represents a significant contribution to the cumulative knowledge of the field. The program of study and research will be planned and supervised by an Advisory committee. Each candidate's course work and research topic must be approved by the advisory committee as meeting the standards generally associated with the doctoral degree. A minimum of 30 course and/or research credit hours beyond the MS degree (or its equivalent) or a minimum of 60 course and/or research credit hours beyond the bachelor's degree is required. The doctoral student must complete the following:

- If you are a Tech master's student applying to a doctoral program, and substitution of the D1 for a regular application is okay with your department, file an Acceptance into the Doctorate Program form (D1)
- choose an advisory committee and chair and file a Recommend Advisor Committee form (D2)
- file a Preliminary Program of Study form (D3)
- complete the comprehensive exam and file a report on the Comprehensive Examination form (D4)
- file a Degree Schedule form (D5)
- develop and defend a dissertation plan and file an Approval of Dissertation Proposal form (D6)
- file a Scheduling of Final Oral Examination form (D7) and defend an approved dissertation in an oral exam
- file a Report on the Final Examination form (D8)
- fulfill the campus residency requirement
- submit the corrected, approved dissertation and associated forms
- finish the degree within the prescribed time limit
- Forms are available on-line at http://www.admin.mtu.edu/rgs/graduate/trackingforms.html

In addition to the Graduate School requirements, which are described below, individual departments may have higher standards. Students are expected to know their department's requirements.

Grades—All grades must be B (3.0 on a 4.0 scale) or better in the major subject area. The department chair can approve no more than 6 credits of BC (2.5) or C (2.0) in a cognate department. The student must maintain a cumulative grade point average of 3.0 or better to remain in good standing.

Campus Residency Requirement—Doctoral students must spend at least four semesters, not necessarily continuous, which can include summer terms, on campus at MTU beyond attainment of a bachelor's degree or two semesters beyond attainment of a master's degree in a formal program of study and research under direct supervision of their major advisor. In special preapproved instances, this residency requirement may be waived.

Time Limit—Comprehensive examinations must be taken within five years of entry and two terms before the final oral defense, and all requirements must be completed within eight years from the time of a student's first enrollment in the doctoral program.

Modern Language Requirement—There is no University-wide language requirement for doctoral degrees. Individual departments or programs may require a foreign language. Each academic department or program is responsible for establishing standards and examination procedures where a foreign language is required. Doctoral students should consult with their advisory committee concerning departmental regulations.

Advisory Committee

During the student's first semester of residence, an Advisory Committee will be chosen to assume responsibility for the direction of the student's educational program and to hold meetings as needed to fulfill this responsibility. The committee, consisting of at least three members of the graduate faculty with one member designated as chair, will be appointed by the chair of the major department or program with the approval of the dean of the Graduate School and filed on the D2 form. This committee, with the addition of a fourth, external member, will often become the Examining Committee (see "Oral Examination" below).

Preliminary Program of Study—Initially the Advisory Committee will meet with the student and prepare a program of course study and research work that will lead to the doctoral degree. This program must be filed in the Graduate School office during the second term of residence on the Preliminary Program of Study form (D3). Subsequent changes in the program can be made by the advisory committee and will appear on the final Degree Schedule form (D5). The Graduate School office must be notified in writing of any significant changes affecting the time required for obtaining the degree.

Proficiency Examinations—Exams may be scheduled as necessary by the department or program to either plan a student's study program or determine the advisability of a student's continuing in the doctoral program.

Comprehensive Examination

A comprehensive examination will be given to determine the general knowledge appropriate to the student's program and the student's ability to use this knowledge. This examination will be a written examination, although it may be oral in part if recommended by the Advisory Committee, but it must be given no later than five years after enrollment. It is recommended that the comprehensive exam be given after about two years of doctoral study and following completion of all course work required by the Advisory Committee. The examination will be given after the applicant has completed any modern language requirement and at least two terms prior to scheduling the final oral examination.

The examination will be prepared and administered by the major department or program with the cooperation of the Advisory Committee. Satisfactory performance on the comprehensive examination will be regarded as an indication that no additional formal course work is needed, although the student may take additional course work. Any member of the graduate faculty may attend the oral examination as an observer.

Final Degree Schedule—Upon satisfactory completion of the comprehensive examination, a final Degree Schedule form (D5) must be filed in the Graduate School office and approved prior to scheduling a final

oral examination. This Degree Schedule should include all course work taken since the last previous degree to be applied to the doctoral degree. It must be approved by the Advisory Committee as meeting the standards associated with the doctor of philosophy degree.

Dissertation

The research study undertaken as part of the doctoral degree program will be presented in the form of a dissertation that can be made a permanent acquisition of the library, along with an expanded abstract, not exceeding 350 words. Any classified or proprietary material that cannot be made available to the public is not acceptable as a dissertation. Completing the dissertation includes approval of the dissertation proposal, preparing the dissertation according to guidelines, and filing the completed (and successfully defended) dissertation.

The dissertation will be written and prepared under the supervision of the chair of the Advisory Committee according to discipline-specific writing requirements. Publication guidelines are found in Publishing Your Dissertation (UMI Dissertations Publishing). The Graduate School Office sends this booklet to students when the final Degree Schedule (D5) has been received. A completed draft of the dissertation must be approved by the Advisory Committee two weeks prior to the final examination.

After the dissertation has been satisfactorily defended, recommended or other appropriate editorial changes in the dissertation should be made with the approval of the Advisory Committee chair.

The appropriate number of copies of the corrected version of the dissertation, one with the original signatures, must be submitted to the Graduate School Office. Two will be bound for placement in the J. R. Van Pelt Library. The third, accompanied by the required form, attachments, and payment, is for submission to UMI Dissertations Publishing for microfilming and inclusion in Dissertation Abstracts International. If the student prepares appropriately, the UMI submission can be done electronically.

Oral Examination

At a public final oral examination, primarily concerning the research and doctoral dissertation, the candidate should justify the validity of the methods and conclusions contained in the dissertation and should be familiar with the import of the particular investigations reported in the dissertation relative to the larger body of existing knowledge. The examination may be given any time after a period of two academic terms following the successful completion of the comprehensive examination and upon completion of the dissertation in a satisfactory form. The student’s examination results must be reported to the Graduate School office on the D8.

The Examining Committee will be appointed by the dean of the Graduate School in consultation with the department chair. The committee will consist of at least four members of the graduate faculty. At least one of these will be from a cognate department or program. For interdisciplinary programs, “cognate” should be interpreted to mean a department other than those departments represented in the program or area of concentration. A person external to MTU may be appointed as an ad hoc member of the Graduate Faculty to serve as the external (cognate) examiner. Additional external examiners who are not graduate faculty may be appointed by a nomination memo to, and approval by, the dean.

The examination will be scheduled, by filing the Scheduling of Final Oral Examination form (D7) with the dean of the Graduate School, in consultation with the chair of the Advisory Committee. The date of the examination must be at least two weeks following the approval of the completed draft of the dissertation by

the Advisory Committee. A copy of the completed dissertation draft must accompany the D7 when it is filed in the Graduate School office. Copies of the completed draft must be distributed to any new members of the Examining Committee at least two weeks prior to the scheduled examination date.

Timeline to Degree—PhD

First reconcile this suggested chronology with your department's requirements. The sequence may not be the same as written here. Take this timeline to a meeting with your advisory committee to make sure your goals are consistent with their expectations.

Date	Completed	
During the first semester of residence or soon thereafter		
		[For internal applications from Master's program only] D1, Acceptance into the Doctoral Program*—completed by your department's graduate program coordinator, perhaps after a preliminary exam.
		Make sure the GSO has *official* final transcripts showing proof of your previous degrees (if not from MTU).
		Get a Social Security Number if you will be a GRA or GTA, or otherwise working.
		Fill out a Patent, Research, and Proprietary Rights form in your department office.
		Inform the Office of Student Records and Registration of any changes in your status, address, student identification number, etc.
During the second semester of residence		
		D2, Recommended Advisory Committee—Your department chair/graduate program coordinator appoints a three-member advisory committee of graduate faculty members to meet with you and prepare a program of courses and research work. Any changes in the membership of this committee should be approved by the department chair and reported to the GSO. Arrange a meeting with your committee to work on D3 and plan your degree path.
		D3, Preliminary Program of Study—Traditionally, this work contract is a list of all courses you have completed since you received your BS and any additional courses your committee says you should take. Subsequent changes in course selections or anticipated completion date can be made on the D5. If credit transfers are necessary, use the Transfer Credits form.
		Proficiency Examination—if required by department
		Modern Language Requirements—if required by department
As work goes on		
		If your research involves animal subjects, human subjects, or recombinant DNA you must obtain approval from the appropriate administrative review committee (s). Applications for approval(s) may be found on the Research web site. If you need further assistance, please contact the Research Compliance Administrator by phone 906-487-3403.

		At least 2 semesters prior to scheduling the final oral examination and no more than five years after beginning your doctoral program, you will be given a written comprehensive exam (and perhaps an oral exam) after you have completed any modern language requirement. Satisfactory performance on the comprehensive exam usually indicates that no additional course work is needed, although you have the option of taking more.
		D4, Report on the Comprehensive Examination—Some departments hold this form until the oral section of the exam.
		D5, Degree Schedule—The GSO can start verifying your grades immediately. Your copy will be returned attached to the University Microfilms booklet on preparing your dissertation for publication.
The Dissertation		
		D6, Approval of Dissertation Proposal—This should be a simple statement of your research goal and plan of attack. (This is sometimes the oral part of the comprehensive exam.)
		At least 6 weeks prior to your defense, send the dissertation draft to your advisory (three-member) committee.
		D7, Scheduling of Dissertation Defense—due in the GSO with a copy of your best dissertation draft at least two weeks before the defense date but after the examining committee has approved your draft and signed the back of the D7. The examining (defense) committee must be comprised of at least four graduate faculty members, including at least one from a cognate department. Non-MTU members of your committee must be preapproved by the dean of the Graduate School. Your copy of the signed form will be returned with instructions on how to complete your degree.
		Dissertation Defense—Take your **D8, Report on Dissertation Defense**, to the defense for signatures. Your advisor/department may hold the signed form for up to one week following the defense; research grades will not be changed until this form is in the GSO.
		Submission of Dissertation—After the defense, make corrections as directed and get the new original dissertation signed. Determine whether you are submitting a CD for printing and binding or a fully linked ETD. Convert the file to the appropriate electronic format. If you are NOT submitting an ETD, you will need to print one complete copy for submission to UMI. Read the paperwork attached to your copy of the signed D7 carefully for other details related to completing your degree and submitting your dissertation. Bring your dissertation invoice, UMI dissertation copy unless submitting to UMI electronically, UMI forms, and payment receipt to the GSO. You can usually receive a certification letter immediately if all your degree requirements are complete.
		The Goal: Graduation—no more than eight years after starting the doctoral program. Your transcript will indicate degree granted by the 4th week of the next semester. If you have left a valid address, your diploma will be mailed to you about 90 days after semester end.

		Be sure the GSO and your advisor are aware of your commencement plans at the beginning of the commencement semester.

