Michigan Tech Create the Future

Graduate Catalog

General Information	About the *Catalog* List of Graduate Faculty
Course Descriptions	Graduate Course Descriptions Undergraduate Course Descriptions Online Courses
Degree Requirements	General requirements for all degrees Doctor of Philosophy Master of Engineering Master of Forestry Master of Science Master's International Peace Corps Program Master's Path (for students who have completed a three year bachelor's program outside the US.) Certificate Programs Non-degree Graduate Option Off-campus programs with partnered sponsors

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To All Grad Students at Michigan Tech...

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. The Graduate School Catalog as well as the Graduate School website will familiarize you with graduate programs available at Michigan Tech as well as relevant policies. Information about other University policies is available in the Michigan Tech Student Handbook.

The Graduate School Office makes every effort to provide accurate, current information regarding Graduate School and University policies. Michigan Tech's Graduate School thus reserves the right to change without notice statements in the Catalog concerning rules, policies, fees, curricula, courses, and/or other matters.

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Graduate Faculty at Michigan Tech

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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 and GPA Requirements

Thirty credits beyond the bachelor's degree are required for most master's programs, though some require more. The distribution of credits among coursework, practicum, and research credits will vary depending on the master's plan chosen. See the Graduate Program websites for detailed information about individual programs.

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

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 graduate program'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.

Neither audit, nor continuous enrollment and other pass/fail courses, may be used toward the total number of credits required. The only non-graded credits that count toward a degree are research credits, which are marked satisfactory/unsatisfactory.

Students must maintain an overall 3.0 GPA for all coursework taken as a graduate student. No course in which a grade lower than B (3.0) is received may be used toward a graduate degree without express permission of the Department Chair or Graduate Program Director.

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, these 3½ 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).

Residency Requirements—Academic

Residency requirements differ among degree programs. Please refer to the specific guidelines for the different degree 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 made by the advisor to the 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 graduate program, however, since requirements beyond the minimum may vary from program to program.

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

Michigan Tech Create the Future

Doctor of Philosophy

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Search

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 Michigan Tech master's student applying to a doctoral program, and substitution of the D1 for a regular application is okay with your program, file an Acceptance into the Doctorate Program form (D1)
- choose an advisor and file a Recommended Advisor form (D2)
- file a Preliminary Program of Study form with your program - this form is not required by the Graduate School (D3)
- successfully complete the comprehensive exams report on the Comprehensive Examination form (D4, D4-EngPhysics)
- choose an advisory committee and chair and file a Recommend Advisory Committee form (D4A)
- 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)
- submit the corrected, approved dissertation and associated forms
- finish the degree within the prescribed time limit
- Forms are available on-line at http://www.gradschool.mtu.edu/forms/tracking.html

In addition to the Graduate School requirements, which are described below, individual programs may have higher standards. Students are expected to know their program'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— There are no university-wide, on-campus residency requirements. Some degree programs have specific requirements. Doctoral students must complete the equivalent of at least four semesters of full-time study through Michigan Tech beyond attainment of a bachelor's degree, or the equivalent of at least two semesters of full-time study beyond attainment of a master's degree. Research credits used to satisfy degree requirements must be taken through Michigan Tech and must be supervised by a member of the Michigan Tech graduate faculty. No more than one-third of a graduate student's course work can be completed elsewhere.

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 programs may require a foreign language. Each program is responsible for establishing standards and examination procedures where a foreign language is required. Doctoral students should consult with their advisory committee concerning program regulations.

Advisory Committee

During the student's first semester of residence, an Advisor will be chosen to assume initial responsibility for the direction of the student's educational program and to hold meetings as needed to fulfill this responsibility. It is also possible that other members of the advisory committee will be chosen at the same time as the advisor. The advisor and committee, consisting of at least two members of the graduate faculty in addition to the advisor, will be appointed by the chair of the major department or program with the approval of the Graduate School and filed on the D2 and D4A forms. 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. A worksheet, Preliminary Program of Study (form D3), may be used to record this plan. This form is not required to be submitted to the Graduate School, but may be required by some programs and if so, should be submitted to the department.

