Department of Kinesiology and Integrative Physiology College of Sciences and Arts Michigan Technological University

Graduate Handbook Kinesiology MS Program

Integrative Physiology PhD Program

Updated January 2020



Department of Kinesiology and Integrative Physiology 1400 Townsend Dr Houghton, MI 49931

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GRADUATE PROGRAM CONTACTS

Department Administration

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Kyle Bolen, MS Graduate Internship Coordinator 906-487-3185 kabolen@mtu.edu

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Graduate School Administration

Nancy Byers Sprague Director of Graduate Degree Services 906-487-2755 jppmurthy@mtu.edu

Pushpalatha Murthy, PhD Dean of Graduate School 906-487-2326 jppmurthy@mtu.edu

Important Websites

Department of Kinesiology and Integrative Physiology http://www.mtu.edu/kip/degrees/kinesiology/

Graduate School http://www.mtu.edu/gradschool/

DEPARTMENT FACULTY

Megan Frost, PhD, Associate Professor, Department Chair

Research Interests: Nitric oxide releasing polymers, implantable sensors, biological response to polymeric materials

William Cooke, PhD, Portage Health Endowed Professor

Research Interests: Autonomic cardiovascular control in humans, orthostatic and simulated orthostatic stress, exercise interventions for obesity, diabetes, and hypertension, frailty in older adults, injury and device development

Steven Elmer, PhD, Associate Professor, Graduate Program Director

Research Interests: Exercise physiology, muscle contraction, cycling biomechanics, limits to human performance, teaching of physiology

Qing-Hui Chen, PhD, Associate Professor

Research Interests: Neurophysiology, cardiovascular physiology, cardiovascular diseases, metabolic disorders

Zhiying (Jenny) Shan, PhD, Associate Professor

Research Interests: Neuroinflammation, neurogenic hypertension, salt sensitive hypertension

Kevin Trewartha, PhD, Assistant Professor

Research Interests: Aging, motor learning, sensorimotor neuroscience

Carolyn Duncan, PhD, Assistant Professor

Research Interests: Biomechanics, ergonomics, neuromuscular control of human movement

<u>Kelly Kamm, PhD, Assistant Professor</u> Research Interests: epidemiology, public health

Kyle Bolen, MS, Lecturer and Graduate Internship Coordinator

Research Interests: Exercise science, strength and conditioning

Lydia Lytle, DPT, Lecturer

Research Interests: Evidence-based rehabilitation

GENERAL POLICIES

All students should be aware of the following policies.

Academic Integrity

Academic regulations and procedures are governed by University policy (admin.mtu.edu/usenate/policies/p109-1.htm). Academic misconduct cases will be handled in accordance the University's policies.

<u>Assessment</u>

Student work products (exams, essays, projects, etc.)

(admin.mtu.edu/usenate/policies/p312-1.htm) may be used for the purposes of university, program, or course assessment. All work used for assessment purposes will not include any individual student identification.

Disability Services

If you have a disability that could affect your performance in any class or that requires an accommodation under the Americans with Disabilities Act, please contact your instructor or <u>Disability Services</u> (mtu.edu/deanofstudents/students/disability/) at 487-1494 as soon as possible so that appropriate arrangements can be made.

The Office of Institutional Equity

Michigan Technological University complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. Michigan Tech has a policy of affording equal opportunity (mtu.edu/equity) 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, gender identity, height, weight, genetic information, or marital status, disabled veteran status, veteran status, or disability.

Equal Opportunity, Discrimination, or Harassment Statement

For other <u>concerns about discrimination</u> (admin.mtu.edu/admin/boc/policy/ch5/), you may contact your advisor, Chair/Dean of your academic unit, Dean of Students Office at 487-2212 or The Office of Institutional Equity at 487-3310. Discrimination and harassment are not tolerated.

MASTER'S PROGRAM IN KINESIOLOGY (MS)

<u>Overview</u>

The Master of Science in Kinesiology at Michigan Tech provides an excellent education paired with advanced research opportunities in health and human movement, which add up to a competitive edge for graduates. Our program offers both a course work option and a thesis option. The course work option includes a more directed course work plan that is capped with an extended internship experience in cardiac rehabilitation, strength and conditioning, or fitness training/management. The thesis option includes course work and research in exercise and integrative physiology, biomechanics, or human performance.

