

PHY175: University Physics Laboratory I

Fall 2009

General Information and Grading Policies

Note: This information is available at

http://www.phy.cmich.edu/people/mellinger/teaching/2009Fall_PHY175/Syllabus_PHY175.pdf

Coordinator

Dr. Axel Mellinger

Dow 222, Phone: 774-3336 (office) or -2184 (lab)

Email: axel.mellinger@cmich.edu

Office hours: Mo, Tu, Th and Fr. 11:00 AM - 12:00 PM, or by appointment

Teaching Assistants

TA	Mahmoud Radwan AL-Omari
Office	Dow 208
Office Hours	Mo, We, Fr 10-11 am
Sections	22089216, 22089217, 22089218
Email	aloma1mr@cmich.edu

Time & Location

CRN	Time	Teaching Assistant
22089216	Th 01:00-02:50 pm	Mahmoud Radwan AL-Omari
22089217	Th 07:00-08:50 pm	Mahmoud Radwan AL-Omari
22089218	We 07:00-08:50 pm	Mahmoud Radwan AL-Omari

Textbook:

William R. Matson & Didarul I. Qadir: PHY-175 laboratory Manual, Fall 2006 ed.

Sold by the CMU bookstore, together with a materials pack (graphing paper, etc.)

Overview:

This course requires concurrent enrollment in PHY-145 or having previously completed it with a passing grade. Principles outlined in the general lecture will be assumed knowledge. Please carefully read the first two chapters in the Laboratory Manual for important details concerning expectations, report writing, and grading policies. Each experiment is carefully detailed in chapter 3 of the laboratory manual. It is expected that you read the assigned experiment before you arrive in the laboratory. This will assist you in arriving prepared to perform the experiment. It is your responsibility to carefully read the experiment and follow its instructions. The laboratory instructor will acquaint you with any equipment you will be using. Arriving on time and prepared is expected. Tardiness will result in lost points.

This course is intended to introduce the student to sound experimental practices

and procedures. Students will learn methods of quantitatively investigating natural phenomena and quantifying the recorded results and their reliability. On completion of this course, you should have developed the necessary skills to independently conduct simple experiments, collect quantitative and meaningful information about desired parameters, and write a meaningful scientific report on your findings. These skills will be tested in the final examination.

Academic Dishonesty

[Campus policies concerning Academic Integrity](#) will be **strictly observed**.

Although data collection is a group activity, students must do calculations and reports independently. Presentation of copied work will result in 0 Credit on the assignment and may lead to disciplinary action.

Basic Course Goals

- become familiar with some particular laboratory equipment and procedures
- make careful and critical measurements
- record and organize your observations
- estimate uncertainties in your measurements
- judge whether your measurements are consistent with previous measurements

Lab Reports / Deadlines

Each group of students must turn in a report for each lab. Completed lab reports are due before the start of your class in the following week. Lab reports handed in late will receive zero credit. Lab reports will be graded on a 10-point scale. Some reports are marked as "FORMAL" and must adhere to an outline detailed in the Lab Manual.

Procedures

Please hang up your coats and book bags when you enter. Show the introduction you have prepared to your Instructor, listen to his/her specific or general comments and instructions, and then start working.

Do not leave the lab until you are sure that all your data has been properly collected. In most cases you will finish taking data before the lab period ends. If this is the case, you are expected to work on your report.

You are expected to leave your lab station as you found it. Your instructor may deduct points from your lab report if your station is left in a mess. You may be held responsible for damaged or missing equipment at your lab station, so have it checked by your Instructor before you leave.

Lab Partners

Unless the class is over-subscribed, you may work with only one lab partner. Groups of three may be permitted if the experiments allow & require it.

Attendance

Attendance is mandatory! Labs can only be made up if the absence is due to serious circumstances and if the Lab Coordinator is notified immediately of your absence.

Experiments

Number	Week	Title/Description
1	Aug. 24 - 28	Acceleration due to Gravity
2	Aug. 31 – Sept. 4	Precision Instruments
3	Sept. 7 - 11	Resolution & Addition of Forces
4	Sept 14 - 18	Velocity & Acceleration (FORMAL)
5	Sept 21 - 25	Gravitational and Inertial Properties of Mass
6	Sept. 28 – Oct. 2	Linear Momentum and Kinetic Energy in Inelastic Collisions
7	Oct. 5 – 9	The Simple Pendulum (FORMAL)
8	Oct. 12 – 16	Hooke's Law and Centripetal Acceleration
9	Oct. 19 - 23	Moment of Inertia of a Disk
10	Oct. 26 - 30	The Torsional Oscillator
11	Nov. 2 - 6	Vibrating String (FORMAL)
12	Nov. 9 - 13	The Ballistic Pendulum
13	Nov. 16 - 20	Specific Heat and Latent Heat
	Thanksgiving	
Final		Laboratory Final (topic t.b.a.)

Points and Grades:

Laboratory scores are computed according to the following point values:

Quizzes	20
Lab Report (10 × 10)	100
Formal Reports (3 × 20)	60
Final Exam	60
Total	240

At least 120 points (50%) will be required for a passing grade; “A” grades start at approximately 216 points (90%).

ADA

CMU provides students with disabilities reasonable accommodation to participate in educational programs, activities, or services. Requests for accommodations must be submitted in writing to Student Disability Service (SDS). Students are referred to the Handbook for Students with Disabilities available on the SDS website for information regarding what accommodations are available. Anyone requiring accommodations should contact their instructor or coordinator as soon as possible in the semester.

Classroom civility:

Each CMU student is encouraged to help create an environment during class that promotes learning, dignity, and mutual respect for everyone. Students who speak at inappropriate times, sleep in class, display inattention, take frequent breaks, interrupt the class by coming to class late or leaving early, engage in loud or distracting behaviors, use cell phones or pagers in class, use inappropriate language, are verbally abusive, display defiance or disrespect to others, or behave aggressively toward others may be asked to leave the class and subjected to disciplinary action.