Proficiency Examinations—Exams may be scheduled as necessary by the department or program to assist in planning students' study programs or to determine the advisability of students 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 Chair 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 abstract. There is no word length requirement for the abstract, but students are advised that many databases will truncate the abstract at 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 Scheduling of Final Examination Form (D7) has been received. A completed draft of the dissertation must be approved by the Advisory Committee Chair 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 corrected dissertation, as approved by the committee, along with an original signature page (advisor and department chair signatures), is submitted to the Graduate School Office as a pdf file on CD for printing and binding. The J. R. Van Pelt Library archives all doctoral dissertations. A paper copy, printed single sided, 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 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 outside the student's administrative home department. The primary advisor, or a co-advisor who serves as chair of the committee, must be from the student's home department. For interdisciplinary and non-departmental programs, the outside examiner may not be affiliated with the interdisciplinary or non-departmental program. A person external to Michigan Tech may be appointed as an ad hoc member of the Graduate Faculty to serve as the outside examiner. Persons who are not members of the Graduate Faculty may not serve as voting members of doctoral examination committees.

The examination will be scheduled, by filing the Scheduling of Final Oral Examination form (D7) with the Graduate School, in consultation with the chair of the Advisory Committee. An electronic version of the abstract in Word (*.doc) format must be sent to the Graduate School at the same time the D7 is submitted. 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. 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 program'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	Done	
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 the Director of your Graduate Program, perhaps after a preliminary exam.
		Make sure the Graduate School has *official* final transcripts showing proof of your previous degrees (if not from Michigan Tech).

		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 program 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 Advisor—Your department chair/Graduate Program Director appoints an advisor to meet with you and prepare a program of courses and research work. If at any time you wish to change advisors, it should be approved by the department chair and reported to the Graduate School. Arrange a meeting with your advisor to work on the D3 and plan your degree path.
		D3, Preliminary Program of Study—This is a list of all courses you have completed since you received your BS and any additional courses your committee says you should take. This form is for student planning purposes only and is not submitted to the Graduate School. If credit transfers are necessary, use the Transfer Credits form.
		Proficiency Examination—if required by program
		Modern Language Requirements—if required by program
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 906-487-2902.
		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, D4-EngPhysics, Report on the Comprehensive Examination—Comprehensive exams must be completed and recorded in Banner within 5 years of starting the program and at least two terms prior to the dissertation defense. Results are recorded in Banner by graduate program staff. This form is for use by programs for internal record-keeping and verification of exam results and should not be sent to the Graduate School.
		D4A, Recommended Advisory Committee—Your department chair/Graduate Program Director appoints an advisory committee of graduate faculty members to meet with you and prepare a program of research work. Any changes in the membership of this committee should be approved by the department chair and reported to the Graduate School. Arrange a meeting with your committee to work on D5 and plan your research path.
		D5, Degree Schedule—The Graduate School can start verifying your grades immediately. Your copy will be returned to you.
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 Graduate School at least two weeks before the defense date but after the examining committee has approved your draft. The examining (defense) committee must be comprised of at least four graduate faculty members, including at least one from a cognate department. Non-Michigan Tech members of your committee must be appointed to the Graduate Faculty. 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/program may hold the signed form for up to two weeks following the defense; research grades will not be changed until this form is in the Graduate School.
		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. Complete pages 3 and 4 of the UMI dissertation publishing document and submit them to the Graduate School. Read the document attached to your copy of the signed D7 carefully for other details related to completing your degree and submitting your dissertation. Bring a CD containing your dissertation no later than 4pm of the first day of classes of the following semester along with the following documents: • TD-Bindery • UMI dissertation paper copy or second CD with links/bookmarks • UMI dissertation submission form pages 3 and 4 (please note that effective Summer 2008, the UMI publishing fee will increase from $55 to $65) • Payment receipt (obtained from the Cashier's Office AFTER presenting the invoice in TD-Bindery to the Graduate School for verification) • Two paper copies of the title page • One paper copy of the abstract • Original signature page • Survey of Earned Doctorates (*NEW* A paper copy is mailed to you with your approved D7. It is also available as a pdf document) • Life After Michigan Tech form • Signed D8 if not already sent by program to Graduate School • Signed M7/D9 and a third CD with links/bookmarks if you wish to upload your dissertation to the Michigan Tech library You can usually receive a certification letter after a degree audit is done by the Graduate School if all your degree requirements are complete. Please also take the Exiting Graduate Student Survey. This is optional, but will be very much appreciated.
		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 Graduate School and your advisor are aware of your commencement plans early in the commencement semester.

* All these forms can be sent to the Graduate School by your Graduate Program Assistant via campus mail. Copies of signed forms will be returned to you and the gradaute program. Be sure to keep a file of your paperwork.