MS in Kinesiology – Accelerated Course Work Option

30 total credits for MS degree

- Minimum of 18 credits (5000-6000)
- Maximum of 12 credits (4000)
- Up to 6 credits can double-count (e.g., KIP 4100, KIP 4200), 3 credits for senior rule

Required core courses (18-21 credits)

- KIP 5700 Graduate Seminar (1 credit x 2 semesters)
- KIP 5900 Graduate Kinesiology Internship (4-6 credits)

At least two of the following:

- KIP 5000 Advanced Exercise Physiology (3 credits)
- KIP 5100 Advanced Biomechanics (3 credits)
- KIP 5300 Advanced Motor Behavior (3 credits)

At least one of the following statistics courses:

- BE 5550: Biostatistics for Health Science Research (4 credits)
- MA 4710: Regression Analysis (3 credits)
- MA 4720: Design and Analysis of Experiments (3 credits)
- MA 5701: Statistical Methods (3 credits)
- PSY 5210: Advanced Statistical Analysis and Design I (4 credits)
- PSY 5220: Advanced Statistical Analysis and Design II (4 credits)

Elective courses (10 credits)

See Elective Courses on Requirements webpage (mtu.edu/kip/degrees/kinesiology/requirements/)

<u>Internship</u>

Students will complete a 4-6 credit graduate internship. It is important to plan ahead and discuss possible internship opportunities and logistics with the graduate student internship coordinator. It generally takes a least an entire semester to complete all of the necessary paperwork prior to starting an internship.

Timeline and Milestones for Degree Completion

The table below outlines a typical timeline for reaching key milestones needed for degree completion. Time to degree completion is approximately 1 year (3 semesters)

	Fall	Spr	Sum
Coursework	Х	Х	Х
Internship Planning	Х	Х	
Internship			Х

Year 1

MS in Kinesiology – Course Work Option

30 total credits for MS degree

- Minimum of 18 credits (5000-6000)
- Maximum of 12 credits (4000)

Required core courses (18-21 credits)

• KIP 5700 Graduate Seminar (1 credit x 2 semesters)

• KIP 5900 Graduate Kinesiology Internship (4-6 credits)

At least two of the following:

- KIP 5000 Advanced Exercise Physiology (3 credits)
- KIP 5100 Advanced Biomechanics (3 credits)
- KIP 5300 Advanced Motor Behavior (3 credits)

At least one of the following statistics courses:

- BE 5550: Biostatistics for Health Science Research (4 credits)
- MA 4710: Regression Analysis (3 credits)
- MA 4720: Design and Analysis of Experiments (3 credits)
- MA 5701: Statistical Methods (3 credits)
- PSY 5210: Advanced Statistical Analysis and Design I (4 credits)
- PSY 5220: Advanced Statistical Analysis and Design II (4 credits)

Elective courses (10 credits)

See Elective Courses on <u>Requirements webpage</u> (mtu.edu/kip/degrees/kinesiology/requirements/)

<u>Internship</u>

Students will complete a 4-6 credit graduate internship. It is important to plan ahead and discuss possible internship opportunities and logistics with the graduate student internship coordinator. It generally takes a least an entire semester to complete all of the

necessary paperwork prior to starting an internship. Internships are performed after the majority of coursework is completed.

Timeline and Milestones for Degree Completion

The table below outlines a typical timeline for reaching key milestones for degree completion. Time to degree completion is approximately 2 years (4 academic semesters)

Requirement	Fall	Sp	Sum
Coursework	Х	Х	
Internship Planning			Х
Internship			

Year	1
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Year 2					
Requirement	Fall	Sp	Sum		
Coursework	Х	Х			
Internship Planning	Х				
Internship		Х	Х		

MS in Kinesiology - Thesis Option

30 total credits for MS degree

- Minimum of 18 credits (5000-6000)
- Maximum of 12 credits (4000)

Required core courses (8-9 credits)

• KIP 5700 Graduate Seminar (1 credit x 2 semesters)

At least one of the following:

- KIP 5000 Advanced Exercise Physiology (3 credits)
- KIP 5100 Advanced Biomechanics (3 credits)
- KIP 5300 Advanced Motor Learning and Control (3 credits)

At least one of the following statistics courses:

- BE 5550: Biostatistics for Health Science Research (4 credits)
- MA 4710: Regression Analysis (3 credits)
- MA 4720: Design and Analysis of Experiments (3 credits)
- MA 5701: Statistical Methods (3 credits)
- PSY 5210: Advanced Statistical Analysis and Design I (4 credits)

• PSY 5220: Advanced Statistical Analysis and Design II (4 credits)

Research Credits (at least 6 credits)

Talk with research advisor

Elective Courses (12 credits)

See Elective Courses on Requirements webpage (mtu.edu/kip/degrees/kinesiology/requirements/)

Advisor and Committee Selection

The selection of who will be your advisor is your decision. Seek a faculty member whose research interests match your own. A good student-faculty match of personalities is important. This relationship will last a number of years and your advisor will open many doors toward your career, even after you graduate. Make sure that the faculty member is someone you can work with for that long.

