# GENERAL PHYSICS I (NET COURSE)
## PHYS 1110, SECTION N AND LABS SYLLABUS SUMMER 2016

<table>
<thead>
<tr>
<th>CONTACT INFORMATION</th>
<th>TEXT AND LAB PAQ</th>
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</table>
| Instructor: Dr. Andrew Young  
You may call me Dr. Drew. | REQUIRED: College Physics (10th Edition) by Young, Adams, Chastain with Mastering Physics. Published by Pearson. |
| Telephone#: 1-307-268-2243  
Office Hours: N/A  
Email Address: ayoung@caspercollege.edu (email is usually the best way to contact me)  
Office: PS 206  
Primary contact will be through E-mail. | Lecture (Section N): ONLINE  
Lab: ONLINE. Do not register for the in-class section. Do not attend the in-class section. |

<table>
<thead>
<tr>
<th>LECTURE/LAB TIMES</th>
<th>COURSE ID FOR MASTERINGPHYSICS:</th>
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| Academic Dates:  
Withdrawal Deadline: **July 6, 2016** | YOUNGONLINEPHYS1110SUMMER2016 |
| Last update: 5/30/16 | There will be no extensions for assignments as the summer session duration is too short for any delay. |

## 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.

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.
**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

**Goal:**
Learn the fundamental properties of forces, energy, and kinematics

**Outcomes:**
1. Demonstrate effective oral and written communication
2. Use the scientific method
3. Solve problems using critical thinking and creativity
4. Demonstrate knowledge of diverse cultures and historical perspectives
5. Appreciate aesthetic and creative activities
6. Use appropriate technology and information to conduct research
7. Describe the value of personal, civic, and social responsibilities
8. Use quantitative analytical skills to evaluate and process numerical data

**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 thereof. 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.
- 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.
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](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](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: **YOUNGONLINEPHYS1110SUMMER2016**

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.

**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 ringwraith.

**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, phone, office hours, and scheduled appointments. You are free to ask me questions on the material. Smarthinking will not be allowed for examination activities.
LabPaq, Lab Policy and Lab Procedure:

Labs are through the LabPaq system which you must buy. 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: YOUNGONLINEPHYS1110SUMMER2016
- 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.

To that end, this course requires the use of hands-on lab through the Lab Paq system.

From the website description:
"LabPaqs are collections of science experiments that support academic objectives and allow students to perform real-world experiments off-campus just as they would in an on-campus science laboratories."

The LabPaq associated with this course is:
College Algebra First Semester Physics
(LP-2232-PK-01)

http://www.holscience.com/
“Order Here”
Login: C000036
Password: labpaq
Product Code: PK-1

Approximate cost (subject to change) is $130.00 (not including shipping and handling). These labpaqs are available for purchase from the bookstore, or at www.holscience.com.

It is your responsibility to purchase the correct LabPaq. Contact LabPaq regarding the speed of their shipping services; Once you receive it, inspect it IMMEDIATELY for completeness and quality of contents. Missing/broken/poor quality contents will be replaced at no cost to you if you contact LaqPaq directly within two weeks of receipt. Be sure of your plans regarding this physics lab, as you can only return the Paq for a
refund less a $35 restocking fee (no exceptions to this fee) within three weeks of receipt. No returns will be accepted after this time. Content replacement requests and return/refund requests must be directed to LaqPaq. Casper College and all affiliated with this physics lab section will assume no responsibility for business conducted directly with LabPaq, such as refund issues, non-returnable Paqs (past three weeks) or non-replaceable contents (after two weeks).

The CD that comes with the LabPaq will have the Lab Manual. Be sure to print off the necessary pages for the associated lab. You have insert the CD into your computer, open the folders, and open the .pdf and/or .doc files.

These are lab experiments you conduct at home. Associated files that will help you along for your use will be available on Moodle for you to download. You can send me files to review, and I can help you analyze your data, but if you do send me something to inspect, please expect a minimum 24 hour turn around time for a thorough review.

Due dates for labs are listed on masteringphysics.com. Please go to the website to see the required lab and due date for this lab. Final excel files for the lab must be uploaded to the dropbox in Moodle by the specified deadline.

**Video Tutorial:**
Video Tutorial Solutions are worked out problems from examples in the textbook. It provides a more broken down “real-time” explanation and discussion of how to approach the problem. These videos provide the best replication of my traditional whiteboard problems. Instructions for accessing the videos on-line are located on Moodle. Please review the video or sample example in the textbook for the complete treatment. I will ask a specific question about the example in MasteringPhysics for you to answer. Make sure you read my question carefully.

**Podcast Assignment:**
- Each week several podcasts will be released on Moodle for you to download in .mp3 or .m4a format and listen.
- The podcast will contain a short synopsis of the previous week’s lecture.
- These podcasts will contain 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.

**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):**

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<tr>
<th>WEEK:</th>
<th>TOPIC</th>
<th>LAB</th>
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<tbody>
<tr>
<td>1</td>
<td>Vectors</td>
<td>Mathematics Review</td>
</tr>
<tr>
<td>2</td>
<td>1-D Kinematics</td>
<td>Experimental Errors and Uncertainty</td>
</tr>
<tr>
<td>3</td>
<td>2-D Kinematics</td>
<td>Measurement: Length, Mass, Volume, Density, and Time</td>
</tr>
<tr>
<td>4</td>
<td>Kinematics/Forces</td>
<td>Trigonometric Measurements</td>
</tr>
<tr>
<td>5</td>
<td>Forces</td>
<td>Data Collection</td>
</tr>
<tr>
<td>6</td>
<td>Forces</td>
<td>Acceleration</td>
</tr>
<tr>
<td>7</td>
<td>Work</td>
<td>Friction</td>
</tr>
<tr>
<td>8</td>
<td>Energy</td>
<td>Simple Machine - Lever</td>
</tr>
<tr>
<td>9</td>
<td>1-D Momentum</td>
<td>Simple Machine - Pulleys</td>
</tr>
<tr>
<td>10</td>
<td>1-D Momentum</td>
<td>Pendulum and Calculation of g</td>
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<tr>
<td>11</td>
<td>2-D Momentum</td>
<td>Centripetal Acceleration</td>
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<tr>
<td>12</td>
<td>2-D Momentum</td>
<td>Hooke's Law</td>
</tr>
<tr>
<td>13</td>
<td>Rotational Kinematics</td>
<td>Determining The Speed of Sound</td>
</tr>
<tr>
<td>14</td>
<td>Torque</td>
<td>Video Review</td>
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**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.*