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The Master of Engineering degree is intended to be a terminal professional degree where the candidate demonstrates advanced ability in course work and with an 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
- finish the degree within the prescribed time limit
- file a successful practicum report form.
- Forms on-line at http://www.gradschool.mtu.edu/forms/tracking.html

In addition to the Graduate School requirements, which are described below, individual programs may have higher standards. Students are expected to know their program'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 Michigan Tech. (Note that this is inconsistent with the general requirement that 2/3 of the course work be taken in residence. See Senate Proposal 5-98.)

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 Director of the Graduate Program, but as soon as possible, and by the end of the first semester in residence, a permanent advisor should be chosen. This Michigan Tech 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 at least 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 Graduate School "forms" web page, must be filed during the first week of the second semester 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 Graduate Program Assistant) 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 program'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	Done	Task
		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 Graduate School 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 Graduate School by your Graduate Program Assistant 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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Program Regulations

The program of study for each student will be planned and supervised in accordance with existing University and School policies. The student's Advisory Committee (which includes the student's Advisor) must insure that each M.F. candidate's course work meets the standards of a Master's program. A minimum of 30 course work credit hours beyond the bachelor's degree is required, as well as an oral examination. The proposed Master of Forestry will have completely specified course work requirements.

Master of Forestry (Plan B and Plan C)

The Master of Forestry (M.F.) degree program will be Plans B and C only, and will be directed at students who want a course work-only professional degree or who may be interested in working on a small project with a report. Students in this program will most likely lack a forestry background at the Bachelors level, and would find the Master of Forestry degree more appropriate than any of the other options within the School. The structure of this program is significantly different from our present Master of Science in Forestry and from the proposed Master of Science Degree programs in Forest Ecology and Management, Applied Ecology, and Forest Molecular Genetics and Biotechnology. In addition to a Bachelors degree, students applying for this program are expected to have had 1 semester of Chemistry, and 1 semester of Elementary Statistics. The curriculum for Plan C is listed below. Students completing plan B may choose to take 2-6 research credits in lieu of the required course work listed below, upon consultation with their advisor. Curriculum:34 credits, depends on previous course work (at a minimum 30 credits)

Fall Semester (11 credits)
FW5510 Measuring Forest Resources & Vegetation of North America (4 cr)
FW3020 Forest and Landscape Ecology (3 cr)
FW3330 Soil Science (4 cr)
Spring Semester (13 credits)
FW3110 Natural Resource Policy (3 cr)
FW3540 Remote Sensing/GIS (4 cr)
FW4130 Biometrics (2 cr)
FW5080 Advanced Forest Economics and Finance (3 cr) NEW COURSE
FW5800 Master's Graduate Seminar (1 cr)
Fall Semester (10 credits)
FW5510 Special Topics in Natural Resources (1 cr)
FW5700 Graduate Field Forestry (7 cr)
FW5760 Graduate Tropical Forestry (2 cr)

Advisory Committee

The student's Graduate Advisory Committee should be appointed by the second semester of residence. The Advisory Committee will consist of at least four members, including one member designated as Chair. The chair is the student's graduate advisor. The Chair must be a member of the School of Forest Resources and Environmental Science and the Michigan Tech Graduate School faculty. At least one member of the Advisory Committee must be from outside the School. The Advisory Committee must approve the report (Plan B), and the necessary course work to successfully complete the project. The student's Advisor is responsible for ensuring the report (Plan B) is within the capability of the student and can be completed within a reasonable period of time. The Advisor and the Advisory Committee are responsible for ensuring the report (Plan B) and course work (Plans B and C) fall within the Masters program selected by the student and the student's Advisor. The role of the Advisory Committee for Plan C students is to help the student

choose course work, keep track of the student's progress in his/her course work, and to test the student's knowledge on his/her course work at the student's oral defense.

General Procedures

A plan of work showing the courses to be taken, the topic of the report (Plan B), and the report format (Plan B) will be prepared by the student with his/her Advisor. The student's Advisory Committee will review the course work (Plans B and C) and design of study (Plan B) by the end of the second or third semester in residence. For a plan B Masters, the study plan must be presented to the student's Advisory Committee no later than the end of the second semester in residence. A copy of the approved study plan will be given to all committee members once approved by the Advisory Committee.All graduate students are required to be enrolled each academic semester following entry into the Masters program until completion of all degree requirements. A full-time student on an assistantship must enroll in a minimum of 9 credit hours per semester and not more than 12 credit hours each semester. During the summer, a full-time student on an assistantship must enroll for one credit hour.All Masters students will go through an oral defense. The oral defense for Plan B Masters students will focus around the student's report and their course work. Early in the student's last semester, a draft of the report should be submitted to the student's Advisor. Following review and revisions by the Advisor, the report should be submitted to the student's Advisory Committee at least two weeks before the scheduled oral examination. Plan B students must give a scheduled oral presentation before their defense. The oral defense for Plan C students will focus on their course work. All work required for the M.F. degree must be completed within five years after first registering for classes.