MS students must choose a primary advisor (or co-advisors) no later than the end of the first year. The primary advisor must hold a regular or affiliated appointment in the Department of Kinesiology and Integrative Physiology and will chair the committee. The primary advisor will help the student select members of the advisory committee. The advisory committee will consist of: 1) primary advisor/committee chair, 2) one graduate faculty member within the department, and 3) at least one graduate faculty from outside the department. The advisory committee should be formed within the first year of study.

Thesis Proposal

A research proposal must be presented in written and oral format. The preparation and presentation of the research proposal is intended to give students experience in developing original ideas and presenting them to the scientific community. The specific content and length of the written thesis proposal will be determined by the advisory committee. The written thesis proposal typically contains a review of the literature followed by aims/hypotheses, methods, and pilot data for the proposed studies.

The proposed research will also be publicly presented as an oral presentation (~25-30 min). The presentation should describe the original research concept with clear objectives, documentation from the literature, defined methods, and anticipated results and/or pilot/preliminary data. The advisory committee along with students and faculty in the department will attend the oral presentation. After open questions from the audience, the advisory committee will ask questions based on both the written and oral portions of the thesis proposal. If the advisory committee determines that the minimum requirements were not met, they may require further work.

Written Thesis

The thesis will be written and prepared under the supervision of the committee chair and the advisory committee according to the requirements of the Graduate School.

Thesis Defense/Final Oral Examination

The thesis research will be publicly presented as a seminar (~30-35 min) as part of the final oral examination. The advisory committee along with students and faculty in the department will attend the thesis defense seminar. After open questions from the audience, the advisory committee conducts a private oral examination of the student. Any corrections to the written thesis that were requested by the advisory committee must be made and new signatures obtained on the final new version. Students who do not successfully pass their thesis defense/final oral examination will be allowed one more opportunity to do so. If a student does not successfully complete the thesis defense/final oral exam in two attempts, the Graduate Program Director will request that the Dean of the Graduate School dismiss the student for lack of progress.

Timeline and Milestones for Degree Completion

The table below outlines a typical timeline for reaching key milestones for degree completion. Time to degree completion is approximately 2 years (4 semesters)

Requirement	Fall	Sp	Sum
Coursework	Х	Х	Х
Thesis Proposal			Х
Thesis Research			X
Dissertation Defense			
Annual Evaluation			Х

Year 1

Year 2					
Requirement	Fall	Sp	Sum		
Coursework	Х				
Thesis Proposal	Х				
Thesis Research	Х	Х	X		
Dissertation Defense		Х	Х		
Annual Evaluation			Х		

MS Documentation and Deadlines

Students are expected to work with their academic advisor to ensure that all of their graduate student safety training and degree completion forms are completed in a timely manner. Forms can be accessed by students from the graduate school website under Forms and Deadlines. (mtu.edu/gradschool/policies-procedures/forms-deadlines/) Failure to complete these forms can delay graduation.

Required	Due Date
Safe Training	First Week
Campus Clarity training	First Week
Basic and Advanced RCR/CITI Training	First Week
Advisor Committee Recommendation*	Second Semester
Degree Schedule	Semester BEFORE graduation
Degree Completion	Semester of graduation
Commencement Application	10 wks before graduation
Workspace cleanout	Final week of final semester
Verification of Final Degree Requirements	Final week of final semester
Complete Exit Survey	Final week of final semester

* Accelerated Masters students should fill this out in their FIRST semester

Timeline and forms can be found on the <u>Graduate School website under Policies and</u> <u>Procedures – Degree Completion Timelines</u>. (mtu.edu/gradschool/policiesprocedures/timelines/)

Completing Forms

- 1. Student fills out the form, prints, and saves a copy
- 2. Student obtains signature from graduate advisor
- 3. Graduate advisor obtains signature from graduate program director
- 4. KIP main office sends completed form to the Graduate School
- 5. KIP main office provides copy of form to student
- 6. Student confirms that form was received by Graduate School
 - a. Saves confirmation email from graduate school office (Nancy Byers-Sprauge)
 - b. Checks on mymichigantech portal

DOCTORAL PROGRAM IN INTEGRATIVE PHYSIOLOGY (PHD)

Overview

The Doctor of Philosophy in Integrative Physiology at Michigan Tech is designed for students who wish to pursue careers in academia, research, or industry in the areas of integrative and exercise physiology, human biomechanics, and motor learning.

