

GENERAL PHYSICS I

PHYS 1110, SECTION 01/02 AND LABS SYLLABUS FALL 2015

<u>CONTACT INFORMATION</u>	<u>TEXT</u>
Instructor: Dr. Andrew Young You may call me Dr. Drew.	REQUIRED: College Physics (10th Edition) by Young with Mastering Physics. Published by Pearson. Yes, we will use the same textbook in Physics 1120 (Physics 2).
Telephone#: 1-307-268-2243	<u>LECTURE/LAB TIMES</u>
Office Hours: Monday, Wednesday, 9:00 AM to 11:00 AM, Friday 9:00 AM to 10:00 AM and by appointment and drop ins.	Lecture (Section 01): MWF 8:00 AM to 8:50 AM PS 202
Email Address: ayoung@caspercollege.edu (email is usually the best way to contact me)	Lecture (Section 02): MWF 11:00 AM to 11:50 AM PS 202
Office: PS 206 Feel free to stop by my office anytime if you need help. You are welcomed to schedule an appointment.	Lab (Section A): Thursday 8:00 AM to 10:50 AM PS 204
Academic Dates: Withdrawal Deadline: November 12, 2015	Lab (Section B): Thursday 11:00 AM to 1:50 PM PS 204 Lab (Section C): Thursday 5:00 PM to 7:50 PM PS 204
<u>MASTERINGPHYSICS COURSE ID</u> YOUNGPHYS1110FALL2015	You must register for one of the lab sections in addition to the lecture.

SYNOPSIS

Have you ever wondered how your MP3 player works? If Stacey left Evanston at 3:30 PM and drives 60 miles per hour East, and her boyfriend Mark left Cheyenne and drives 75 miles per hour west, where will they meet? How does a pressurized cabin in a 747 work? Can lasers really destroy nuclear weapons? If you found yourself asking these and other funky questions, then you are in the right course. Welcome to PHYS 1110!

Please read the entire syllabus carefully. You are responsible for all of the requirements and procedures described herein. You are also responsible for all announcements (whether verbal or on powerpoint), assignments, videos, demonstrations, and changes in the dates when material is discussed in lecture, etc..., whether or not you are in class. This syllabus is subject to minor revisions and modifications as needed.

<u>GRADES: 1000 points total, comprised of:</u>	<u>GRADING SCALE</u>
Midterm 1: 9% (90 points)	A, 870 to 1000 points
Midterm 2: 9% (90 points)	B, 750 to 869 points
Midterm 3: 9% (90 points)	C, 625 to 749 points
Midterm 4: 9% (90 points)	D, 500 to 624 points
Final Exam: 15% (150 points)	F, 499 points and below
Homework: 21% (210 points, 15 points per assignments (scaled to 15 points), 14 assignments)	Exams consist of lab, lecture, homework, and textbook material.
Labs: 21% (210 points, 15 points per lab, 14 labs)	
Participation: 7% (70 points)	There is no grading curve. The scale is set above.

Course Description:

Designed for liberal arts, pre-medical, pre-dental, pre-law, and vocational and technical students. The subject matter is covered with less emphasis on derivations of formulas and more emphasis on the social significance of

science and its applications to everyday life. Topics covered are fluids, mechanics, wave motion, and sound.

Prerequisite:

MATH 1400 or an ACT math score of 23 or better or an appropriate COMPASS exam within the past year.

Goal:

Learn the fundamental properties of forces, energy, and kinematics

Moodle:

The first order of business is to stay up-to-date on materials for this course. In order to do this, you will need to access Moodle. Please register for Moodle access. Please be sure to contact me if you are having problems accessing it. Documents on-line may include powerpoint lectures, homework solutions, homework schedules, and other assorted items.

Exams:

Exams consist of in-class learning activities, lecture, homework, and textbook material. It may be essays, short answers, or a combination there of. Essays may be entirely math based. All midterms and the final exam will be cumulative. Show your work on all exams to receive partial credit. Additional guidelines will be posted one week prior to exam.

Participation:

From time to time, I will ask a question and request a written response from the class. This will serve as a random spot check of attendance and a check of current understanding of the material.

Faculty Initiated Withdrawal:

After two consecutive weeks of non-attendance without valid and proper notification, I reserve the right to initiate a Faculty Initiated Withdrawal per the guidelines of the Casper College Catalog.

