

## CONCEPTS OF PHYSICS (NET COURSE)

### PHYS 1050/1090, SECTION N AND LABS SYLLABUS FALL 2015

<i><b>CONTACT INFORMATION</b></i>	<i><b>TEXTBOOK</b></i>
Instructor: Dr. Andrew Young You may call me Dr. Drew.	<b>REQUIRED: Conceptual Physics (12th Edition) by Paul Hewitt with Mastering Physics. Published by Pearson.</b>
Telephone#: 1-307-268-2243	<i><b>LECTURE/LAB TIMES</b></i>
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. Special Recitation: Wednesday 7:00 PM – 9:00 PM	Lecture (Section N): ONLINE
Email Address: <a href="mailto:ayoung@caspercollege.edu">ayoung@caspercollege.edu</a> (email is usually the best way to contact me)	Lab: ONLINE. Do not register for the in-class section. Do not attend the in-class section.
Office: PS 206 Primary contact will be through E-mail.	<b>COURSE ID FOR MASTERINGPHYSICS: YOUNGONLINEPHYS10501090FALL2015</b>
<b>Academic Dates:</b> Withdrawal Deadline: Nov 12, 2015	You must purchase the book and masteringphysics access in order to complete all labs, assignments, exams, etc...
<b>Last update: 8/14/15</b>	

### ***SYNOPSIS***

The world around is filled with natural beauty and wonder. From the very small motions of insects, to the brilliant light of a galaxy far far away, the physics of the universe describes all manners of behavior. Even if you cannot see it, the motions of the atoms in your cells are bound by the laws of physics as is the Earth going around the Sun. The power of motion, electricity, heat, and other phenomena of our living environment is grounded in the physical laws that apply anywhere and everywhere. Welcome to PHYS 1050/PHYS1090!

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.

As this is an on-line course, the impetus is on you to ensure progression through this content. While being on-line offers the flexibility to arrange your education timeline in conjunction with your work and personal life, you are still required to be an active participant in the learning process. This includes communication with your instructor (when needed or required), completion of the on-line assignments, retrieval of documents on-line, and mental consumption of material, wherever it may lie. Your instructor is your guide on this academic journey, but it is you who must walk the steps to reach the finish line.

<i><b>GRADES: 1030 points total, comprised of:</b></i>	<i><b>GRADING SCALE</b></i>
Midterm 1: 8% (80 points)	A, 870 to 1030 points
Midterm 2: 8% (80 points)	B, 750 to 869 points
Midterm 3: 8% (80 points)	C, 625 to 749 points

Midterm 4: 8% (80 points)	D, 500 to 624 points
Final Exam: 8% (80 points)	F, 499 points and below
Homework: 21% (210 points, 15 points per assignments, 14 assignments)	Exams consist of lab, lecture, homework, and textbook material.
Labs: 21% (210 points, 15 points per lab, 14 labs)	
Podcast Assignment: 21% (210 points, 5 points per assignment, 42 podcasts)	There is no grading curve. The scale is set above.

**Course Description:**

One semester course for those students whose curricula call for an introduction to elementary physical concepts.

**Prerequisite:**

MATH 0900

**Goal:**

Learn the fundamental properties of forces, energy, kinematics, rotational motion, thermodynamics, vibrations, electricity, magnetism, atomic theory, and relativity.

**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. It is your responsibility to register for Moodle access and to familiarize yourself with the class layout. Please be sure to contact me if you are having problems accessing it. Documents on-line may include powerpoint lectures, homework solutions, assignment and exam schedules, and other assorted items. You will download and read and listen to all of the files on Moodle.

**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. Exams will be conducted on [www.masteringphysics.com](http://www.masteringphysics.com)

**Faculty Initiated Withdrawal:**

I reserve the right to initiate a Faculty Initiated Withdrawal per the guidelines of the Casper College Catalog should any of these conditions occur: Failure to register for [www.masteringphysics.com](http://www.masteringphysics.com) 1 week after the semester begins, two missed exams, incompleteness of two week's worth of assignments, or failure to login to this course shell through Moodle for 2 consecutive weeks. Students who register late for the course are still subject to these conditions.

**Retention Alert:**

I reserve the right to send out a Retention Alert per the guidelines of the Casper College Catalog should any of the following occur: Incompleteness of one week's worth of assignments, missed exams, failure to register for [www.masteringphysics.com](http://www.masteringphysics.com) within 1 week of the class start date, failure to login to this course shell through Moodle within 1 week of the class start date. Students who register late for the course are still subject to these conditions.

**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.
- Ensure that your programs are kept up to date.
- 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.