Degree Requirements

30 total credits for PhD degree (beyond MS degree)

- 10 required KIP credits
- 3-4 credits of Statistics
- 16-17 credits of electives and research

Required KIP courses (10 credits)

- KIP 5000: Advanced Exercise Physiology (3 credits)
- KIP 5500: Systems Physiology (3 credits)
- KIP 5100: Advanced Biomechanics (3 credits) OR
- KIP 5510: Molecular Physiology (3 credits)
- KIP 6100: Doctoral Graduate Seminar (1 credit)*

At least one of the following:

- BE 5550: Biostatistics for Health Science Research (4 credits)
- MA 4710: Regression Analysis (3 credits)
- MA 4720: Design and Analysis of Experiments (3 credits)
- MA 5701: Statistical Methods (3 credits)
- PSY 5210: Advanced Statistical Analysis and Design I (4 credits)
- PSY 5220: Advanced Statistical Analysis and Design II (4 credits)

Remaining credits are dissertation research and/or electives

Talk with advisor each semester about specific research and elective credits * offered every 1-2 years

Advisor and Committee Selection

The selection of who will be your advisor is your decision. Seek a faculty member whose research interests match your own. A good student-faculty match of personalities is important. This relationship will last a number of years and your advisor will open many doors toward your career, even after you graduate. Make sure that the faculty member is someone you can work with for that long.

Doctoral students must have a primary advisor (or co-advisors) prior to starting the program. The primary advisor must hold a regular or affiliated appointment in the Department of Kinesiology and Integrative Physiology and will chair the committee. The primary advisor will help the student establish the advisory committee. The advisory committee will consist of: 1) primary advisor/committee chair, 2) two graduate faculty

members within the department, and 3) at least one graduate faculty from outside the department. The advisory committee should be formed within the first year of doctoral study.

Qualifying Exam

The qualifying exam will consist of a written and oral examination, and will evaluate fundamental and applied topics in integrative physiology. The primary advisor will be responsible for soliciting the advisory committee members for content and assessment. Graduate students typically take the qualifying exam during their second year of doctoral study (following completion of most of the coursework). After students pass the written portion of the exam they will proceed to the oral portion of the exam. Students who do not successfully pass their qualifying examination will be allowed one more opportunity to do so. If a student does not successfully complete the oral exam in two attempts, the Graduate Program Director will request that the Dean of the Graduate School dismiss the student for lack of progress.

Dissertation Proposal

A research proposal must be presented in written and oral format. The preparation and presentation of the research proposal is intended to give students experience in developing original ideas and presenting them to the scientific community. All successful research scientists must be able to present and defend their ideas to scientists, sponsors including government agencies and industry partners, employers, and general public.

The specific content and length of the written dissertation proposal will be determined by the advisory committee. The written dissertation proposal typically contains a review of the literature followed by aims/hypotheses, methods, and pilot data for the proposed studies.

The proposed research will also be publicly presented as an oral presentation (~35-40 min). The presentation should describe the original research concept with clear objectives, documentation from the literature, defined methods, and anticipated results and/or pilot/preliminary data. The advisory committee along with students and faculty in the department will attend the oral presentation. After open questions from the audience, the advisory committee will ask questions based on both the written and oral portions of the dissertation proposal. If the advisory committee determines that the minimum requirements were not met, they may require further work.

It is expected that at least one of the projects within the proposal will be designed by the student, and include an IRB/IACUC submission and approval. Graduate students should complete their dissertation proposal within six months of completing their qualifying exams and prior to starting the majority of their data collection.

Written Dissertation

The dissertation will be written and prepared under the supervision of the committee chair and the advisory committee according to the requirements of the Graduate School. As stated above, it is expected that at least one of the projects within the final written dissertation will have been designed and led by the student, and will include an IRB/IACUC submission and approval.