Grades

All grades must be B (3.0 on a 4.0 scale) or better in the major subject area. The associate dean of the School of Forest Resources and Environmental Science can approve no more than six credits of C (2.0) in a cognate department. The student must maintain a cumulative grade point average of 3.0 or better.

The master’s degree demonstrates advanced ability. The master’s student must complete the following:

- choose an advisor and file a Recommended Advisor form (M2-GSO)
- file a Degree Schedule form (M4)
- complete the coursework requirements
- complete an oral examination
- finish the degree within the prescribed time limit
- submit an approved document in plans A & B
- Forms are available on-line at http://www.gradschool.mtu.edu/forms/tracking.html

Advisor

Initially the advisor may be the Director of the Graduate Program, but as soon as possible, and no later than the end of the second semester in residence, a permanent advisor should be chosen. This Michigan Tech graduate faculty member advises the student on course selection. 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 semester prior to the defense semester. 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 Michigan Tech may be used for graduate degree credits if the Senior Rule form (available from the Graduate Program Assistant) has been appropriately filed. Courses taken while a post-grad may be used on the Degree Schedule with departmental approval.

Plan B: Report Option (Not offered by all programs)—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 programs)—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

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.

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 program'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	Done	Task
		Enrolling for the first time—Get into course work under the direction of the

		Director of your Graduate Program.
		Make sure the Graduate School has official final transcripts showing proof of your previous degrees (if they are not from Michigan Tech).
		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 program will have its own way of handling this. File an M2-GSO form.
		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/Graduate Program Director 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 program 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 programs 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/program may retain your M6 for up to two weeks following the defense while you make corrections; research grades are not changed until the M6 is in the Graduate School.
		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 Graduate School, in a sturdy binder suitable for archiving in the Library. (Your advisor/program may want more copies.) Plan A thesis: The Graduate School requires the approved copy converted to .pdf and saved on CD. See the thesis procedures page for instructions on how to submit and format the thesis.
		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 Graduate School and your advisor are aware of your commencement plans at the beginning of the commencement semester.
* All these forms can be sent to the Graduate School by your Graduate Program Assistant via campus mail. Copies of signed forms will be returned to you and the program. Be sure to keep a file of your paperwork.		

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Master of Science

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 Recommended Advisor form (M2-GSO)
- file a Degree Schedule form (M4)
- complete one of three option plans: Note that plans B, C, and D are not offered by all programs.

  plan A—thesis and course work
  plan B—report and course work*
  plan C—course work with oral exam
  plan D—course work only

- complete an oral examination
- finish the degree within the prescribed time limit
- submit an approved document in plans A & B
- Forms are available on-line at http://www.gradschool.mtu.edu/forms/tracking.html

In addition to the Graduate School requirements, which are described below, individual programs may have higher standards. Students are expected to know their program'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—There are no university-wide, on-campus residency requirements. Some degree programs have specific requirements. A minimum of two-thirds of the required non-research course-work credits required for the degree must be taken through Michigan Tech. Research credits used to satisfy degree requirements must be taken through Michigan Tech and must be supervised by a member of Michigan Tech graduate faculty.

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 Director of the Graduate Program, but as soon as possible, and no later than the end of the second semester in residence, a permanent advisor should be chosen. This Michigan Tech 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. Students in all plans must have an advisor.

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 semester prior to the defense semester. 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 Michigan Tech may be used for graduate degree credits if the Senior Rule form (available on-line) has been appropriately filed. Courses taken while a post-grad may be used on the Degree Schedule with program approval.

Changes in the Degree Schedule—Any changes must be approved. The advisor must communicate approval of changes to the degreee schedule to the Graduate School.

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, along with an original signature page (advisor and department chair signatures) 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 including an original signature page 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 programs)—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

Coursework Master's (Not offered by all programs)—This plan requires the minimum 30 credits be earned through course work.

Two Options within the Coursework Master's are available. Both options require the student to have an advisor. Only one of the two options may be offered by a single degree program:

- Plan C requires a comprehensive oral examination.
- Plan D does not require a comprehensive oral examination. Research credits taken by students in Plan D may NOT be counted as coursework credits.

