



Cypress College

PHYS130 Principles of Physics

Fall 2008

Section

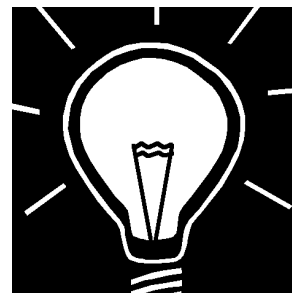
10914. Lecture: MW 10:30AM–11:50PM. Lab W 1-3:50PM, SEM-106.

Instructor: Dr. Ron Armale

Office:

SEM-259, **Phone:** (714) 484-7000 Ext. 48638.

Science/Math Division: (714) 484-7153. FAX: (714) 952-9667.



Email

Armale@CypressCollege.edu is the best way to reach me. Always put course number/title in the Subject field. Sign your Email with your full name. I check Email Monday-Friday and will reply to you within 24 hours.

Web: <http://sem.CypressCollege.edu/~astronomy>

Office hours

Monday and Thursday 1-3PM, or by appointment.

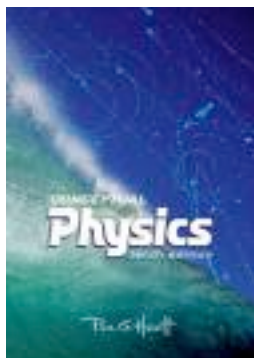
Course Description

PHYS 130 C PRINCIPLES OF PHYSICS

4 Units Three hours lecture and *Three hours laboratory per week.*

UC Credit Limitation/CSU, AA GE, CSU GE, IGETC

Prerequisite: MATH 020 C. This course provides an introduction to the basic concepts, principles, and laws of physics with major emphasis upon their practical importance and application towards understanding and controlling natural phenomena. Laboratory work includes experiments in mechanics, heat, sound, electricity, and optics. This is a general education course in the physical science area. The course is not open for credit to students with previous college physics credit. No UC credit if taken after PHYS 201 C or PHYS 202 C.



Required Text:

Conceptual Physics, 10th edition by Hewitt.
Physics 130 Lab Manual

Optional supplement

Practicing Physics to accompany Conceptual physics by Hewitt.

Note: You may purchase your paper textbooks online from the Cypress College Online Bookstore at <http://www.cypresscollegebookstore.com/>

Textbook Web site: <http://www.physicsplace.com>

Required Supplies

Calculator, ruler, protractor, Web access, (5) Scantron forms No. 882.

Computer Requirements

Computer Skills

To be successful in this course you will need to be comfortable browsing the web, word processing, sending and receiving email, and saving your work on a computer.

Computer Equipment

To access your Blackboard course site at <http://cypresscollege.blackboard.com/> you will need to know your username and password, have internet access and a valid email account. On-campus computers for online and hybrid student use are available on the first floor of the Library/Learning Resource Center building.

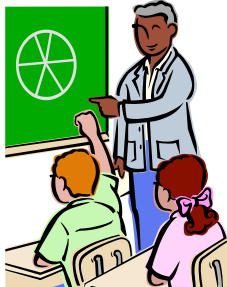
Teaching Philosophy

Math and memorization of facts are not our goals. I emphasize the understanding of processes and the development of critical thinking skills. Plan to spend at least **seven** hours of study outside of class each week.

Upon completion of the course, the student will have a basic understanding of

- Units. Vectors, Conservation of energy and momentum.
- Motion, inertia, mass, and force.. Gravitation and electromagnetism.
- Temperature. heat transfer, phase changes, and the four states of matter..
- Fluids. Waves and vibrations., Light and color.
- The atom: nucleus & electrons.

Ground Rules



1. **Attend all classes.** It will influence your grade in borderline cases. If you miss more than **6** lectures or **2** labs, you may not pass the course.. Note that It is **your responsibility** to officially drop the course if you want to withdraw.
2. **Be on time.** Tardiness and leaving early are rude and disruptive. If you are late, be as quiet as possible.
3. **Respect your teacher and classmates.** Go outside to talk.
4. **Eat and drink before or after class.**
5. **Turn off phones and pagers before you enter the classroom.**
6. **Be honest.** Cheating in any form will not be tolerated. Copying from your lab partners is cheating. If caught, you will not pass the course.
7. **Work Hard.** Plan to spend eight hours per week on preparation and study outside of class.

Grading Policy

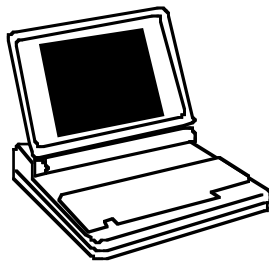
Lab Reports	20%	A normal distribution (curve) will be used, which usually results in approximately the following grade distribution:	A =85-100%
Homework	10%		B =75-84%
Four exams	50%		C = 60-74%
Final exam	20%		D = 50-59%
			F = 0-49%

Homework

You are required to read the entire assigned chapters prior to coming to class. Take notes while you read and during class, and **ask questions**. Can you learn how to swim without getting wet? Can you learn physics without solving problems? No to both questions. So 10-15 questions and problems will be assigned in class and at the Assignments section of Blackboard every week. Doing the exercises yourself is the best way to do well on the exams. The lowest homework score may be dropped, and late homework will not be accepted. All homework assignments may be **viewed** online at <http://sem.cypresscollege.edu/~astronomy/courses/phys130/>