Dissertation Defense/Final Oral Examination

The dissertation research will be publicly presented as a seminar (~40-45 min) as part of the final oral examination. The advisory committee along with students and faculty in the department will attend the dissertation defense seminar. After open questions from the audience, the advisory committee conducts a private oral examination of the student. Any corrections to the written dissertation that were requested by the advisory committee must be made and new signatures obtained on the final new version. Students who do not successfully pass their dissertation defense/final oral examination will be allowed one more opportunity to do so. If a student does not successfully complete the dissertation defense/final oral exam in two attempts, the Graduate Program Director will request that the Dean of the Graduate School dismiss the student for lack of progress.

Timeline and Milestones for Degree Completion

The table below outlines a typical timeline for reaching key milestones for degree completion. Time to degree completion is approximately 3-4 years (6-8 semesters).

Requirements	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 3	Year 3	Year 3	Year 4	Year 4
	Fall	Sp	Sum	Fall	Sp	Sum	Fall	Sp	Sum	Fall	Sp
Coursework	Х	Х	Х	Х							
Qualifying Exam				Х	Х						
Dissertation Research					Х	Х	Х	Х	Х	Х	Х
Dissertation Proposal						Х	Х				
Dissertation Defense									Х	Х	Х
Annual Evaluation			Х			Х			Х		

Documentation and Deadlines

Students are expected to work with their academic advisor to ensure that all of their graduate student safety training and degree completion forms are completed in a timely manner. Forms can be accessed by students from the graduate school website under Forms and Deadlines. (mtu.edu/gradschool/policies-procedures/forms-deadlines/) Failure to complete these forms can delay graduation.

Timeline and forms can be found on the <u>Graduate School website under Policies and</u> <u>Procedures – Degree Completion Timelines</u>. (mtu.edu/gradschool/policiesprocedures/timelines/)

Completing Forms

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Degree Schedule	Semester BEFORE graduation
Degree Completion	Semester of graduation
Commencement Application	10 wks before graduation
Workspace cleanout	Final week of final semester
Verification of Final Degree Requirements	Final week of final semester
Complete Exit Survey	Final week of final semester

DEPARTMENT POLICIES

<u>Grades</u>

Graduate students **are expected to obtain a B or higher** in all department courses. In addition, students are expected to obtain a B or higher in courses outside the department. Up to one BC/C grade will be allowed for courses outside the department.

Professionalism

Graduate students are expected to dress professionally, show up on time, and be engaged for all department related events. This includes teaching in the classroom, performing research in the laboratory, attending conferences, working during internships, and participating in community outreach events. Please keep in mind that you are a reflection on the department, college, and university.

Cell Phone Policy

The use of cell phones in the classroom and research laboratory is not allowed unless indicated by the instructor/researcher. If you need to use your cell phone then please be respectful to the instructor/researcher and step outside the classroom/laboratory.

Department Seminars

All graduate students are expected to attend the Department of Kinesiology and Integrative monthly research seminars (1 Friday/month, 3-4pm). For these monthly seminars invited researchers from outside the department will present on a variety of health related topics during the semester. This experience will expose students to cutting-edge research, help us think "outside the box", and facilitate interaction with other students/faculty on campus. For each seminar we ask you to:

- Review research materials by the speaker (website, pubmed, journal articles, ect...)
- Socialize with other students and faculty
- Bring a notepad/laptop to take notes
- Participate in the discussion and answer session
- Introduce yourself to the speaker

Within one week after the seminar you will turn in a short one page summary of the speaker/seminar. Each summary should include the presenter's name/department, describe what experimental techniques they utilized, list three questions for the speaker, identify the main findings/take home message of the presentation, and explain how this information might be useful in the field kinesiology and integrative physiology.

The seminar schedule is posted on the course website and in the lab. If you have a scheduling conflict (e.g., varsity athletics, job interview) and cannot attend one of the

seminars then contact the graduate program director to discuss alternative ways to participate/stay engaged.

Community Outreach/Public Service

All graduate students are expected to participate in at least one community outreach event each semester. These events consist of tours of the department research laboratories, local science fairs, high school visits, student/parent preview day, medical careers week, ect... Participating in these events requires a few hours of time and provides experience communicating and teaching science to a public audience. Kathy Carter, Department Outreach Coordinator, will provide more information each semester about upcoming outreach events and ways to get involved.

Student Conference Travel

The department does provide some funds to graduate students presenting research at professional meetings and conferences (up to \$250 for MS thesis students, up to \$500 for PhD students).