* All these forms can be sent to the GSO by your department's graduate secretary via campus mail. Copies of signed forms will be returned to you and the department. Be sure to keep a file of your paperwork.

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Research

Familiarize yourself with the research in progress on campus. It is a good idea to attend seminars and thesis defenses in your department and others. Announcements are usually in the campus newspaper or on the Electronic Display System (EDS)—monitors are located throughout campus. The Graduate Student Council e-mails a weekly seminar list to department representatives.

Research and Sponsored Programs

Research and Sponsored Programs' primary mission is to provide service and outreach to MTU's research/sponsored-programs community and external partners. This office supports and assists faculty in the administration of all pre-award sponsored programs aspects, from submission of proposals to receipt of award. They review and submit university proposals to outside funding agencies, and they also review and negotiate grants and contracts received by MTU.

Research Centers and Institutes

Information about the following research centers, institutes, and consortia can be found by following the link above.

- Center for Advanced Manufacturing and Materials Processing (CAMMP)
- Computational Science and Engineering Research Institute (CSERI)
- Institute for Engineering Materials (IEM)
- Institute of Materials Processing (IMP)
- Isle Royal Institute (IRI)
- Keweenaw Research Center (KRC)
- Michigan Tech Transportation Institute (MTTI)
- Power and Energy Research Center (PERC)
- Plant Biotechnology Research Center (PBRC)
- Remote Sensing Institute (RSI)
    - Lake Superior Ecosystem Research Center (LaSER)
- Sustainable Futures Institute (SFI)
    - Product and Process Architecture Alignment Consortium (P2A2 Consortium)

Last Updated:24 June 2004

Academic and Conduct Policies

All members of the University community—students, faculty, staff, and administrative officers—are jointly involved in maintaining a moral and social pattern in keeping with acceptable conduct. Students are expected to exhibit behavior which is indicative of good citizenship and to accept personal responsibility for their conduct that may be incongruent with University community standards. The University reserves the right to discipline any student for violation of any rule, ordinance, or law, or for any conduct damaging to the University, by such means as it considers suitable, including dismissal. Refer to the MTU Student Handbook, Student Rights and Responsibilities document (available at http://www.admin.mtu.edu/dos/rights/), and to documents linked to in the University Policies panel on the Bulletin Table of Contents for more information on disciplinary procedures and specific policies.

Academic Integrity

Academic integrity and honesty are central to a student's education. Ethical conduct in an academic context will be carried forward into a student's professional career. Academic honesty is essential to a community of scholars searching for and learning to seek the truth. Anything less than total commitment to honesty undermines the efforts of the entire academic community. Both students and faculty are responsible for insuring the academic integrity of the University.

In their academic work, students are expected to maintain personal academic integrity; treat all academic exercises as work to be conducted privately, unless otherwise instructed; ask faculty to clarify any aspects of permissible or expected cooperation on any assignment; and report any cheating activity. Please note that use of "scoop" material (old exams) is prohibited unless specifically authorized by the instructor.

Students found guilty of academic dishonesty can receive a sanction ranging from academic integrity warning to expulsion.

Definitions of academic dishonesty, including plagiarism, cheating, fabrication, and facilitating academic dishonesty, can be found in the Academic Integrity Policy booklet. Copies of the policy can be obtained from the Office of Student Affairs and from chairs of academic departments Or at http://www.sas.it.mtu.edu/usenate/propose/02/18-02.htm.

Computer Use Policy

MTU considers access to computer resources to be a privilege granted on the condition that each member of the University Community uses these resources responsibly, and in accord with professional and university standards. This section describes MTU's computer resources, the responsibilities assumed by users of the system, the services provided to support and assist users, and professional and university standards that must be observed.

Use of Computers and Networks

Computer and network facilities are provided for educational, research and administrative use. All access and use of University computing resources and services is presumed to be consistent with University rules and regulations, including University personnel policies, faculty and student codes of conduct and departmental policies and procedures. All use is also subject to the University's Conflict of Interest and Intellectual Property policy and procedure. Use of Michigan Technological University's computers and networks for non-MTU-related business purposes or personal gain without authorization is prohibited.

Individuals who are provided access to MTU's computer facilities and to the campus-wide communication network assume responsibility for appropriate use of these resources. The University expects individuals to be responsible in the use of computers and networks. Those who use wide-area networks (such as the Internet) to communicate with others or to connect to computers at other institutions are expected to abide by the rules of the remote systems and networks as well as those for MTU's systems. In addition to being a violation of University rules, certain computer misconduct is prohibited under Michigan Laws. Act 53 of the Public Acts of 1979 of the State of Michigan (as amended by Act 326 of 1996), states "An act to prohibit access to computers, computer systems, and computer networks for certain fraudulent purposes; to prohibit intentional and unauthorized access, alteration, damage, and destruction of computers, computer systems, computer networks, computer software programs, and data; and to prescribe penalties." In addition, individuals may be held responsible for misuse which occurs by allowing their account to be accessed by a third party.

Individuals must consult their department System Administrator or other designated individual prior to any activity that might threaten the security or performance of University computers and networks. Failure to do so may result in disciplinary action. An individual who may have unintentionally or inadvertently participated in or caused such an event, must notify the System Administrator as soon as possible.

Use of Facilities

MTU computer and network facilities have tangible value. Consequently, attempts to circumvent accounting systems or to use the computer accounts of others will be treated as forms of attempted theft. Refer to http://www.cec.mtu.edu/cacsec/info/cup_approved.html.

FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. Questions about FERPA may be directed to Michigan Technological University, Office of Student Records and Registration, 1400 Townsend Drive, Houghton, MI 49931-1295. The complete policy is available on the Office of Student Records and Registration website at http://www.admin.mtu.edu/em/students/policies/privacy.php

Directory Information—Michigan Technological University, Houghton, Michigan, hereby by public notice, and in order to comply with Section 438 of Public Law 93-380 designates the following student information as public or "directory information": student name, local address, telephone number, hometown, e-mail address, age, major field of study, participation in officially recognized activities and sports, weight and height of athletic team members, attendance dates, degrees and awards received, and most recent previous school attended.

Withholding Disclosure—Currently enrolled students may withhold disclosure of the above information, except name and verification of enrollment status, under the Family Education Rights and Privacy Act of 1974, by submitting written notification to the Office of Student Records and Registration within two weeks of the start of classes for any semester. Such notification will prevent disclosure to non-University personnel.

Records Request—Requests for review of a record other than grades should be made in writing to the Graduate School office.

Intellectual Property and Trademark Licensing

All graduate students are required by Board of Control policy to sign the MTU Proprietary Rights Agreement which establishes the ownership and disposition of intellectual property developed at MTU. The Office of Corporate Services provides assistance to inventors (including graduate student inventors) in the patenting, commercialization, and ultimate licensing of technologies developed at Michigan Tech. This assistance can involve direct support for patenting the technology and identification of potential commercialization partners or licensees. Invention Disclosures on any new technologies should be submitted to Corporate Services for review and possible patent application. In some cases, the rights will be returned to the inventor(s).

Corporate Services handles the licensing of MTU

- technologies (intellectual property)
- logos/trademarks

Corporate Services is also responsible for licensing the use of the MTU logo, which is a registered trademark. Any use of the MTU logo/trademark should first be approved by Corporate Services. The office maintains a list of licensed vendors who are authorized to use and reproduce the logo and a specification sheet of approved MTU logos. The office also handles the approval and licensing of new vendors and logo uses.

Michigan Residency

The governing board at each university in Michigan has the authority to determine residency classification guidelines for admission and tuition purposes. Therefore, residency guidelines may vary from school to school and are independent of guidelines used by other state authorities to determine residency for purposes such as income and property tax liability, driving and voting.

A resident student is defined as a student domiciled in the State of Michigan. Dependent students must

have the same residency as their parents. Independent students must have a physical presence in Michigan. Students who enroll in the University as nonresidents shall be so classified throughout their attendance as students unless residency reclassification is granted. Continuously enrolled nonresident students are not eligible for reclassification.

Students who believe their residency status has changed since their first enrollment may seek an evaluation of their status. Contact the Office of Student Records and Registration—487-2319. MTU alumni who were Michigan residents as undergraduates will retain that residency status for tuition purposes, regardless of current address.

Scientific Misconduct Procedures

A major goal of the University is the furthering of research. The University upholds the scientific method in the conduct of research and is committed to the ethical conduct of research by its faculty, staff, and students.

A requirement of valid experimental observation or theoretical deduction is that the data and/or the conditions of obtaining the data and results can be verified, either by scrutiny of accurate records made at the time of experimentation or by repetition of the experiments or theoretical deduction.

Conduct inconsistent with the ethical conduct of research and which is considered scientific misconduct includes

1. Serious deviation from commonly accepted practices in the scientific community in proposing, conducting or reporting research, such as fabrication, plagiarism, falsification, deception, misrepresentation, or arbitrary selection of data;
2. Plagiarism or other appropriation of the work of another individual and presenting it as if it were one's own or without credit to the originator as is required by commonly accepted practices in the scientific community;
3. Material failure to comply with funding agency (federal, state, or private, and so on,) requirements that uniquely relate to the conduct of the research; and
4. Retaliation against a person who, acting in good faith, has reported or provided information about suspected or alleged misconduct.

Faculty, staff, and students involved in scientific misconduct or false accusations of such conduct may be subject to University disciplinary procedures.

Possible University sanctions may include, but are not limited to, sending a letter of reprimand, setting special conditions on research activities, requiring special certifications or assurances of compliance, dismissal from degree programs and/or termination of employment. Any termination of employment shall occur in a manner consistent with existing applicable University policies on employment practices and academic tenure. The University may impose limitations or special reviews on the research activities or expenditures of affected individuals.

For further information, see appendix F of the Faculty Handbook at http://www.admin.mtu.edu/admin/prov/

facbook/appf/fapp.htm.

Sex Discrimination/Sexual Harassment

Michigan Tech is committed to providing a fair and responsible environment for all of its students. Federal and state law prohibit discrimination in the use of educational facilities because of gender. Discriminatory treatment on the basis of one's status as cited in the Michigan Tech Equal Opportunity statement (see page 27) is prohibited. Title VII of the Civil Rights Act expressly prohibits sexual harassment. According to the MTU Sexual Harassment Policy, unwelcome sexual advances, requests for sexual favors, and other verbal and physical conduct of a sexual nature constitute sexual harassment when submission is either explicitly or implicitly a basis for academic advancement (e.g., for better grades, advancement in an academic program); or when submission or rejection affects the targeted person's employment (e.g., their evaluation, advancement, salary); or when the conduct has the purpose or effect of unreasonably interfering with the targeted person's work performance or learning environment; or when it creates an intimidating, hostile, or offensive work, academic, or residential living environment. For information on the University's sexual discrimination policies, see the MTU Student Handbook, "Rules" section (Code of Conduct, Sexual Harassment, Sexual Misconduct) or contact the Office of Affirmative Programs—487-3310.

MTU Policy on Sex Discrimination/Sexual Harassment
MTU Policy on Discrimination/Harassment
MTU Complaint Procedures

See also Section G (page 23) of the Annual Crime Report for discussion of MTU's sexual misconduct policies.

