

University of Maryland
Department of Physics
Physics 121 – Spring 2015
“Fundamentals of Physics I”

Lecture Date and Time: M 7:00 – 8:50 PM, W 7:00 – 7:50 PM
Lecture Room: 1410 Physics Building

Instructor: Dr. Hailu Bantu Gebremariam
Office: 3107 Physics Building

email: hailu@umd.edu
Phone: x5-6024

Office Hours: M, W 5:30 – 6:30 PM or by appointment

TAs: Name: Soubhik Kumar
E-mail: soubhik@umd.edu

Riquelme, Simon
sdriquel@umd.edu

Elliott, Kyle
kelliott2@terpmail.umd.edu

Discussion and Lab schedule:

Section		Date and Time	Room	TA
0401	Lab	M 5:00 – 6:50 PM	3306	Kumar, Soubhik
	Discussion	W 8:00 – 8:50 PM	1204	
0402 SES1	Lab	W 8:00 – 9:50 PM	3306	Riquelme, Simon
	Discussion	M 9:00 – 9:50 PM	1219	
0403	Lab	W 5:00 – 6:50 PM	3306	Elliott, Kyle
	Discussion	W 4:00 – 4:50 PM	1204	

Coordinator in charge of the labs: **Bill Norwood**
bnorwood@umd.edu

Textbook:

- College Physics, A Strategic Approach, Knight, Jones, & Field, 3rd edition.
- Physics 121 Laboratory Manual, UMCP.

Official Course Description:

PHYS121 Fundamentals of Physics I (4 credits)

The first part of a two-semester course in general physics treating the fields of mechanics, heat, sound, electricity, magnetism, optics, and modern physics. Together with PHYS122, this generally satisfies the minimum requirement of medical and dental schools.

Prerequisite: MATH112 or MATH115. Credit only granted for: PHYS121 or PHYS131

Guidelines:

- (1) There will be 10 Laboratory experiments. Two makeup lab sessions will be arranged. **You must do all the laboratory experiments and deliver reports.** They will count for **25%** of the final grade. You are not allowed to miss any lab. Missing a lab will result in an F in the whole course.
- (2) Homework problems will be collected at the beginning of class on the due date. All problems will be graded. These will count for **25 %** of the final grade.
- (3) There will be 50 minutes midterm exams. Midterm exams will count for **25%** of the final grade.
- (4) Final Exam will be on **May 18, 7:00 – 9:00 PM** . It will count for **25%** of the final grade.

Course Policies

Attendance:

Lecture and discussion attendance is both strongly recommended and required. Students are responsible for all material covered in lectures and discussions. It is the students' responsibility to record accurately and to be aware of the specific lectures' contents. This is one of the reasons why attendance is necessary. The exams will include materials from the lectures and discussions.

In regards to attendance of laboratory sessions, in case of illness or other overwhelming circumstances, we will follow the university policy posted at: <http://www.president.umd.edu/policies/v100g.html>. Please let me (not just your TA) know your situation as soon as possible, and I will tell you if I need documentation for the reason for your absence. In any case, whatever the reason for your absence, it is important that you contact your and/or me as soon as you reasonably can, and I will do my best to make accommodations.

Exams:

Three **midterm exams** will be given in class, plus a **final exam** at the end of the semester. On exam day, bring a calculator of any type and writing tools (pens or pencils). Paper will be provided. Your calculator cannot have internet connection capabilities. **The lowest of three scores in the midterm exams will be dropped. No make-ups will be given under any circumstances. If you happen to miss one midterm, due to illness or any other reason, that is the score that will be dropped. If you miss the final exam, you will be receiving a grade of Incomplete (I) for the class, provided, of course, that you have a passing grade up to that point.**

Homework:

Homework will be assigned nearly every week. They will be posted on CANVAS. They will be collected at the beginning of the class on the due date. **No late assignments will be accepted, under any circumstances. The two lowest scores of your homework assignments will be dropped. If you are unable to turn in one or two assignments on time, for any reason, those are the scores that will be dropped.** Working together with other students is part of the course; in fact, the tutorials and labs are specifically designed around teamwork. Working together to figure out the homework is also encouraged, but you must turn in your own work. This simple rule applies: Never look at someone else's written solution. Talking about how to work the problem is fine if it helps you to understand it better, but copying a solution is strictly forbidden.

Religious observances:

If you need to miss class, a deadline, or an exam due to a religious observance, please notify me in advance, preferably at the beginning of the semester.

Honor Code: The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. I will ask you to sign the Honor Pledge on exams; I will not ask you to sign it on each homework assignment, but it should be understood that the Honor Code still applies. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. Violations will be taken very seriously and may result in an XF grade for the course and possible suspension. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/SHC/Default.aspx>.

Students with disabilities: Accommodations will be provided to enable students with documented disabilities to participate fully in the course. Please discuss any needs with me at the beginning of the semester so that appropriate arrangements can be made. ***Students who are registered with DSS, and who are planning to take examinations at DSS facilities, are required to let me have the pertinent authorization forms in editable electronic format at least one week prior to each exam date.***

Weather and emergency closures:

If the University is closed due to weather or some emergency situation on a day when homework is due, then that homework must be turned in at the beginning of the next class when the University is open. If the University is closed on the scheduled date of an exam, then the exam will be given during the next class period when the University is open. If the University is closed on any non-exam day, including just before an exam, then the exam will still be given according to the original schedule. In these or other exceptional circumstances, I will attempt to send out information by email.

Course announcements by email and email usage:

I will be sending important announcements to the class, specifically to each student's umd.edu email address. If you use some other email system, please make sure that mail sent to your umd.edu address is successfully forwarded to the address you use most regularly. I will be communicating with students outside of class exclusively via email. I will be happy to respond to your inquiries, communications, and requests via email, in as timely a fashion as is practicable. Any question that can be asked in person, either in class or at office hours, or even out of class by appointment, would preferably be asked in person.

General schedule (**Subject to change**)

Date	Topics on text book	Labs
Jan 26, 28	1.1 – 1.4, 2.1 – 2.4	NO LAB
Feb 02, 04	2.5 – 2.7, 1.5	Functions & Graphs, Pencils & Rulers
Feb 09, 11	Chapter 3	The Pendulum...Error Analysis
Feb 16, 18	Chapters 4, 5	Motion with Constant Accel.(Air Track)
Feb 23, 25	Chapter 5	Conservation of Energy (Air Track)
Mar 02,	Chapter 5 and Review	Equilibrium of Forces
Mar 04	Exam 1	
Mar 09, 11	Chapters 6, 7	Make-Up Week (Expts 1-5 only)
Mar 16, 18	SPRING BREAK	No Lab
Mar 23, 25	Chapters 7, 8	Cons. of Linear Momentum (Air Table)
Mar 30	Chapter 8 and Review	Centripetal Force & Acceleration
Apr 01	Exam 2	
Apr 06, 08	Chapter 9	Equilibrium of Rigid Bodies
Apr 13, 15	Chapter 10, 11	Mechanical Equivalent of Heat
Apr 20, 22	Chapters 11, 12	Simple Harmonic Motion & Hooke's Law
Apr 27	Chapter 12 and Review	Make-Up Week (Expts 6-10 only)
Apr 29	Exam 3	
May 04, 06	Chapter 13	No Lab
May 11	Chapter 13 and Review	No Lab
Monday May 18 7:00 – 9:00 PM	FINAL EXAM	