Annual Evaluation and Policy on Timely Written Feedback

All graduate programs at the university provide constructive written feedback to students at least annually. This formal process ensures that both students and advisors are aware of the student's academic progress and plans for the future. The form used in our department is provided at the end of the handbook. When completed by the student and advisor, the copies are provided to the student, advisor, graduate program director, and Department Chair. If deficiencies are identified in a student's performance, written feedback will be provided twice yearly, specifically addressing the area(s) of deficiency, timeline for making up the deficiency, and consequences for continued unsatisfactory performance.

Change of Advisor

A change of graduate advisor most often occurs when a MS student changes from coursework to thesis degree option. A change of advisor for a MS thesis or PhD student in the middle of a research program is rare, but can happen. Under these situations, the advisor-committee form must be completed. Before initiating the process to change your graduate advisor, please consider all the options listed on the Graduate School's website for how to address difficulties in the student-advisor relationship. Once you have decided to change your graduate advisor, you must follow the steps listed below.

- 1. Meet with your graduate program director to initiate the process to change advisor. If meeting with the graduate program director is not feasible or appropriate, meet with the Department Chair.
- 2. Discuss the following with the graduate program director and, if appropriate, the current advisor:
 - a. Whether additional resources within or outside the department could help resolve the situation.

- b. The impact of the change of advisor on your time to complete the degree. Coursework, qualifying exam(s), and the research proposal examination are all factors that could be impacted with a change in advisor.
- c. Your current and future funding support.
- d. Research already conducted. Whether this will be incorporated into the dissertation or thesis, and if so, how.
- e. Impact on immigration status (if any). Consult International Programs and Services (IPS), if necessary.
- f. Record the agreement from the discussions in writing, including indications of agreement from all affected faculty advisors, and provide copies to the student, the graduate program director, and all affected faculty advisors.
- 3. File an updated Advisor and Committee Recommendation Form for approval by the Graduate School (https://www.mtu.edu/gradschool/documents/policies-procedures/forms/advisor-committee.pdf).
- 4. If the student and the graduate program director are unable to reach agreement on the advisor change, contact the assistant dean of the Graduate School to determine additional steps to resolve the situation.

Probation

Students placed on departmental probation will be so informed in writing by the Department Chair. Students who remain on departmental probation for two consecutive semesters may be subject to academic dismissal.

<u>Dismissal</u>

The procedures for academic dismissal and the grievance procedures are fully described on the Graduate School website. Decisions on dismissal will be made by the department faculty on the advice of the Graduate Program Director in consultation with the Department Chair and the student's advisory Committee. The student may be required to withdraw if he/she is not meeting expected standards. The advisory committee, Department Chair and Dean of the Graduate School are all involved in the process, and the student is given several opportunities to contest the dismissal.

Additional Resources

americankinesiology.org/ acsm.org/ the-aps.org/ asbweb.org/ nsca.com/ sportsci.org/

SAFETY AND RESEARCH TRAINING

<u>Overview</u>

Graduate students are required to complete: 1) university and department safety training and 2) responsible conduct of research (RCR) training. Michigan Tech has developed several training programs

University and Department Safety Training

University and department safety training will be completed during the orientation week prior to start of the student's first semester.

Basic RCR Training Requirements

All graduate students must complete basic responsible conduct of research training. This training must be completed by graduate students within their first two semesters at Michigan Tech, or a registration hold will be placed on the student's account. Students may not graduate or enter research mode if the training is not complete. To fulfill this requirement, students may either:

- attend the Graduate School's on-campus orientation program (mtu.edu/gradschool/resources-for/students/orientation)(held before the start of each semester), or
- complete the basic online CITI training course (mtu.edu/research/administration/integrity-compliance/responsibleconduct/training/basic/)

Advanced RCR Training Requirements

Graduate students who were admitted in Spring 2013 or later must complete advanced training, regardless of the source of funding for their education. Graduate students who are supported by an external sponsor must complete both basic and advanced training, regardless of when they began their degree. Students may not graduate or enter research-mode if the training is not complete.

Advanced Training for	Requirements
Students	
MS Thesis/Report, PhD	Pre-approved course for advanced RCR training
	(mtu.edu/research/administration/integrity-
	compliance/responsible-conduct/training/courses)
Online, MS Coursework	Advanced online CITI training course
	(mtu.edu/research/administration/integrity-
	compliance/responsible-conduct/training/advanced)

GRADUATE STUDENT PROGRESS REPORTS

Assessment

Graduate students will meet with their advisor and the graduate program director annually to complete an individual development plan and progress report (form to be provided).