Substance Abuse

The University encourages and promotes an environment where healthy life-style choices can be made every day by the students, faculty, and staff. Students may take advantage of the substance abuse assessment and counseling available to them through Counseling Services. MTU is committed to following the guidelines of the Drug-Free Schools and Community Act of 1988. The Drug and Alcohol Policy may be found at.

MTU recognizes that substance abuse has a detrimental effect on the University's goals and objectives. It affects the intellectual, social, physical, and moral growth and development of the individual and the campus community. To reduce the effects that substance abuse promotes, Michigan Tech expects each person to accept the responsibility for their own choices and behavior. The University will intervene in any substance abuse-related behaviors that have a negative effect on any segment of the University community or violate any city, state, or federal law. For more explicit information, refer to the brochure on Policy and Procedure Concerning Drugs and Alcohol, or the MTU Student Handbook.

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Registration, Enrollment, & Full-Time Status

There is a difference between registration and enrollment. When you sign up for particular courses, you are **registering**. After you register you will be charged tuition and fees. When you pay those tuition and fees, you have validated your **enrollment**.

VALIDATING YOUR ENROLLMENT IS REQUIRED, NECESSARY, & ESSENTIAL EVERY TERM YOU REGISTER FOR COURSES, INCLUDING CONTINUOUS ENROLLMENT OR CO-OP. **THIS IS YOUR RESPONSIBILITY!**

• If you don't receive a bill in the mail, you must obtain a copy at the Office of Student Records and Registration, or on the web at http://www.admin.mtu.edu/acct/ [click Student On-line Bill].
• You must sign and return your bill even if you have a zero ($0.00) or credit balance.
• If you do not validate your enrollment (process your bill) by the due date, you will be assessed a late fee of $50. If your bill is not processed by the first Wednesday of classes, your courses and/or research credits will be dropped and you will be charged a late fee of $100. All fees must be paid before your schedule can be reinstated. This will not be paid by whoever is supporting you.
• If you get a bill for full tuition and have been told you'll be supported, verify with the cashier whether your support has been added by your department. If your support has been processed by your department, you can pay just the fees you owe (approximately $135).
• If your support has not been processed, contact your department immediately. DO NOT HOLD YOUR BILL BEYOND THE DUE DATE WAITING TO HEAR FROM YOUR DEPARTMENT.
• You may arrange a deferred payment with Accounts Receivable if you can't pay the bill in full by the due date.
• You may also pay by credit card (Visa, Mastercard, and Discover are accepted).

Registration

To be enrolled, students are required to register each semester during the dates specified in the University Academic Calendar. Enrollment requires selecting classes, verifying course data, acquiring the combined billing statement, and making the applicable payment by the due date. Registration is validated when the billing statement is processed by the Cashiers' office. Distance Learning students register through Sponsored Educational Programs.

Although every effort is made to ensure that the Time Schedule Booklet is accurate at the time of printing,

unforeseen circumstances or low enrollments may cause the cancellation of some section(s) or course(s). Michigan Tech also reserves the right to change the days, times, rooms, and/or instructors of section(s) or course(s) as deemed necessary.

Registration Changes

Dropping and adding credits may impact your bill. Changes to your registration should be made by the second Wednesday of the semester and, subject to the allowable maximum, students may make the following changes in their schedules: adding or dropping classes, changing credits on variable-credit courses, section changes, pass-fail versus letter-grade option changes, and audit versus letter-grade option changes.

Students may drop courses through the end of the third week of a semester without a grade being reported. From the beginning of the fourth week through the end of the eighth week of a semester, courses dropped will be indicated by a grade of W (late drop) on the transcript.

Full-Time Status

All graduate students, including Distance Learning students, who are using University services must be enrolled for at least one course or at least one credit of graduate research. Graduate students supported by teaching, research, or administrative assistantships or by fellowships must be registered as full-time students and must complete a certain number of credit hours each term in which they receive support (further information for students on assistantships). In both master's and doctoral programs, research credits may, but need not, be included for the purpose of determining whether the minimum criteria have been met. Full-time enrollment may be required by insurance companies, your lending institution, and/or the Immigration and Naturalization Service.

A graduate student is considered full time during the academic year for all support, visa, and financial aid purposes if s/he enrolled for 9 or more credits (credits may be of any type: coursework or research, audit or graded, undergraduate or graduate, any department including PE). A student is considered half-time if s/he is enrolled for 5-8 credits. Before you sign up for fewer credits, be sure you're not jeopardizing your visa status, loans, fellowships, insurance, your department standing, and so on.

A student taking fewer than 9 credits is considered full time if any **one** of the following applies:

1. Student is enrolled in a course that carries full-time status regardless of the number of credits, e.g., co-op (UN5000). For a list of these courses click here;
2. Last term (completion) has been certified:
    a. **Must be recorded with GSO by the end of the previous term.**
    b. M4/D5 has been filed
    c. Advisor affirms in writing that student will complete the degree during the term.
    d. Students who have certified a "Documented Final Term" but do not complete the degree in that term must back-enroll for additional credits to bring their total to 9 if they were required to be full time for support, visa, or financial aid purposes. Source of original support will be billed (self, project, department).
3. Full time (progress) has been certified:
    a. **To be used ONLY when circumstances dictate dropping to below 9 credits following the last official drop/add day AND when advisor does not recommend replacing the**

dropped credits with a different COURSE. (Adding additional research credits to maintain full-time status is not necessary.)

b. Student must consult with advisor about decision to drop credits.
c. Advisor must affirm in writing that student is making adequate progress to degree.
d. Must be recorded with GSO in a timely fashion, generally prior to the actual change in registration.

Summer term enrollment of 1 credit of research or one course is considered full time.

Graduate students supported by teaching, research, or administrative assistantships or by fellowships must be registered as full-time students and must complete a certain number of credit hours each term in which they receive support. In both master's and doctoral programs, research credits may, but need not, be included for the purpose of determining whether the minimum criteria have been met.

Continuous Enrollment

Having begun a graduate program, students must be enrolled every fall and spring semester until they complete the degree. "Completing" a degree means turning in ALL THE PAPERWORK as well as the REVISED AND EDITED report, thesis, or dissertation. In general, graduate students are not required to register for summer term in order to fulfill the continuous enrollment policy. However, those graduate students who have summer financial support, who are completing their degree during summer term, or who are using University facilities or faculty time must register for summer term.

Also, students must be enrolled for one full credit the term of their final oral examination. Students who defend, but are not able to complete corrections must be enrolled each fall and spring term until all revisions are approved and the paperwork is turned in. Students turning in paperwork during summer must be enrolled summer term as well. In all cases, if a student must be enrolled during terms following the defense term, **and is no longer on campus**, enrollment in UN5952 is sufficient.

Continuous enrollment may be satisfied by being enrolled in

- regular course(s)
- research credits
- Co-op
- UN5951, UN5952, or UN5953, as appropriate.

If a non-summer term is missed and a waiver of continuous enrollment was not granted by the Graduate School office, the student becomes inactive. Students who become inactive must apply for readmission and pay the continuous enrollment fee for each semester missed before returning to active status.

Readmission

Any University graduate student whose enrollment is interrupted for one or more non-summer semesters or who has been dismissed or requested to withdraw must apply for readmission. The application for readmission should be submitted well in advance of the beginning of the term in which the student wishes to resume his or her degree program.

Students returning after failing to maintain continuous enrollment must

1. apply for readmission and have the application approved
2. pay a readmission fee equivalent to the cost of having maintained continuous enrollment,

calculated at the total cost of enrolling in UN5951 each non-summer term the student has not been active. This fee may not be waived.

Waiver of Continuous Enrollment

A waiver of continuous enrollment status will remain available only for those students who for demonstrable extenuating circumstances will be making NO progress to degree during a given term. Waivers will be strictly limited to one term except in the most serious of situations. All waivers must be approved by the Dean of the Graduate School, and, for the time being, will be approved only after a formal meeting of the dean, advisor, and student.

The “no progress” designation means NO use of campus facilities (e-mail, library, labs, computers, etc.) and NO use of faculty time.

Continuous Enrollment Courses

UN5951: Graduate Status - Maintenance of Continuous Enrollment

00 credits (fee only, $100)

1. Meets continuous enrollment requirement for graduate students needing "time out" for special circumstances and for programs with inactive terms
2. No access to advisor's time or campus facilities
3. Enrollment includes e-mail and library privileges

UN5952: Report, Thesis, Dissertation - Independent Writing & Revision

.25 credits (billed at regular tuition rate)

1. Meets continuous enrollment requirement for graduate students engaged in writing report, thesis, or dissertation
2. Open only to students who have completed all course and credit requirements
3. Limited access to advisor's time
4. No access to labs and other campus facilities
5. Enrollment includes e-mail and library privileges
6. NOTE: This course differentiates between students who are not engaging the advisor’s time (UN5951) and those who are (UN5952). Because the advisor must grant permission to register, all involved will understand that the student is actively involved in writing the report/thesis/dissertation and will be making limited demands on the advisor’s time. (At the standard 1 cr. = 1 hour contact, .25 cr. comes out to about 1 hour / month.)

UN5953: Terminal Graduate Registration

.75-1.0 variable credits (billed at regular tuition rates)

1. Meets defense-term enrollment requirement for graduate students defending report, thesis or dissertation
2. Open only to students returning from enrollment in UN 5951/5952
3. Allows decision late in the term to defend and complete
4. Late enrollment after the billing due date carries standard late fee; no waivers granted
5. Variable credit assigned to bring total term enrollment to minimum 1.0 credits
6. Computer lab access is not included; if campus computing facilities are necessary for post-defense revision, the BCF will need to be paid as well.

Paperwork

Please be sure your graduate school file contains an official final transcript from your previous college and your signed, witnessed “Patent, Research, and Proprietary Rights Agreement,” which is available on the Web at http://www.admin.mtu.edu/rgs/graduate/KeepingOnTrackForms/PatentFormt.pdf.

If your final transcripts do not include degree granted, then an official proof-of-degree is also required. Transcripts are not considered official unless they are sent directly to the Graduate School by the degree-granting institution or are received in a stamped, sealed envelope issued by the institution. MTU graduates do not have to request or pay for their transcripts—the GSO has access to them.

Various forms are used to inform the GSO of your progress through your degree program. They also serve as a kind of work contract between you and your advisor/committee, confirming that you’re on the right track. These forms (**MEng** for master of engineering, **M** for master of science, **D** for doctoral) are on the Web at http://www.admin.mtu.edu/rgs/graduate/trackingforms.html. They should be filed in a timely fashion per instructions on each form and/or the timeline to your degree. There is also a summary of when forms are due on this same web page.

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Last Updated:24 June 2004

Transfer Credits

Transfer Credits (**Provisional**)—A limited number of graduate course credits taken as a graduate student at other colleges or universities may be accepted for graduate credit at MTU. If these credits were taken before enrollment at MTU, a request for transfer credit should be made during the student's first term on campus. Transfer of credits taken after enrollment at MTU must be approved in advance of course registration. Courses intended primarily for undergraduates are not transferable. The number of credits accepted depends on an evaluation by the major department and the dean of the Graduate School. Transfer credits for courses taken after admission to the program and approved in advance may not exceed one-half of the non-research course credits. In no case may the total of transfer credits exceed 1/3 of the non-research course credits. Provisional language, when approved, will allow up to ½ of the coursework credits to be transferred. Transfer approval request form.

