

**Contact Info and Office Hours**

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Office: Fisher 121  
Office Hours: by appointment

**Course Overview**

In PH1111 online, you will develop practical skills in equipment setup and troubleshooting, data and error analysis, and model building through hands-on experiments created with everyday materials and supplemented by research-based simulations. It is also my hope that you will gain an appreciation of just how much you can figure out about our world using the gear you have at hand!

**Technical Requirements**

- Computer: Windows, Mac, or Linux OS with ability to install Tracker, an open source video analysis and modeling program
- Video: Internal or external webcam, smartphone, or other video recording device
- Internet: Reliable access is required to access the lab manuals online and upload your results. Most students will want to access the course content at least 3 days/week.

Other common household items are also required; the complete list is available on Canvas, our LMS

**Safety**

Be mindful of your safety. None of our experiments are inherently dangerous, but accidents can always happen! Please follow all instructions and use caution.

**Lab Schedule**

I suggest that you work on your assigned labs throughout the week. However, labs are due at 11:59 PM the SUNDAY following the week they are assigned. This timing allows students working during the week to finish labs over the weekend.

Week	Lab Topics	Due Date
1	Lab 1: Constant Motion	May 20
2	Lab 1: Accelerated Motion Lab 2: Balanced Forces	May 27
3	Lab 1: NO LAB, MEMORIAL DAY Lab 2: Conservation of Energy and Momentum	June 3
4	Lab 1: Torque Lab 2: Rotational Motion	June 10
5	Lab 1: Fluid Flow Lab 2: Simple Harmonic Motion	June 17
6	Lab 1: Standing Waves Lab 2: Specific Heat	June 24
7	Lab 1: Student-Proposed Experiments	June 29

**Grading Policy**

You will complete 11 labs over the term. For each lab, you will present the data and results of your experiments and answer related questions based on the model you develop. Each lab weighs equally in your final grade.

Grading Scale			
A	90-100	C	70-74
AB	85-89	CD	65-69
B	80-84	D	60-64
BC	75-79	F	0-59

**Late Work and the Grace Period**

I understand that everyone is busy and sometimes life can throw you a curveball. Canvas will automatically apply a 12-hour grace period for every lab. After the grace period, the assignment will lock and work will not be accepted except for reasons allowed by the Dean of Students. See guidelines at [www.mtu.edu/deanofstudents/academic-policies/attendance](http://www.mtu.edu/deanofstudents/academic-policies/attendance). Please use the grace period responsibly and only when needed so that I can continue to offer it.

**Academic Integrity**

I have a liberal policy toward students working together to solve problems. Just as physicists work together to do physics, physics students should work together to understand their lab experiments! You can get together in person, or ask and answer questions in our class forum, Piazza. HOWEVER, all work you submit must be based on your own data and analysis. ***Each person must run their own experiment.***

If academic dishonesty is suspected, the matter will be referred to the Office of Student Affairs. The penalty is no less than an academic integrity warning and no more than expulsion.

**University Policies:**

Student work products (exams, essays, projects, etc.) may be used for purposes of university, program, or course assessment. All work used for assessment purposes will not include any individual student identification.

Michigan Tech has standard policies on academic misconduct and complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. For more information about reasonable accommodation for or equal access to education or services at Michigan Tech, please call the Dean of Students Office, at (906) 487- 2212 or go to [http://www.mtu.edu/ctl/instructional-resources/syllabus/syllabus\\_policies.html](http://www.mtu.edu/ctl/instructional-resources/syllabus/syllabus_policies.html)

This course supports University Student Learning Goal #2: Knowledge of the Physical and Natural World. For more information, see <http://www.mtu.edu/assessment/program/university-learning-goals/>