You must also check your email every few days as I will send a broadcast message out at least once a week. Taking an on-line class does not obviate the need for instructor/student communication. Because this is an on-line class, e-mail will be the primary method of communication. If you ask me a question on email, you should check your email daily for a response.

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. For example, if you are downloading a video but it keeps on buffering every few minutes in the middle, you should either stop all other processes on your computer, stop downloading other files, and/or wait 15-20 minutes for the entire video to load up. It may be that you also live

in a neighborhood that does not have high speed internet lines.

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:**

- Homework enables you to solidify your grasp of the new material. It is the normal way to develop skills, and to integrate the new material into your overall knowledge of the subject. In class, you can often be quite passive, and although it may seem that the new material is totally clear and easy to follow, it is only after you try the problems on your own that true learning has occurred. In addition, while I may see many nods of agreement in the classroom, one of the more definitive ways to assess your understanding is through 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. It is located on a separate piece of cardboard. 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 **Students** in the **Register** area. Follow the instructions on the website to register your access code.
- 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: **YOUNGONLINEPHYS10501090FALL2015**
- You cannot use a previous course ID. You cannot use any other course ID. You cannot use or borrow anyone else's access code. Your code must be your own and under your name. No substitutes will be accepted.
- 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.
- Regarding the answers to the questions for an assignment, the textbook reading for the week is designed to go in parallel with the Assignment for the week, give or take a chapter.
- For example, if this is Week 1, the Reading is Chapter 1. The answers for Assignment 1 can be found in Chapter 1. This is the general guideline, but sometimes you may be able to find the answer within 1 or 2 chapters of the stated Chapter reading for the week.
- My lectures may also hold some clues or content regarding the answers to the questions, although of course the textbook would have far more in depth information. You can also look at the index to find the content you are looking for, and then proceed to the appropriate chapter.

### **Podcast Assignment:**

- Each week a podcast will be released on Moodle for you to download in .mp3 format and listen.
- The podcast will contain a short synopsis of the previous week's lecture.

- These podcasts will contain 1 or more questions for you to answer.
- You must answer these questions on-line on <http://www.masteringphysics.com>. Podcast assignments will not be accepted through any other means.
- You can save the podcast on your computer by right clicking on the file link and select “Save file as” from the pop-up menu (procedure may vary slightly between browsers, PC, or Mac version).

### **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 email address and a phone. People contacted me before and lived to tell about it. I am not an ogre, agent, sith lord, or ring-wraith.

### **Smarthinking:**

Smarthinking is an on-line tutorial system where by you can access tutors to help you with questions on the physics material. The system is accessible from within Moodle. Instructions on how to access Smarthinking are available for download from Moodle. Smarthinking is an additional asset for your educational repertoire on approaching and learning the physics material. Please note however that as your primary instructor, all final grading and evaluation policies reside with me, and no one else. I am also available for assistance through email, scheduled appointments. You are free to ask me questions on the material. Smarthinking will not be allowed for examination activities.

### **Lab Policy and Lab Procedure:**

Labs are conducted on-line. Lab is automatically incorporated into the on-line section. Please do not register or attend the campus live section, as you will not receive credit. There are no substitutions or replacements.

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.

- Lab is to be done on-line. Lab will not be accepted through any other means.
- You will have an access code associated with your textbook. It is located on a separate piece of cardboard. 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 **Students** in the **Register** area. Follow the instructions on the website to register your access code.
- If you bought a book without a code, you can buy a code 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: **YOUNGONLINEPHYS10501090FALL2015**
- You cannot use a previous course ID. You cannot use any other course ID. You cannot use or borrow anyone else’s access code. Your code must be your own and under your name. No substitutes will be accepted.
- 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.

Due dates for labs are listed on [masteringphysics.com](http://masteringphysics.com).

Labs are done using the interactive figures, videos, sorting tasks, and other active exercises and activities on [www.masteringphysics.com](http://www.masteringphysics.com).

### **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):***

<b><u>WEEK:</u></b>	<b><u>CHAPTER</u></b>	<b><u>LAB</u></b>
1	1, 2, 3	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
2	4, 5, 6	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
3	7, 8, 9	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
4	10, 11, 12	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
5	13, 14, 15	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
6	16, 17, 18	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
7	19, 20, 21	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
8	22, 23, 24	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
9	25, 26, 27	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
10	28, 29, 30	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
11	31, 32, 33	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
12	34, 35, 36	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
13	37, 38, 39	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
14	40, 41, 42	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>
15	43, 44, 45	See <a href="http://www.masteringphysics.com">www.masteringphysics.com</a>

***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.**