Michigan Intercollegiate Graduate Studies (MIGS) Program

Application Instructions:

Graduate Students who are in good standing in a degree program are eligible to elect courses at several graduate schools in Michigan with the approval of both Host and Home faculty. This program for guest scholars enables graduate students to take advantage of unique educational opportunities throughout the state. Contact the MTU Graduate School office for a list of participating Universities and MIGS liaison officers.

Procedures:

1. The Student and Academic Advisor decide if the course(s) are appropriate to the program of study and are not available at the Home University (MTU).
2. The advisor discusses the plan with appropriate faculty members at the Host University.
3. The Host department is consulted to ensure that space is available for enrollment.
4. MIGS application is filled out, and returned with the Academic Advisor's signature to the MTU Graduate School office.
5. Signature from Liaison Officer (Nancy Byers-Sprague) is obtained and the application is forwarded to the Host University for completion.
6. Once the admission has been approved by the Host Department, the MIGS Liaison Officer at the Host University issues admissions documents, registration instructions, and forwards a copy of the letter to the MTU Graduate School.
7. After completing the course(s), the student is responsible for arranging to have two (2) official transcripts sent to the MTU Graduate School.

8. The student should also contact that office to indicate that a transcript is being sent for posting on the academic record as MIGS graduate credit.

Fees: Students on a MIGS enrollment pay tuition and other fees normally charged by the Host University for the services rendered.

Residency Status: It is the same as at the Home University.

Credit: All credit earned under a MIGS enrollment will be accepted by a student's Home University as if offered by that University.

Grades: Grades earned in MIGS courses will be applied toward the Home University grade point average.

Part-Time: A student may combine a part-time enrollment at the Home University with a part-time MIGS enrollment with approval if the student's academic advisor.

Fellowships: MIGS participation does not necessarily modify fellowship commitments made by a Home University for a given period. Therefore, specific arrangements for individual cases should be negotiated with the appropriate officials.

Enrollments: Enrollments are limited to six (6) credit hours for master's or specialist degree students or nine (9) credit hours for doctoral degree students.

Transcripts: The student is responsible for arranging to have transcripts certifying completion of work under a MIGS enrollment forwarded to the Home University.

Northland College – Graduate Credit Option (DRAFT)

An agreement between Michigan Tech and Northland College allows students at Northland to use up to twelve credits obtained while enrolled at Northland College towards a graduate degree at Michigan Technological University. Details of the Graduate Credit Option are here.

Senior Rule

An MTU senior with a satisfactory undergraduate record may apply for permission to take courses for graduate credit while completing the bachelor's degree requirements. The form is available at http://www.admin.mtu.edu/em/students/records/senior_rule_form.pdf. Permission to take classes should be obtained from the chair of the major undergraduate department and the chair of the prospective graduate department. A student so enrolled and carrying 6 credits or more in 5000- or 6000-level courses may carry no more than 16 credits of course work per semester.

After the Senior Rule form has been submitted and approved, senior rule students may elect to have these credits appear on their graduate transcripts and be applied toward an advanced degree. In that case, these credits will not be used to calculate the undergraduate GPA. This decision is irrevocable and must be made prior to the awarding of the undergraduate degree. The student will still have to officially apply for admission to the Graduate School. These courses may be used on the graduate degree schedule provided the courses are approved by the chair of the major department and, eventually, the advisor.

Quarter to Semester Conversion – Master's Program Requirements *

	Master of Science			Master of Engineering
	Plan A	Plan B	Plan C	
	Course Work and Thesis	Course Work and Report	Course Work	Course Work and Practicum
	Q/S	Q/S	Q/S	Q/S
Min. coursework credits (total)	30/20	36/24	45/30	39/26
Min grad (5000-level) credits	18/12	18/12	27/18	21/12
Max undergrad (4000-level) credits	18/12	18/12	18/12	21/14
Practicum credits	—	—	—	3–6/2–4
Research credits†	9–15/6–10	3–9/2–6	—	—
Minimum total credits	45/30	45/30	45/30	45/30

*Semester credits apply if you are completing your degree after August 28, 2000.
†Research credits may also be used as continuous enrollment credits for those who leave before completing their degrees.

As always, departments can have special, more-stringent requirements, so check with your department coordinator before completing your M4 degree schedule. Departments may require more credits, may limit your out-of-department credits, may require specific courses, and so on.

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Last Updated:24 June 2004

Good Standing, Grading Policy, Dismissal

GPA—Grade Point Average

In order to remain in good standing, you must maintain an overall 3.0 GPA for all courses taken while a graduate student. Students whose overall graduate GPA falls below 3.0 are placed on academic probation. After receiving notification of probation, graduate students must meet with their graduate program director as soon as possible to plan a course of action for resolving the situation.

All courses used on your degree schedule must be graded, that is not pass/fail, audit, or satisfactory/unsatisfactory.

All courses used on your degree schedule must have B or better grades, but at your department's discretion, 6 credits of BC/C grades may be used toward your degree if they are not in your major department.

Grades in courses that are not on your degree schedule will not affect your standing except as they affect your overall GPA. Graduate students are allowed to repeat courses in which they have received less than a "B." The old grade stays on the academic record, but is exempted from computation of the overall GPA.

Courses which are needed for background or breadth but will not be used on the degree schedule may be audited or taken pass/fail so as not to affect GPA.

Grading Policies

Grades are assigned in accordance with University procedures. A grade of A, AB, or B must be obtained in each course used for credit toward a graduate degree with the exception that a total of 6 credits taken in cognate departments may carry a grade of BC or C, if approved by the chair of the major department. Graduate students must maintain a minimum 3.0 cumulative GPA in all course work taken while in graduate status.

Grading System and Grade Points

The grades awarded by the University are:

A	Excellent	4.00 grade points/credit
AB	Very good	3.50 grade points/credit
B	Good	3.00 grade points/credit
BC	Above average	2.50 grade points/credit
C	Average	2.00 grade points/credit
CD	Below average	1.50 grade points/credit
D	Inferior	1.00 grade points/credit
F	Failure	0.00 grade points/credit
I	Incomplete (no grade points per credit)—Given only when a student is unable to complete a segment of the course because of circumstances beyond the student's control. It must be made up by the close of the next three semesters in residence or the incomplete grade becomes a failure (F). An I grade may be given only when approved in writing by the department chair. At graduation, an I grade is considered an F grade in computing the final GPA.	
X	Condition (no grade points per credit)—Given only when the student is at fault in failing to complete a segment of a course, but in the judgment of the instructor does not need to repeat the course. The X grade becomes a failure (F) if it is not made up within the next semester in residence. An X grade is computed into the GPA as an F.	
M	Missing grade—See instructor for clarification.	
W	Late Drop (no credit, no grade points)—From the beginning of the fourth week through the end of the eighth week of a term, course drops will be indicated by a grade of W on a student's transcript. For the remainder of a term, special late drops for graduate students (also indicated by a W) will only be issued by the dean of the Graduate School to correct errors in registration or events of catastrophic impact beyond a student's control, such as serious personal illness, serious accidents, emergency hospitalization, and so on.	
N	No grade (no credit, no grade points)—Given when a student officially withdraws from the University after the regular drop period, passing the subject. In these cases, the registrar notifies the instructor that the student has withdrawn from the University and should receive an N grade if passing as of the date of withdrawal. The student's grade form will come to the instructor at the end of the course in the normal manner. The instructor will enter the appropriate grade, N or F, thus notifying the registrar.	

P	Progress—(no credit, no grade points) Should be used with 5000- or 6000-level research courses where projects carry over for more than one semester. May also be used for approved 3000- or 4000-level project courses.
Q	Inadequate Progress (no credit, no grade points)—Should be used with 5000- or 6000-level research courses where projects carry over for more than one semester. May also be used for approved 3000- or 4000-level project courses.
Cr	Credit—Given by advanced placement or examination.
S	Satisfactory (credit given, no grade points)—Given for courses taken under the Pass-Fail option. A grade of S is given for performance equal to a letter grade of A, AB, B, BC, or C. Also indicates successful completion of research courses as evidenced by a successful defense of report, thesis, or dissertation.
E	Effort Unsatisfactory (no credit, no grade points)—Given for courses taken under the Pass-Fail option. A grade of E is given for performance equal to a letter grade of CD, D, or F.
Note: Audit Option—Courses are typically taken for audit by students wishing to refamiliarize themselves with the material. A course taken as an audit may be taken at a later date for credit subject to the approval of the student's committee. Changes to audit option must be approved by the instructor. Be certain to find out what the instructor requires of you in an audit; it often is more than simply sitting in class.	
V	Satisfactory audit (no grade points or credit)—Given for courses taken under the audit option.
U	Unsatisfactory audit (no grade points or credit)—Given for courses taken under the audit option.

Grade Reports/Transcripts

Students may access their semester-end grades through the Office of Records and Registration Website http://www.admin.mtu.edu/em. Follow the "Student" tab. Access to the Website requires that the student provide both an ID number and a PIN number. Grades are mailed to the student only upon request.

Disputed Grades

A student having an error in a final course grade should contact the instructor and the registrar as soon as possible but no later than one month after the beginning of the next semester. Graded student work (exams, papers, homework, and so on,) that has not been returned to the student should be retained by the instructor of record for at least one month after the beginning of the next semester or until existing disputes have been resolved.

Official Transcripts

Students or alumni may request official transcripts of their academic records from the Office of Student Records and Registration at no charge. Write a brief letter and fax it to 906-487-3343 or mail it to

Office of Student Records and Registration

Michigan Technological University

1400 Townsend Drive
Houghton, MI 49931-1295

The letter must include the exact address where each transcript should be sent and also contain your

- Full name and any former names
- Social Security Number (for verification purposes only)
- Graduation date or the year you last attended MTU
- Address and telephone number
- Signature

Unofficial Transcripts—Available through the Office of Student Records and Registration Website at http://www.admin.mtu.edu/em. (Follow the Students tab.)

Academic Dismissal, Change of Status, and Grievance

Dismissal

If for any reason the faculty concludes that the student is not meeting the expected standards, the Dean of the Graduate School, on the advice of the student's Advisory Committee and the Department Chairperson, may require the student to withdraw. The following procedure will be followed:

1. The Advisory Committee meets with the student and provides the student with the reasons which, in their professional judgment, indicate that progress in course work, research, or other requirements has not been satisfactory and that completion of the degree program is not likely. The student is given the opportunity to reply orally or in writing. The Committee evaluates the student's reply and subsequently forwards a written recommendation to the Department Chairperson with a copy going to the student.

2. The Department Chairperson evaluates the Advisory Committee's recommendation and discusses the recommendation with the student. If the Department Chairperson agrees with the recommendation and is satisfied that the student understands the basis for the recommendation and has had an opportunity to reply, a letter recommending dismissal is sent to the Dean of the Graduate School, together with the supporting documentation.
3. When the Dean of the Graduate School is satisfied that there is a basis for dismissal and that the student has been afforded due process, the Dean writes a letter to the student on behalf of the University terminating the student's status in the Graduate School.