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

Oral Examination

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—The examination committee will be appointed by the dean of the Graduate School in consultation with the department chair. The committee will consist of at least three members of the graduate faculty. At least one of these will be from outside the student's administrative home department. The primary advisor, or a co-advisor who serves as chair of the committee, must be from the student's administrative home 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 program'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	Done	Task
		Enrolling for the first time—Get into course work under the direction of the Director of your Graduate Program.
		Make sure the Graduate School has official final transcripts showing proof of your previous degrees (if they are not from Michigan Tech).
		Fill out Patent, Research, and Proprietary Rights form.
		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 program will have its own way of handling this. File your M2-GSO form with the Graduate School.
		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 and Graduate School of any changes in your status, address, 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/Graduate Program Director and your department chair, any changes must also have the advisor's 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 three-member examining committee and schedules your oral examination. (Check program policy on choosing your committee.)
		At least two weeks prior to your defense, distribute copies of the thesis/report to the examining committee.
		Oral Examination—Faculty and students will be invited to attend your presentation. It is wise to attend a few of these early in your tenure at Tech. Some programs 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/program may retain your M6 for up to two weeks following the defense while you make corrections; research grades are not changed until the M6 is in the Graduate School.
		Submission of final document — For Plan A Thesis and Plan B Report, make corrections as indicated by your committee. Get the signature page signed. For a Plan A Thesis, bring a CD with your approved document in .PDF format to the Graduate School. For a Plan B Report, bring one paper copy to the Graduate School, in a sturdy binder suitable for archiving in the Library. (Your advisor/program may want more copies.) All thesis option students and any report option students who want professional binding should also bring: • TD-Bindery • Payment receipt (obtained from the Cashier's office AFTER presenting the invoice in TD-Bindery to the Graduate School for verification) • One paper copy of the title page • Original signature page ALL students must submit (Plans A, B, C, D): • Life After Michigan Tech form Please also take the Exiting Graduate Student Survey. This is optional, but will be very much appreciated.
		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 if needed. 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 Graduate School and your advisor are aware of your commencement plans six weeks before the commencement date.
* All these forms can be sent to the Graduate School by your Graduate Program Assistant via campus mail. Copies of signed forms will be returned to you and the graduate program. Be sure to keep a file of your paperwork.		

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Peace Corps Master's International Programs

General Information

Students may earn an MS in conjunction with the US Peace Corps, combining academic study in the fields listed below with supervised, practical field experience and research. A brochure with overviews of all of the disciplines is here.

- Forestry
- Civil Engineering
- Environmental Engineering
- Mitigation of Natural Geological Hazards (Geological Engineering, Geology, Geophysics)
- Applied Science Education

After completing a program of on-campus academic work, students serve two years with the US Peace Corps. Students return to campus for one additional semester following their Peace Corps tour to complete their degree requirements. Additional information on each program available through the links above.

Graduate School Policies

Policy for Peace Corps Status

Graduate students entering any of the Peace Corps Master's International Programs on campus receive Peace Corps status and are eligible for the Peace Corps tuition rates and support from the Graduate School for tuition while serving in Peace Corps.

1. Any student who enters their Peace Corps country of service after successfully completing Peace Corps staging maintains Peace Corps status unless they are administratively separated or early terminate their service.

   Students who are administratively separated or early terminate may appeal to maintain Peace Corps status. The appeal is made to a committee composed of the program directors of the Michigan Technological University Peace Corps Master's International Programs. Appeals are approved at a meeting of the coordinators where a majority of the coordinators constitutes a quorum. Meetings may be held in person or electronically. Appeals to reinstate Peace Corps status must receive approval by a majority of the coordinators who are present. If the student is not satisfied with decision of the committee, the student may appeal to the dean of the Graduate School. The decision of the dean of the Graduate School is final. Appeals may be made at any time prior to graduation, however decisions are not retroactive. Therefore, it is in the student's best interest to appeal promptly if the student wishes to maintain Peace Corps enrollment status.

2. Any student who is medically declined by Peace Corps maintains Peace Corps status.

3. Students who do not enter a country of service, except those medically declined by Peace Corps, lose Peace Corps status. This group of students includes those students who voluntarily choose to change programs including, but not exclusively, those who are medically deferred.

4. Any student who loses Peace Corps status must develop a new graduate committee and find a new

advisor. This responsibility lies with the student and not the department or school. This change of status is a change of graduate programs and acceptance into the new graduate program is at the discretion of the coordinator, director, dean, or department chairs responsible for the new graduate program selected by the former Master's International graduate student. The new advisor and student will be required to file a new set of forms with the Graduate School.