Retention Alert:

I reserve the right to send out a Retention Alert after three consecutive no shows to lab/lecture.

The Philosophy of Science:

Science is an investigation of the natural world. We strive to quantify and qualify the objects and events that we see in the universe through a process of data collection and thorough analysis. We also try to make a prediction of the things we *may* see based on what we know. Science is more than just generating numbers. The important thing is to understand each seemingly isolated event and integrate them into a bigger picture. It is important to understand what we know through the process of the scientific method. Have fun learning!

Chain of Command:

If you have any problems in the class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then move on to the department head, dean, and lastly, the vice president for the academic affairs.

Textbook:

There will be assigned chapters for each week. You are responsible for buying the correct book for my class. If you wish to purchase the e-text version, you may do so. You are also responsible for keeping up with the reading. I will post the assigned reading on-line each Monday on Moodle. Please do not delay the purchase of this book. Waiting for the lowest bid on e-bay or requesting free shipping from Amazon does not relieve you of the academic obligations required in this class.

Computing Expectations:

You must have access to the following things:

- A working computer with Firefox browser, Adobe Flash Player, Adobe Acrobat reader, Quicktime, Microsoft Powerpoint viewer, Microsoft Word viewer and Microsoft Excel viewer, iTunes (or other .mp3 application) and Javascript enabled. These programs must be kept up to date. If you wish to try other programs/browsers to see if they work, that is up to you, but you are responsible for making sure those programs work.
- Your computer must have the system and hardware requirements to be able to handle the demands placed on the system.
- A working internet connection (at least DSL speed).
- A printer.
- A valid email account.
- A moderate level of tech savvy, independence, and perseverance.

Computers for student use are available at Casper College at various facilities (such as the Math Lab in the Physical Science Building). Computers for general use are typically available at public libraries in your community.

Today, thanks to the internet, we now have a wonderful communication system. You must have a valid e-mail address. Full inboxes are not valid reasons to ignore email.

I strongly suggest that you start working on internet assignments as early as possible. You never know when the internet may experience heavy traffic, or if lightning will hit your house and zap your electronics.

I will be happy to help you as best I can to address your computing issues. Please keep in mind though that you must adhere to the basic requirements listed above in order to accomplish the tasks set out in this class. Having anything less may compromise your performance.

While it may seem like a lot of computing expertise is needed for the class, in fact it is no different than having an automobile. As a driver of a car, you are expected to know how to use the steering wheel, pedals, and change gears. You are also expected to respond to traffic lights, signs and other cars and pedestrians in the street. Finally, you are probably capable of filling up your gas tank, inflating your tires, and adding in windshield wiper fluid. The same level of proficiency you show for your car is expected for your computer as well. Welcome to the digital highway. Buckle up and fasten your seatbelts.

Homework:

Since the emphasis of this class is to do science, the homework is very important. I encourage you to study together. You may help each other to find how to solve a problem, but you must show all of your work and present your own discussion and steps needed to achieve the solution. This means you should not simply copy another student's work. Weekly assignments will be posted on-line and are due per the schedule. No late homework will be accepted.

Homework is to be done on-line. The website is: <http://www.masteringphysics.com>

You will have an access code associated with your textbook. You will need to use that code to sign up for the course. As a new student you will have to register with a name and password. Go to the website and click on New Students in the Register area.

If you bought a book without a code, you can buy one separately also on <http://www.masteringphysics.com>. Go to the website and click on **Students** in the **Register** area. You will be given the option to purchase access online.

Once you have successfully registered, you can then sign up for the course using a special course ID.

The course ID is: **YOUNGPHYS1110FALL2015**

This website has nothing to do with Casper College. Casper College IT cannot help you. Your Casper College login information cannot help you. Please contact me for any questions regarding the process. I may direct you directly to the Publisher's contact for more information.

Reading Assignments:

Reading assignments are assigned online at www.masteringphysics.com. Weekly reading assignments will be posted on-line and are due per the schedule. No late reading assignments will be accepted. Reading assignments will not be accepted through any other means.

Extra Credit:

There is no such thing as extra credit. Period. Don't even bother asking. You already have plenty to do. If you are not doing the assigned labs, homeworks, and exams, then you are not working on the basics. Doing extra work while ignoring the fundamentals will not impress me.