Change of Academic Status

In some cases a student who is not meeting the expected standards for the PhD program may be allowed to transfer to the MS program in lieu of withdrawal. The Dean of the Graduate School may require this change of status on the advice of the student's Advisory Committee and the Department Chairperson. The following procedure will be followed:

1. The Advisory Committee meets with the student and provides the student with the reasons which, in their professional judgment, indicate that progress in course work, research, or other requirements has not been satisfactory and that completion of a PhD degree is not likely. The Committee recommends transfer to the MS program if they judge that the student is likely to successfully complete that degree program. A written recommendation for a change of status is sent to the Department Chairperson with a copy to the student.
2. The Department Chairperson evaluates the Advisory Committee's recommendation, discusses it with the student, and allows the student to respond. If the Department Chairperson agrees with the recommendation and is satisfied that the student understands the basis for the recommendation, a letter recommending a change of status to the MS program is sent to the Dean of the Graduate School, together with the supporting documentation.
3. When the Dean of the Graduate School is satisfied that there is a basis for status change and that the student has been afforded due process, the student will be transferred to the MS program and will be notified in writing of the change.

Grievance Procedures Following Dismissal or Change of Academic Status

Following receipt of a letter of dismissal from the dean of the Graduate School, the student has two weeks to appeal the dismissal. If the student wishes to appeal, the student should write a letter to the dean explaining the specific reasons for reinstatement. The dean will review the case and notify the student of the disposition of the case. In general, reinstatement will be granted only in cases where either the intent of the dismissal procedure was not followed or where there are additional, extenuating circumstances that affected the student's performance

and were unknown at the time of dismissal.

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Late Drops / Withdrawal

Courses dropped and withdrawals processed between the beginning of the fourth week and the end of the eighth week of the semester will be indicated by a grade of W on the transcript. After the end of the eighth week of the semester W grades will not be given without the approval of a late drop request. A graduate student may request a late drop and/or late withdrawal from the Graduate School office, which will consider those requests that involve circumstances beyond the student's control.

University Withdrawal

If you terminate your course work during the semester, it is important that you be formally withdrawn. A form for widrawal is available in the Office of Student Records and Registration or from the Assistant Dean of the Graduate School. Letting the Graduate School know of your plans before the fact helps ensure a smooth withdrawal-readmission process. You may do this in person, over the phone, through the mail or by fax or e-mail.

Failure to withdraw formallyl may result in "F" grades and in payment of tuition and fees which otherwise might be avoided. Students supported by an assistantship, must notify their department and/or advisor of their decision to withdraw as early as possible. Students who plan to return at a later time to complete the degree should register for one of the continuous enrollment courses (UN5951 or UN5952) to replace the dropped credits. Students may continue to enroll in UN5951 or UN5952 without special permission other than the standard instructor's permission for enrolling in the course. Enrollment will not be automatic, but must be initiated by the student.

A student who drops all classes and does not register for a continuous enrollment course will be withdrawn from school as of the date classes were dropped and will have to apply for readmission before returning to the graduate program.

Medical Withdrawal of Graduate Students

Medical Withdrawal is an umbrella term covering all cases in which a graduate student steps out of "progress" enrollment in a course of study during or between terms for medical reasons. There will be no distinction made in the student's record between mental and physical illness or between cases initiated by the University and cases initiated by the student. Neither is there a distinction in the procedures for withdrawal or eventual return to study.

A written request for approval of medical withdrawal is to be prepared and forwarded to the Assistant Dean of the Graduate School. The request should cite the reason for the request, documentation from a physician and/or MTU's Counseling Services as to the necessity of the withdrawal, and signatures from the student's advisor and/or graduate coordinator that s/he is aware of the request. The advisor's

signature is an indication only of awareness, not of approval or disapproval. Approval or disapproval of the request lies with the Assistant Dean of the Graduate School, who may consult with the Dean of the Graduate School, with right of appeal to the Dean of Students.

Upon approval of the request by the Assistant Dean of the Graduate School, all research, coursework, or co-op credits in which a student is currently enrolled will be dropped without penalty. The student will be enrolled in UN5951 for the current term at no additional expense and will thus remain on active status for the remainder of the term in which the medical withdrawal took place. The student may continue to enroll in UN5951 without special permission other than the standard instructor's permission for enrolling in the course. Enrollment will not be automatic, but must be initiated by the student.

Before the student may return to "progress" enrollment (a "progress" continuing enrollment course, co-op, coursework, or research credits) documentation from a physician verifying that the student is safely able to return to campus will be required. A written request to return to progress enrollment should be forwarded to the Assistant Dean of the Graduate School at least two weeks before the beginning of the term in which the student wishes to return. The physician's documentation must be sent directly to the Assistant Dean, who will consult with appropriate campus offices and persons before granting the student permission to enroll.

Late Drop Request Instructions

In order to have a request for a late drop approved, you must have clearly extenuating circumstances that prohibit you from completing a course.

Procedure

1. You must make a written request to the Assistant Dean of the Graduate School explaining the circumstances necessitating a late drop. As well as justification for the late drop, your written request must include your name, student identification number, and the course(s) you wish to drop. After reviewing your request, the assistant dean will schedule an appointment to meet with you.
2. In the meeting, the assistant dean will request documentation to substantiate the extenuating circumstance. It could include, for example, hospital or doctor receipts, the recommendation of the instructor of the course to be dropped, or the recommendation of a counselor from Counseling Services.
3. The day after the meeting, you must check back to learn the preliminary decision. If preliminary approval is given, you will receive two “Comment Slips”—one for the instructor of the class and one for your academic advisor.
4. The two comment slips must be returned to the Graduate School office. Some faculty will send them through campus mail; others will give them to you to return.
5. A final decision will be made after both comment slips are returned. If final approval is granted, a grade of “W” will appear on your grade report and transcript.

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MichiganTech Graduate School Bulletin

Instructions for Preparing Reports, Theses, and Dissertations

The J. Robert Van Pelt Library archives all project reports, theses, and dissertations submitted to MTU in partial fulfillment of a graduate degree. In addition, all dissertations are submitted to University Microfilms for archiving and distribution via electronic, paper, and/or microform copies.

Reports are accepted in paper copy. Theses and Dissertations must be submitted on CD as either plain .pdf files, which are printed and bound, or as fully linked and bookmarked .pdf files which are printed, bound, and also made available electronically (ETDs). The following instructions apply to all documents submitted to the Graduate School. For instructions specific to the preparation of ETDs click here.

Standard Preparation

Examination Copies and Final Approval—Prior to scheduling the defense, the candidate must provide copies of the document, prepared in an approved format, to members of his/her final Oral Examination Committee in accordance with Graduate School regulations. Corrections and/or significant revisions may be required by the examining committee. After any such corrections have been made, the final copy will be submitted to the candidate's advisor for approval. The candidate's advisor and department chair must approve the final document. Also, any member of the committee who requested changes must either approve the changes or delegate the authority to do so to the chair of the committee. After signatures are obtained, the document is submitted to the Graduate School.

Format

When considering the initial format of the dissertation, the candidate should consult the pamphlet Publishing Your Dissertation: How to Prepare Your Manuscript for Publication. This pamphlet is sent to PhD students when they submit their D5. You may also consult the ProQuest UMI website for authors at http://www.umi.com/umi/dissertations/authors.shtml.

Style—The candidate should consult style manuals recommended by his/her department or advisor or recommended by the editors of journals that publish articles closely related to the subject of their thesis or dissertation. In any case, accepted use of gender-neutral language should be adopted. A web search for "gender neutral language guide" will turn up a number of good sources. One example is http://jerz.setonhill.edu/writing/style/gender.html.

Printing— Readability should be considered in formatting decisions. Documents may be printed double-

sided and /or single-spaced, in two-column format, or in other variations of standard page layout. The one "no-exception" rule is that the binding edge must have a 1½ inch margin. If printing double-sided, be especially careful to observe appropriate margins on the binding edge. Also note that the default in Microsoft Word, which many students on campus use, is 1.25 inches. This is not wide enough for clear readability in a bound document, and you will be asked to reformat it.

Paper—The thesis or dissertation must be printed on 8-1⁄2-by-11-inch white paper.

Margins—**A margin of 1½ inches must be maintained at the left (binding) side of each page. Please be aware that the Microsoft Word default is 1¼ and is not sufficient.** A margin of 1 inch should be maintained on each of the other three sides. Page numbers should be at least ½ inch from the sides of the page.

Title and Approval Pages— This link provides sample title and approval pages for the master's thesis/ report and PhD. These samples indicate an accepted format for these pages.

The name of the authorized doctoral program should appear on the title page for doctoral dissertations (for example: Biological Sciences, Engineering-Environmental, Mechanical Engineering-Engineering Mechanics, Forest Science, and so on,). This name should also correspond to the field of study on the approval page. The approval page should immediately follow the title page.

Copyright—Use of the copyright notice is optional, though recommended. On the title or final page, "©Year Owner's Name" will protect your written work, even if the copyright is not registered. "Copyright" or "Copr." may be used instead of "©." Dissertation copyrights may be registered, for a fee, with the UMI form sent to you with your copy of your signed D5.

Final Editing and Proofreading—While it is the practice at some schools for the Graduate School to have a person on staff who goes through submitted documents very carefully to check for spelling, grammatical, and/or formatting errors, we do not perform this service. The quality of the finished document, which will be archived and/or available electronically, is the responsibility of the candidate. Please put every possible effort into producing a document you will be glad to have others borrow, purchase, and read.

Submission of the Completed Thesis or Dissertation

Make all requested corrections, edits, and revisions to your thesis or dissertation, obtain your advisor's approval, and convert the final version of the file to .pdf. Submit the necessary paperwork along with a CD with the .pdf file(s) of your thesis or dissertation to the GSO for printing and binding. Payment for printing and binding can be in cash to the MTU Cashier's office, account number(s) and authorization initials/ signatures on the invoice for payment by a departmental or research account, or a combination of these payment methods. The invoice sent to you at the time of your defense has the details. Copies will be bound and distributed as follows:

Distribution Of Theses and Dissertations

Original	Library Archives
First Copy	Library Circulation (3rd floor)

Additional Copies	Student's Department

Any additional copies will be distributed by the department according to the candidate's instructions. The department will eventually receive the unbound copy of the dissertation if one was submitted to the Graduate School for microfilming. In addition, the candidate must either have a copy of the approved document printed and bound for, or provide an unbound copy of the approved document for, any member of their final Oral Examination Committee upon request.

Distribution of Project Reports

Project reports are not professionally printed and bound. One copy should be submitted to the Graduate School in a sturdy binder suitable for archiving in the Library. Title and signature pages should be similar to thesis samples. Candidates who wish to have reports printed and bound may make arrangements to do so by completing the necessary invoice and bindery form.

In addition to the one copy provided for the Library, the candidate's department and/or advisor may request a copy of reports.

Copies for Submission

Files submitted for printing and binding should be thoroughly checked to be sure they will print as the candidate intends. Graphics should be clear and of high enough quality to be legible. If the file includes color and it is to be printed in black and white, the author should be certain the color will be legible when printed.