This policy is effective for all students who entered a Peace Corps Master's International Program in the 2006-2007 academic year or in subsequent years. Students who entered before the 2006-2007 academic year are covered by the previous policy.

Policy for Language Credit

Up to 2 credits of 1000 or 2000 level language may be counted towards completion of a Peace Corps Masters International degree and may be considered as substitutes for 3000 or 4000 level credits in the degree schedule.

Policy for Thesis Research Credit

Students pursuing thesis option MS degrees may count up to 4 of their "in-country" CE5994, FW5730, or GE5994 credits as thesis research credits if they conducted research while serving in the Peace Corps.

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Master's Path Program

For students who have completed a three-year bachelor's program outside the US. See our brochure for more information.

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-three disciplines in the sciences, engineering, forestry, communications, social sciences, and business.

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, official transcripts
- Three letters of reference
- Adequate academic achievement in pursuit of the three-year degree
- GRE/general test results, if required by graduate program,
- Proof of English proficiency TOEFL (at least 550 written, 213 computer-based, or 79 internet based) or ILETS (a score comparable to TOEFL requirements)

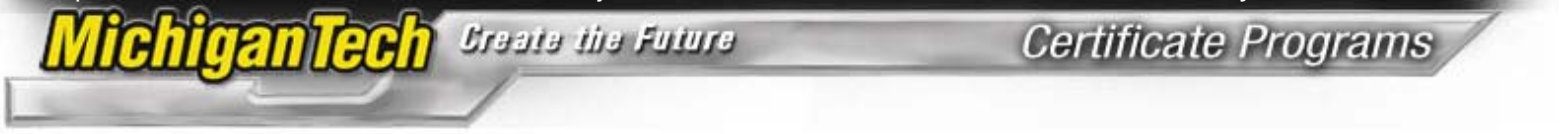
Master's Path Curriculum

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 graduate program's graduate committee, which delineates the specific course requirements needed for completion of the master's degree.

Based on the specific Michigan Tech 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 semester 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 semester, they may, at the discretion of their advisor, be eligible for a research and/or teaching stipend.

Master's Path course planning form here.

Last reviewed on 11/06/2007 Contact Webmaster.



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Graduate Certificates can be obtained concurrently with a graduate degree or can be obtained by students who have completed an undergraduate degree and apply to Michigan Tech as non-degree graduate students. Undergraduate/Graduate 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.sfi.mtu.edu/grad_certificate_for_web.htm.

Graduate Certificate in Nanotechnology — The Graduate Certificate in Nanotechnology recognizes advanced study of scientific, technological, and engineering topics in nanotechnology, including aspects of (i) characterization, (ii) micro- to nano-scale fabrication and control, and (iii) devices, systems and integration. The certificate also requires study of the societal and ethical implications of emerging technologies.

Graduate Certificate in Advanced Electric Power Engineering— The Graduate Certificate in Advanced Electric Power Engineering program provides the student with advanced knowledge of the operation and design of electric power systems.

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 Cognitive & Learning Sciences for specific requirements.

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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.
- 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 program 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. Departmental approval is not required as it is for applications to a graduate program, though the Graduate School may request review by the academic department. A completed application for non-degree graduate status includes:

- Application Form
- 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 Michigan Tech meets your requirements and expectations.

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. Michigan Tech 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 2006-2007 is $500 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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Michigan Tech promotes knowledge enrichment and personal development through graduate level credit courses and programs, as well as noncredit courses and seminars offered via on-line and distance delivery technologies to individuals and corporate sponsors. For information about Michigan Tech's off-campus options for individuals outside of partnership agreements, visit Tech Online. Most on-line courses are delivered via streaming video and WebCT. A preview of a streamed video lecture can be found on this page.

Partnered Research Master's and PhD Degrees

- Partnered Master's Options
- Partnered Doctoral Options

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 Michigan Tech graduate degrees. The public defense of theses, dissertations, reports, projects, and plan C coursework should preferably occur on campus. Students in partnered programs may take up to 1/3 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 Michigan Tech 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., Michigan Tech faculty time on site with the student, summer school residency, video-conferences for periodic reviews, etc.

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 preferably conducted on the Michigan Tech campus.
- additional periodic visits to the Michigan Tech campus in Houghton.
- Michigan Tech 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 Michigan Tech campus, which can be met by enrollment in the full (14-week) summer session.

For more information contact Jacque Smith in the Graduate School at 1.906.487.1434, or via e-mail.