Review Sessions:

There is no such thing as a review session. That is why I have office hours, an email address, and a phone. People have come to my office hours before and lived to tell about it. I am not an ogre, agent, sith lord, or ring-wraith.

Lab Policy and Procedure:

Labs are held the first week of class. Lab must be attended. If you miss lab section due to **SERIOUS** complications (illness, military duty, etc...), please contact me in advance. A written notice will be required explaining your absence.

Laboratory work is an integral part of the learning process. It is within these sessions that your instructor can introduce new material, or emphasize material mentioned in the lecture or textbook. The lab work conducted will involve a significant amount of quantitative and qualitative analysis. To gauge your understanding of the lab work, the exercises contained in this document will be considered as testable material for the exams.

- Come to class on time. Coming late is unfair to your group members.
- Turn your cell phones off. If you do make or answer a cell phone call, your classmates have the right to listen in on your conversation, point at you, and giggle a lot. The instructor has this right too.
- All lab work must be completed within the designated laboratory time and handed in at the end of lab.
- Attendance is expected for all lab work.
- Please come to the lab section you are registered for.
- Lab grades are an integral part of the final course grade.
- You will make mistakes in lab. Therefore, you should be using pencils.
- There is no smoking break during lab.
- Bring a scientific calculator. You will need it.

Lab groups will be formed with 3 to 4 group members. The group tasks will be divided as follows:

Participation Manager: This person ensures that everyone contributes to the group.

Task Minder: This person ensures that everyone keeps on pace in order to complete the lab on time.

Skeptic: This person double checks everything and determines if another possible answer exists.

Recorder: This person ensures that everybody comes to a general consensus about an answer and writes it down in their lab. You are free to write whatever you want in your lab. However, at the end of the lab, only the recorder will submit their lab sheets. All group members will sign this lab. The submitted work will receive a single grade and it will be applied to all group members.

Participation in the lab is of the utmost importance. Group learning has been proven to be an effective means to master new material. However, copying down measurements and calculations from others or taking measurements from computers will not be condoned and shall be dealt with in accordance to [college regulations](#).

Accommodative Services for Students with Disabilities:

Any students with special learning needs must contact their instructor during the first two weeks of class. A signed letter from Accommodative Services documenting your needs is required. Accommodations cannot be made without the letter. Only when the letter is received upon request of the student will the accommodations be implemented. Accommodations are not retroactive to past exams, essays, etc... and can only be instituted beginning on the date of the receipt. In particular, those students taking exams through Accommodative Services MUST schedule to take their exam on the same date and begin at the same start time as the classroom examination.

Academic Standards:

The [Casper College Student Code of Conduct](#) will be followed. You are responsible for being familiar with these codes. Students are welcome to work together, exchange ideas, etc. However, EACH STUDENT MUST DO THEIR OWN MEASUREMENTS AND OWN CALCULATIONS. Copying of someone else's measurements, calculations, observations, ideas, and/or writings, of plagiarism of any sort, is equivalent to cheating and will be handled accordingly.

Course Registration:

You must register for lecture and lab in this course by the start date of the academic semester. Late registration for this course does not absolve you of missed homeworks, labs, exams, or other material. Unless there are extenuating circumstances for your late registration (upon which your instructor will decide), no make ups will be available.

General Class Schedule (subject to revision):

<u>WEEK:</u>	<u>TOPIC</u>	<u>LAB</u>
1	Vectors	Math Review
2	1-D Kinematics	Measurements
3	2-D Kinematics	The Acceleration of Gravity
4	Kinematics/Forces	Projectile Motion
5	Forces	Force Table
6	Forces	Kinematic and Force Problems
7	Work	Atwood Machine
8	Energy	Modified Atwood Machine
9	1-D Momentum	Play With New Equipment
10	1-D Momentum	Uniform Circular Motion
11	2-D Momentum	Work and Energy
12	2-D Momentum	Linear Momentum
13	Rotational Kinematics	The Ballistic Pendulum
14	Torque	Torque and the Center of Gravity
15	Rotational Dynamics	Rotational Dynamics I
16	Buoyancy	Rotational Dynamics II
	FINAL EXAM	

FINAL NOTES:

By registering for this class, you of course accept all the policies and stuff described in this syllabus!
It is not the responsibility of the faculty to constantly remind you of the terms of this syllabus.