University Microfilms—Agreement and Abstract

Dissertations—If an ETD is not submitted, one unbound copy of the PhD dissertation must be submitted to the GSO to be sent to UMI. In either case, a paper copy of the title page and of the abstract must be submitted with the UMI fee as noted on the invoice. The abstract, which is submitted for the purpose of publication in Dissertation Abstracts International, must have a title identical to the title page of the dissertation and must be 350 words or less. If it is longer, UMI will cut it to the required length. The research advisor's name must appear on either the title page or the abstract. It is recommended that the student keep a copy of the Agreement Form. The Agreement Form is in the UMI booklet that is sent to you with your copy of your signed D5.

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Last Updated:6 July 2004

ı, Degree Certification, and Commencement

A help sheet with procedures, dates, and deadlines for the current term can be linked to from http://www.admin.mtu.edu/rgs/graduate/pubs.html.

You must remain enrolled until the end of the semester in which you complete all degree requirements. You graduate in a given semester if you have completed all degree requirements, including grade changes, before the first day of the next semester. You won't graduate until the end of the term, so your degree won't be on your official transcript until approximately the fourth week of the next term. Your diploma will be mailed to you about 90 days after the end of your graduation term.

Confirm your commencement plans with the GSO at the beginning of the commencement term. If you want to march in commencement, you must have completed your degree and notified the GSO by the announced deadline. The mailing of commencement information, in mid-March and early October, is triggered by your graduation date on BANNER (the administrative database), as updated by the GSO according to your submission of MEng-, M-, and D-forms.

Degree Certification

Provisional Certification

The Graduate School will issue a letter of Provisional Certification if requested by the student. The student must have completed all the requirements for an advanced degree, including depositing copies of the thesis, dissertation, or report in the Graduate School office.

Official Certification

The Graduate School office authorizes and mails the diplomas within approximately 90 days of the end of the term in which the student finishes. It is important to keep the Graduate School informed of current addresses. A replacement diploma costs $35.

The Board of Control receives and approves the list of degree recipients at its next regular meeting after the end of the term. That meeting date is the conferral date for the degrees, but the effective date is the end of the term in which the student finishes.

Commencement Ceremony

Commencement information is mailed to all eligible students about two months before the ceremony. To participate in the commencement exercises, the student must have completed all degree requirements at least three weeks before the ceremony. Students completing after that date and by the first day of the next semester will be certified for that semester and will be eligible to participate in the next commencement. Students who leave campus before commencement should keep the Graduate School office informed of their commencement plans and their current address.

Michigan Tech has commencement in December and May, at the end of fall and spring semesters, respectively. Usually the December commencement includes the preceding summer and current fall graduates, and spring commencement includes the fall and current spring graduates; however, a student can defer participation to a later commencement by notifying the GSO via the LAM form or via phone or e-mail. The student's name will appear in only one commencement program, the commencement for which he or she is first eligible, or a later one if deferral is requested in a timely manner.

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Last Updated:26 June 2004

MichiganTech Graduate School Bulletin

Health Services

The local Houghton-Hancock-Calumet community includes two hospitals as well as convenient clinic locations near campus and in the surrounding area with a range of physicians and health care providers. The Houghton Community Health Center is located on campus adjacent to the Student Development Complex, with regular weekday hours. The Portage Medical Group (483-1060), which operates the center, provides primary medical care for Michigan Tech students, their spouses, and their dependents on a fee-for-service basis. After-hours and hospital emergency care are available at Portage Health System in Hancock (483-1000) and Keweenaw Memorial Medical Center (337-6500) in Laurium.

Students insured under the MTU student health plan and their insured dependents may use any qualified and licensed health care provider appropriate for the loss or injury.

Counseling Services

Counseling Services assists students with social and personal/emotional issues that may interfere with the effective use of their talents at MTU. Professional counselors staff the Counseling Center, located on the main campus in the white house between Fisher Hall and Walker Arts and Humanities Center. Confidential individual and group services are available.

Counseling helps students and their significant others improve their feelings of well-being by helping develop decision-making skills, stress management skills, interpersonal communication skills, and self-awareness. Any concern a student may have, including depression, pregnancy, anxiety, loneliness, substance abuse, or relationship problems, can be discussed with a counselor.

The Myers-Briggs Type Indicator is administered and interpreted. Workshops are offered in the areas of time management, study skills, eating disorders, substance abuse, and self-defeating behaviors.

Health Insurance

All graduate students are required to have health insurance and are eligible to enroll in a group health insurance plan sponsored by the University. Based on assistantship status, students are required to enroll in the appropriate University graduate student plan unless they have comparable coverage from another provider. Supported students will receive a subsidy toward the cost of the insurance premium.

Health Insurance Information And Enrollment Forms

Forms

Grad Tech Select Form (must be completed by every graduate student)

http://www.sos.mtu.edu/gsc/tech_select_04.pdf

Comparability Worksheet
http://www.sos.mtu.edu/gsc/CompWorksheet.pdf

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Last Updated:24 September 2004

Got a Life?

The university experience is much more than classes, research, and cappuccino. Broaden your awareness of other subjects, styles, and cultures by attending the various lectures, symposia, concerts, dance performances, films, and so on, as your schedule allows—and make sure it allows some time for these things.

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Last Updated:24 June 2004

Campus & Community Resources

The Call of the Keweenaw, distributed to new students by the Graduate School office, is a guide to housing and other aspects of graduate student living at Michigan Tech. The most recent edition was published in 1997, so it's a bit out of date but still useful: http://www.sos.mtu.edu/gsc/toc.htm.

Campus Activities and Organizations

Michigan Tech offers opportunities for students to participate in a multitude of activities. There are more than 200 registered student organizations on campus, which include media, governmental, cultural/ethnic, Greek, social, special interest, honorary, religious, service, leadership, professional, and club sports groups. A number of professional chapters are listed in the descriptions of the appropriate academic departments.

Sigma Xi

Sigma Xi, the Scientific Research Society of North America, is an honor society established to reward excellence in scientific research and to encourage a sense of companionship and cooperation among scientists in all fields. Graduate students may be elected to associate membership in this Society upon nomination, application, and recommendation by two members of the MTU Chapter of Sigma Xi. Calls for nominations are generally requested in March each year. The chapter usually has four to six meetings and technical presentations during the academic year, including the Annual Initiation Banquet.

Graduate Student Council

The Graduate Student Council (GSC) of Michigan Tech exists to serve graduate students through the following objectives:

- to represent the professional, intellectual, and academic concerns of graduate students to the various governing and policy-making bodies of the University;
- to inform graduate students of newly developing policies and procedures affecting them;
- to support and promote policies and events that foster cooperation and understanding among graduate students, with faculty, and with the University.

The council meets twice per month and hosts several social/seminar meetings per term. Departments elect representatives in proportion to their graduate enrollment. In addition, GSC publishes Call of the Keweenaw, an amusing yet practical guide for graduate students living in the local area. See the GSC website at http://www.sos.mtu.edu/gsc/

Cultural Activities

MTU Ticket Offices

Tickets for University-sponsored events can be purchased from the Central Ticket Office located in the Student Development Complex, the Tech Express office, or the Rozsa Center for the Performing Arts ticket office. Student and group discounts are available, as well as subscriptions for the MTU Great Events series. Tickets may be purchased online at http://www.tickets.mtu.edu.

Arts Activities

All University music and theater activities offered through the Fine Arts Department are open to student participation. Most activities require an audition for membership or casting. Performance organizations at Michigan Tech include a dance troupe, a choral group, three bands, several jazz bands, small ensembles, and a symphony orchestra. Theater activities include several main-stage productions each season and an improvisational comedy troupe.

Art Exhibits

Students, faculty, and staff can exhibit their artworks at juried shows at the Copper Country Community Arts Gallery in Hancock and at the Tech Arts Festival, a non-juried competition sponsored by the Memorial Union Board each April. In addition to the art competition, TAF features a week-long schedule of arts-related events, including performances, films, and workshops. There is also an art and design exposition annually as well as an open house to exhibit student multi-media projects.

Cultural Events

The University Cultural Enrichment (UCE) office publishes an annual Great Events Series calendar detailing all performances and public lectures on campus. UCE coordinates and administers the activities of the three major campus programming boards responsible for providing a broad spectrum of cultural activities, including national and international theatre and dance touring companies, chamber orchestras and other musical ensembles, performing artists from a variety of disciplines, and lectures by leading figures in politics, technology, science, and the humanities: Student Entertainment Board, the Memorial Union Board (specifically Tech Arts Festival), and the Committee for Campus Enrichment. Listings of events can be accessed on the Web at http://www.greatevents.mtu.edu.

Film

The MTU Film Board, a student group, offers a wide variety of general release movies on campus. The cities of Houghton and Hancock have three movie theaters offering nine film screens. Classic film theaters in Calumet and Laurium offer dinner/discussion with movie showings.

Athletics

Athletic Facilities

The University owns and operates multiple athletic facilities and recreation areas for the benefit of its students, faculty, and staff. Facilities include the Student Development Complex, the Gates Tennis Center, and numerous other indoor and outdoor facilities, both on and off campus, for team sports, skiing, golf, tennis, and bowling.

The Student Development Complex (SDC) is a 235,000 square-foot, indoor sports arena located on the Michigan Tech campus (see http://www.aux.mtu.edu/sdc/Welcome.html. Students may use the facilities

free of charge. The SDC features the following:

- weight room with Hammer equipment
- racquetball and squash courts
- basketball and volleyball courts
- running track
- swimming pool (8-lane, 25-yard)
- diving pool
- gymnasium
- dance room
- gymnastics room
- rifle range
- ice arena
- locker rooms with showers and saunas
- sports equipment rentals
- University Images (MTU apparel)

Gates Tennis Center, also located near the SDC, features the following:

- tennis courts, indoor (4 with a minimal fee)
- ball machine
- locker rooms with showers
- pro shop for racquet stringing and repairs

Other facilities (on and off campus)

- bowling alley (6 lane) in the Memorial Union Building
- golf course (18-hole), Portage Lake Golf Course south of Houghton
- downhill ski area at Mont Ripley in Hancock
- cross-country ski trails (19 k) near the SDC
- tennis courts, outdoors
- play/practice areas
- softball fields
- football/track stadium

Intercollegiate Athletics

Michigan Tech has a thirteen-sport intercollegiate athletic program, highlighted by its Division I men's ice hockey team, a program that has captured three national championships. Other men's programs include football, basketball, cross country, track and field, tennis, and Nordic skiing. A strong women's program, one which has witnessed eight NCAA tournament appearances in basketball in the 1990s and five in volleyball, also includes programs in cross country, tennis, Nordic skiing, and track and field.

Intramural-Recreational Sports Services

The Department of Physical Education, through its Intramural-Recreational Sports Services Office, offers competition in more than thirty different intramural events—from badminton to water polo—for Michigan Tech's students, faculty, and staff. Stop by the Intramural Office, Room 202, student Development Complex for IM handouts and information.

Tax Issues for Graduate Students

General Information for Supported Graduate Students, Scholars, and Fellows—Generally, the funding you receive for tuition, fees, books, and required supplies and equipment is tax free. Although the remainder of your stipend is taxable, educational institutions are not required to report fellowship dollars to US residents to the IRS. For income tax purposes, your department assistant can issue a calendar-year statement of the amount of the fellowship you received.

The Tax Reform Act of 1997 includes some federal tax credits for education. See a tax specialist and IRS Publication 970 for more information on your taxes. Other IRS publications that you might find useful are

Pub. 4—Student's Guide to Federal Income Tax
Pub. 515—Withholding of Tax on Nonresident Aliens
Pub. 519—U.S. Tax Guide for Nonresident Aliens
Pub. 520—Scholarships and Fellowships
Pub. 596—Earned Income Credits
Pub. 901—U.S. Tax Treaties
Pub. 970—Tax Benefits for Higher Education

These may be downloaded from the IRS Website at <http://www.irs.ustreas.gov/>.
Circumstances and situations differ for each student, and, as a result, some tax questions should be answered on a case-by-case basis.

For more information, contact Brenda Sutherland, tax accountant, Admin. 224B, 487-3149.

Graduate Teaching and Research Assistants—Wages received for services as an employee are taxable and are subject to graduated withholding rates. University-paid tuition is nontaxable. You will receive a W-2 form by January 31.

International Students—The United States currently has tax treaties with more than fifty countries. Some of these treaties may allow some additional nontaxable benefits. Also, because most international students are not eligible for the additional personal exemption or the standard deduction, the W-4 forms must be completed differently.

Child Care

Little Huskies - MTU and the Baraga-Houghton-Keweenaw Child Development Board have joined efforts to provide high-quality child-care facilities for Michigan Tech students, faculty, and staff. Care is available for children from 4 weeks to 4 years of age. For more information, call 906-482-3663 or 800-236-5657. http://www.mtu.edu/childcare/home.html.

MTU Preschool - An independent, cooperative preschool is conducted out of the Daniell Heights Community Center for children ages 3 to 5 years old. Enrollment is open to all families in the area; Daniell Heights student families are eligible for a tuition discount. Non-English speaking families are welcome. Please call 487-2720 for a brochure and preschool enrollment application.

Office of Student Affairs

The Office of Student Affairs provides support to students in co-curricular and extra-curricular areas, including academic counseling. Students may contact the office for clarification on issues of academic integrity or student conduct as well as for accommodation for physical or learning disabilities. The office makes referrals to the appropriate resources or offices for a variety of student issues and problems. See <http://www.admin.mtu.edu/dos/>.

Residence Life Staff

Providing help to students who reside in University housing with adjustment, personal, or academic problems, residence-life staff also make referrals to appropriate resources or offices.

Center for International Education

From the time of enrollment to the time of graduation, international students at Michigan Tech receive specialized assistance and support. The Center for International Education co-sponsors an orientation program for new students that includes information about registration procedures; immigration regulations; health insurance; banking, shopping, and community services; and many other matters. Students also receive a detailed handbook, which supplements orientation information, and a quarterly newsletter to keep them informed of immigration requirements and registration procedures and deadlines. Students are invited to visit the CIE for individual assistance at any time.

Educational Opportunity

Educational Opportunity (EO) provides academic, professional, and personal educational opportunities for students. The EO department

- directs programs and activities focusing on topics that address the needs of pre-college, women, minority, and nontraditional students;
- assists in the recruitment and retention of a diverse undergraduate and graduate student pool;
- provides support and services for individual students who are underrepresented on our campus, and for their professional organizations;
- initiates campus and community diversity-related programs/ celebrations
- coordinates conferences and institutes, and continuing education programs that benefit Michigan Tech students of all ages;
- builds alliances with state and national organizations that provide graduate fellowships and research experiences for graduate and undergraduate students;
- coordinates the King-Chavez-Parks Future Faculty Program and the GEM (Graduate Education for Minorities) Program for Michigan Tech;
- hires and trains a large number of students, including graduate students, to work on or teach for a variety of academic and diversity projects.

Living Accommodations

A variety of housing options is available to Michigan Tech graduate students, including University residence halls, University apartments, and off-campus housing. Based on the usual high demand for on-campus housing, it is a good idea to secure housing as early as possible. Check the Residential Services home page for more information: http://www.aux.mtu.edu/ressvcs.

University Residence Halls

Graduate students are not required to live on campus in the residence halls but certainly are welcome to do so. Priority for honoring hall and roommate preferences is based on the date your housing contract is received by Residential Services.

MTU has three residence halls with their own dining facilities, study areas, television lounges, fitness room, game room, and laundry facility. Each room has been wired for cable TV and a high-speed computer connection (ResNet). Professional residence-life staff and student resident assistants help students make the most of their living and learning opportunities. Wadsworth Hall, the largest, houses 1,220 students; McNair Hall, 660; and Douglass Houghton Hall, 360.

Each hall offers a variety of lifestyle choices. Residents and guests in the chemical-free sections may not smoke or consume alcohol. Other areas are smoke-free. The Community Governed area is for students who are 21 and older or are entering their third year of college. Students living in this area will have the opportunity to assist in determining some of the policy guidelines, like quiet hours, through the development of a Community Living Agreement. The International House pairs students from different nations and provides an opportunity to learn more about other cultures.

MTU Apartments—Daniell Heights

Graduate students with or without children may apply for one- or two-bedroom apartments located on campus. These economically priced apartments are close to main campus classrooms and athletic facilities. Placed throughout the complex are several children's play areas and school bus stops. A free bus to campus and back is available weekdays during the academic year.

Applications—Apartment assignments are based on the date the application is received at the apartment office. University apartment applications and brochures can be obtained from the MTU Apartments-Daniell Heights, Michigan Technological University, 2001B Woodmar Drive, Houghton, MI 49931-1017; call 906-487-2727, or fax 906-487-2801. Applications can also be printed from the Web at http://www.aux.mtu.edu/ressvcs/heights.htm.

Off-campus Housing

Many graduate students live off campus in either Houghton or one of the surrounding communities, renting or purchasing homes, cabins, or apartments. The Undergraduate Student Government office maintains a list of off-campus rentals and makes copies available. The list is on the Web at http://www.aux.mtu.edu/usghousing.

The local and student newspapers also list available off-campus housing—The Daily Mining Gazette, Houghton, MI 49931 (906-482-1500); The Lode, MTU, Houghton, MI 49931 (906-487-2404).

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MichiganTech Graduate School Bulletin

Campus Community—Facilities

Computing Facilities

MTU graduate students use computers and network services for a range of activities from the computation of assigned classroom problems to the design and solution of specialized research projects.

Access to Facilities
Access to computer labs and network services is coordinated through the individual departments.

Cost of Facilities
All academic departments charge laboratory fees for computer access; the costs vary depending on the type of equipment and software used. All students are guaranteed access to e-mail, printing, and the use of basic spreadsheet and word-processing software.

Graduate Computer Facilities

All University departments and schools maintain labs of PCs, SUN Microsystem workstations, Macintoshes, or other specialized computational or visualization facilities. Some departments maintain dedicated graduate student facilities, and other departments maintain shared facilities for all department majors.

Career Center

The University Career Center is designed to help all MTU students with career and employment decisions. It is located in the Harold Meese Center and is open 8:00 am–5:00 pm Monday–Friday. Call 487-2313 for information. The services listed below are of greatest interest to graduate students. Please refer to http://www.ucc.mtu.edu for additional information.

Computer Lab—UCC maintains a computer lab for students to work on resumés, cover letters, and electronic resumés for a referral service database, as well as electronic sign-up for interview times.

On-Campus Interviewing—Use on-campus interviews as one of many strategies during your employment search. Graduate students who want to work in industry should visit the Career Center six to twelve months before completing their thesis or dissertation. Many corporations visit MTU looking specifically for candidates with graduate degrees.

Employers usually want to interview students during the academic year in which they are graduating. Because the majority of interviews for the entire year occur in October, graduate students should register with the Career Center in the spring before the academic year in which they graduate or as soon as possible in the fall.

Special Programs—Corporate speakers, Career Day, and job fairs (on and off campus) are offered regularly. Seminars about resumé writing and interviewing help graduate students prepare corporate and government interviews. Individual consultation is also available to assist students with employment concerns. Contact the Career Center to request a special program.

Career Resource Information—The Career Center has corporate videotapes and literature, computerized resumé-writing programs, and federal government applications and information. Additional information is available at http://www.ucc.mtu.edu.

Student Advisory Council—The Career Center's Student Advisory Council meets regularly to advise the staff about programs, policies, and any issues which affect student career and employment concerns. Students interested in serving as a Graduate School representative should contact the Career Center. Council members sometimes have the opportunity to meet with corporate recruiters.

Alumni Services—Graduate students who leave campus without finding employment may register with the Career Center. Participants' resumés will be forwarded to interested employers free of charge.

J. R. Van Pelt Library

Reference and Research Assistance, 487-2507
E-mail refib@mtu.edu
Website http://www.lib.mtu.edu

Collections

Centrally located, the J. Robert Van Pelt Library provides electronic and print information resources to support the instructional and research programs of the University. The print collection totals more than 800,000 volumes, including government documents. Approximately 3,000 serials and periodicals are received annually in printed formats. Web-based access is provided to over 100 databases, some of which include full-text articles from journals. Individual electronic journal titles are also accessible on the library's Website.

MTU Archives and Copper Country Historical Collections—Houses historically significant University material, including faculty publications and files, and student theses and dissertations. It also houses materials on the social, economic, and political history of the Copper Country and western Upper Peninsula.

Government Documents/Maps Department— A selective federal depository, housing publications and maps from such federal entities as the Energy Department, Environmental Protection Agency, Forest Service, Bureau of Mines, and Geological Survey. Also contains publications and maps from Michigan's Department of Natural Resources, Labor Department, and Attorney General's Office.

Borrowing Privileges

Graduate students may borrow books for seventeen weeks. However, after three weeks, books may be recalled at the request of another patron. Bound and unbound periodicals may be borrowed for three days. Materials may be renewed three times. Books may be renewed by in person, by telephone, or via e-mail; periodicals must be renewed in person. Fines are assessed for overdue and lost materials. Contact the

Circulation Desk (487-2508) or e-mail: circlib@mtu.edu.

Interlibrary Loan and Document Delivery Services

Interlibrary loan and document delivery services provide access to materials not owned by the Van Pelt Library. Lending libraries and institutions establish the loan periods for these items. Contact the Interlibrary Loan Office (487-3207), e-mail: ill@mtu.edu, or use library forms on the Website.

Online Search Service

Online Search Service provides access to more than 1,000 commercial bibliographic and factual databases covering current and historical scholarship in virtually all subject areas. Contact the Reference Desk (487-2507) or use library forms on the Website.

Getting Assistance

Instruction in Using Library Resources and Technologies— Librarians can provide individuals, groups, and classes with customized instruction in the use of the library's print and electronic resources and technologies. Contact the Instruction Office (487-3041), e-mail: instrlib@mtu.edu, or use library forms on the Website.

Reference and Research Assistance

Contact the Reference Desk (487-2507), e-mail: refib@mtu.edu, or use library forms on the Website.

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Last Updated:27 June 2004

Links to documents and information discussed at the general orientation for new graduate students.
Please e-mail mjvogler@mtu.edu if you have suggestions for other links and/or information that should be added.
New links from Fall 2004 orientation will be added soon.
Links were last updated October 2003.
Community of Science training link:
Degree requirements and tracking forms:
Forms are available on the web: http://www.admin.mtu.edu/rgs/graduate/pubs.html
Your first term here: (links later)
Master of Engineering timeline: (links later)
Master of Science timeline: (links later)
PhD timeline: (links later)
External funding – Valorie Troesch vtroesch@mtu.edu
Gender neutral language: http://www.ncte.org/pubs/publish/books/107647.htm
http://www.apa.udel.edu/apa/publications/texts/nonsexist.html
http://owl.english.purdue.edu/handouts/general/gl_nonsex.html
http://www.ucc.uconn.edu/~wwwwmst/language.html
Health insurance:
Questions about the MTU policy: gradins@mtu.edu
Healthcare links from GSC: http://www.sos.mtu.edu/gsc/healthcare.htm
Insurance forms are available through the GSC link above
Everyone must turn in the Grad Tech Select form at least once a year.
Everyone must turn in either the Comparability Worksheet OR a student enrollment form.
Judicial hearing process: http://www.admin.mtu.edu/dos/rights/ProceduresMain.html
Conduct Policies
Policies governing individual students: http://www.admin.mtu.edu/dos/rights/PoliciesIndividualStud.html

Computer use policy: http://www.cec.mtu.edu/cacsec/info/cup_approved.html
Academic integrity policy: http://www.sas.it.mtu.edu/usenate/propose/02/18-02.htm
Scientific Misconduct: http://www.admin.mtu.edu/admin/prov/facbook/ch3/3chap-31.htm
Plagiarism: http://www.hu.mtu.edu/wc/WPAplagiarism.pdf
Human Subjects Research: http://www.admin.mtu.edu/research/vpr/reviewboards/human.html
Sexual harassment policy & information: http://www.admin.mtu.edu/aao/sexwww.htm
Career Center: http://www.ucc.mtu.edu/
Counseling Services: http://www.counseling.mtu.edu/
ESL programs: http://www.admin.mtu.edu/cie/esl/
Elaine Bacon Literacy Program: http://www.esl-houghton.org/
Exchanges and research abroad: http://www.admin.mtu.edu/cie/sa/
GSC: http://www.sos.mtu.edu/gsc/
Ombudsperson: http://www.me.mtu.edu/~peckcho/ombuds/Ombudsperson.htm
Recreational opportunities at the SDC: http://www.aux.mtu.edu/sdc/
School and community organizations:
Campus: http://www.sos.mtu.edu
Community: http://www.pasty.com
Houghton (City) Organizations: http://multimag.com/community/com_listing.cgi/Houghton%2C_MI
Houghton County Organizations: http://multimag.com/community/com_listing.cgi/Houghton_County%2C_MI
Writing Center: http://www.hu.mtu.edu/wc/

OTHER THINGS
From Graduating Engineer, "Choosing an Advisor" - Advice from the Assistant Dean
Parking:
Graduate School Home Page: http://www.gradschool.mtu.edu
Support & full-time enrollment: (links later)
Deadlines: (links later)

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The Michigan Technological University

Graduate School Bulletin (2003-04)

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- Links that are Black are links to sections in the Bulletin. The index links are broad-brush, that is, they will take you to the **section** of the Bulletin where the information can be found rather than to the exact line. Most pages are fairly short, but in the event you can't find something by skimming quickly, you can do a "find" and locate the information that way.
- Links that are marked with an asterisk (*) are University links taken from the University A2Z web page. They will not take you to pages in the Bulletin, but provide information useful to graduate students.

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- Chemical Engineering
- Civil & Environmental Engineering
- Electrical & Computer Engineering
- Geological/Mining Engineering & Sciences
- Materials Science & Engineering
- Mechanical Engineering-Engineering Mechanics

College of Sciences & Arts

- Biological Sciences
- Chemistry
- Computer Science
- Education
- Fine Arts
- Humanities
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*University administration
*University Career Center
University information – FOIA
University Microfilms

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*Van Pelt Library
*Veterans Benefits
Vision Statement, Graduate School
*Voyager—JRVP Library Catalog

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*Weather
*WebCal (All Campus)
*Web Mail (MTU HuskyMail)
*Web Registration
Withdrawal procedure - medical
Withdrawal – refund of tuition and fees
*WMTU Radio (Student-Operated)
Work Study Program
*Writing Center
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Graduate School - Michigan Technological University
1400 Townsend Drive, Houghton, Michigan 49931-1295
Telephone: 906.487.2327
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Graduate Faculty

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A

Duane L. Abata, PE (duane@mtu.edu)
Professor of Mechanical Engineering
PhD, University of Wisconsin—Madison
Thermodynamics, combustion, I-C engines

John H. Adler (jhadler@mtu.edu)
Chair and Professor of Biological Sciences
PhD, University of Maryland
Structure-function interactions of lipids, particularly sterols and steroids, as hormones, components of biological membranes, and as defense compounds in higher plants, algae, and fungi

Dieter W. Adolphs (dadolph@mtu.edu)
Associate Professor of German
PhD, Washington University—St. Louis
German and Austrian literature from 1880 to the present, critical theory, intercultural communication, humanities research methods, rhetoric of difference, exile studies, Thomas Mann

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Associate Professor of Physics
PhD, Kansas State University
General physics

Theresa M. Ahlborn, PE (tess@mtu.edu)
Assistant Professor of Civil and Environmental Engineering
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High-strength concrete, structural analysis, prestressed concrete, bridge engineering

Elias C. Aifantis (mom@mtu.edu)
Professor of Engineering Mechanics
PhD, University of Minnesota
Continuum mechanics, microstructures

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Adjunct Assistant Professor, MEEM
PhD, University of Texas at Austin

Bernard D. Alkire, PE, (balkire@mtu.edu)
Professor of Civil and Environmental Engineering
PhD, Michigan State University
Soil compaction, cold weather construction, computer methods, dynamic properties of soils, aggregate properties, transportation engineering, highway design

Burhannettin S. Altan
Visiting Associate Professor of ME-EM
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Continuum mechanics, applied math, composite materials, novel theories in elasticity, Upper Bound Analysis

Susan L. Amato-Henderson (slamato@mtu.edu)
Assistant Professor of Psychology
PhD, University of North Dakota, Grand Forks
Psychology and law (eyewitness memory, credibility assessment, field sobriety testing); normative parent/child interactions (co-bathing, kissing, co-sleeping) and service learning as a teaching tool (outcome assessments)

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Associate Professor of Electrical and Computer Engineering
PhD, University of Wyoming
Biomedical applications of ultrasound, modeling of physiological systems, medical imaging

Carl L. Anderson (cander@mtu.edu)
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Heat transfer, I-C engines, thermodynamics

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Environmental Toxicology

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Thermodynamics, heat transfer

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Limnology; algal ecology; environmental impact assessment; mathematical modeling of the fate, transport, and impact of wastes in rivers, lakes, and embayments

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Fish ecology, larval fish biology, aquatic ecology

Top

B

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Combinatorics, design theory, algebra

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Mathematical problem-solving strategies, instructional technology, spatial visualization

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Environmental microbiology, mutagenic and toxic properties of environmental contaminants; bioremediation

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Chair and Professor of Civil and Environmental Engineering
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Biological treatment processes, removal and fate of toxic pollutants, oxygen transfer, industrial pollution prevention

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PhD, Michigan State University
Aquatic resources

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Chair Department of Education, Professor of Geography
PhD, Clark University
Agricultural structure, cultural ecology, immigration and ethnicity

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Robotics, controls

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Computer-aided design, kinematics, biomedical engineering and manufacturing, rotary pumps

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Electronic structure of solids, theoretical atomic physics

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Adjunct Assistant. Professor of Materials Science & Engineering.
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Microelectromechanical devices and technologies

Victoria L. Bergvall (vbergval@mtu.edu)

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PhD, Harvard University
Language and gender theory and practice, discourse analysis (especially critical discourse analysis), sociolinguistics, linguistic and gender aspects of computer-mediated communication, local dialect issues

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Associate Professor of Mathematics
PhD, University of New Mexico
Singular integral equations, numerical analysis

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Paleomagnetism, rock magnetism, sedimentology, geophysics

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Geometric reasoning and artificial intelligence in design and manufacturing; object oriented CAD software architecture

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MFA, University of Iowa
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Adjunct Assistant Professor of ME-EM and Senior Research Engineer, Keweenaw Research Center
PhD, University of Cincinnati
Digital signal processing, dynamic systems measurements, noise and vibration troubleshooting and methods development

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Associate Professor of Geology
PhD, Pennsylvania State University
Earth/atmosphere interactions, remote sensing of volcanic emissions, watershed geochemistry

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PhD, University of Wisconsin—Madison
Electric power system analysis

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Chair, Geological and Mining Engineering and Sciences

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PhD, University of New Mexico
Mineral resources, geochemistry, geology of the Lake Superior region

Aleksandra Borysow (aborysow@mtu.edu)
Associate Professor of Physics
PhD, University of Texas—Austin
Theory of atomic and molecular spectroscopy, collision induced spectroscopy

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PhD, University of Texas—Austin
Experimental atomic and molecular physics, high-resolution absorption and laser-induced fluorescence spectroscopy

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PhD, University of Oregon
Emerging Latin American fiction and narrative including testimonial and essays by Latin American women writers

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PhD, Purdue University, W. Lafayette
French and Francophone language, literature and culture; eighteenth-century studies; women's studies

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Rhetoric and professional communication, Gender studies,
Philosophy of technology,
Qualitative ethnographic research methods and methodologies

Noah Brosch
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PhD, University of Leiden, The Netherlands
Astronomy, Astrophysics

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PhD, Indiana University—Bloomington
Quantum chemistry

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Associate Professor of Theatre
PhD, University of Missouri—Columbia
Theatre

Mari W. Buche (mwbuche@mtu.edu)

Assistant Professor of Information Systems (School of Business & Economics
PhD, University of Kansas
Fundamental concepts in management information systems and workforce issues

Judith W. Budd (jrbudd@mtu.edu)
Research Assistant Professor of Geological and Mining
Engineering and Sciences and Biological Sciences
PhD, Michigan Tech University
Limnology, aquatic ecology; remote sensing of lake properties

William M. Bulleit, PE, (wmbullei@mtu.edu)
Professor of Civil and Environmental Engineering; Adjunct
Associate Professor of Wood Engineering,
School of Forest Resources and Environmental Science
PhD, Washington State University
Structural reliability, probabilistic mechanics, timber engineering, prestressed concrete, structural wood composites

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Associate Professor of Electrical and Computer Engineering
PhD, University of California—Irvine
Control systems and signal processing, vision-based control of aerospace systems, robust control, adaptive control

Andrew J. Burton
Research Assistant Professor,
School of Forest Resources and Environmental Science
PhD, Michigan Technological University
Forest ecology, forest soils, below ground carbon and nutrient cycling, responses of forests to global change, root ecology and physiology

Victor B. Busov
Assistant Professor of Forest Resources and Environmental Science
PhD, North Carolina State University
Forest molecular genetics

Top

C

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