To submit your homework

- Link to <http://cypresscollege.blackboard.com>
- Login: input your username which is your 8 digit Cypress College ID beginning with @. Example: @12345678. Enter your password which is your MyGateway/Webstar password birth date (mmddyy). Example: If your birth date is October 17, 1987, then your password is 101787
- If you are taking or have recently taken another online course and you have changed your password, then try that first.
- Select PHYS130 then follow instructions after --> START HERE! <--
- Select Personal Information and verify or input your E-mail address. I cannot reply to you unless you enter a valid Email. I recommend you use an Email address that is your full name for professional purposes like contacting instructors. Example: ron_armale@apple.com
- For Blackboard help select Help at top after you login.



If you cannot login, try the following:

1. Restart your computer and connect to the internet.
2. Use a different browser. See below.
3. In Internet Explorer, select Tools -> Internet Options -> Security -> Advanced -> Restore Defaults.
4. Try a friend's computer or a campus pc. You may use the computers at the library (LLRC),
5. If you have a firewall, it may not allow Blackboard to work. So

disable it or connect from another location.

If none of these work, Email me with your name and password.

Get general help: <http://www.CypressCollege.edu> -> Online/Hybrid Courses

Collaboration

I suggest that you work in small groups (2-3) to study and do the homework. Once a solution is reached, write the answer in your own words. To simply copy the group answer or study the solutions will not help you when you have to think on your own during exams. Copying homework solutions or answers to questions is cheating.

Exams

Four one hour exams and a comprehensive two hour final exam will be given. All exams are open textbook only. The exams will consist of multiple choice questions. No make-ups are given except in cases of documented emergencies. Call your instructor ASAP. The lowest exam score may be dropped. **For Exams, bring Scantron Form No 882.**



How to succeed in any science course

Successful students are independent, self-motivated and willing to learn on their own. Here are some tips you may find useful for this class:

1. Read your syllabus carefully, it should answer most, if not all your questions about this class.
2. **Read the book** before class, take notes and write down questions as you read. I suggest that you read the chapter summary first, to get an idea of what you're supposed to learn. Then, read it again after you finish to review what you learned.
3. Log in and participate online each and everyday. It will help you to learn and to stay connected to the material.
4. Do not procrastinate. Classes with web components often involve more work than campus only classes, so keeping up with the class is especially important.
5. **Ask questions** in class and at office hours and ask your classmates.
6. **Take notes** in class. I will write your exams not your textbook authors.
7. **Attempt all homework** questions yourself. If you get stuck, don't give up and assume you can skip this topic. Science builds on previous material, so ask for help.
8. **Collaborate** with classmates on homework and exam preparation.
9. **Explain** difficult concepts to others. "you don't really understand anything unless you can explain it to your grandmother" -Richard Feynman.
10. Create a quiet space at home or choose an isolated computer in a lab to make the most of your online class time.
11. Keep electronic and paper copies of your work, just in case.
12. Keep in touch with your instructor and don't be afraid to ask for help when you need

Communication

Email Etiquette

Email is an important communication tool for academic success. It indicates whether you are a serious student or not. Appropriate uses of email include informal questions, requests for clarification addressed to your instructor or to your classmates. To maximize the benefits, limit your email to course related subjects. Check the Syllabus, Announcements, and FAQ sections on Blackboard for answers to the most common questions.

How to Email

Your instructor's email software is set to filter junk mail. To make sure your email is received, follow these guidelines: Always sign your emails with your entire name since your address may not adequately identify you. In the "subject" or "re" area please put your course name then the subject of your message. For example: "PHYS130: Homework question." Use formal grammar, spelling, and punctuation. Do not use internet or text messaging abbreviations such as "lol."

Check out these web sites for more information on how to write college level emails:

1. Introduction to Electronic Mail Available:
<http://www.albion.com/netiquette/book/0963702513p47.html>
2. E-mailing, like, whatever to profs: http://writing.upenn.edu/news/dp_email.html
3. Email etiquette in an instant messaging world:
<http://www.doit.wisc.edu/news/story.asp?filename=791>

PHYS 130 Physics Calendar - Fall 2008

Wk	Dates	Ch	Topics	Experiment
1	Aug18-22	1	Introduction, Science, Inertia	Lab Introduction
2	25-29 Sept 1	2, 3	Linear motion, Newton's laws Holiday: Mon Sept 1 Labor Day	Science or Nonsense?
3	Sept 2-5	4	Three laws of motion	Is seeing believing?
4	8-12	5, 6	Three laws of motion. Momentum	Galileo's Experiment
5	Sept 15-19	7	Exam 1 (Ch1-5), Energy,	Acceleration-Free fall
6	22-26	8, 9	Circular motion, Gravity	How high can you Jump
7	29-Oct 3	10, 11	Projectiles & Satellites, Atoms	Centripetal Force
8	Oct 6-10	12	Exam 2 (Ch 6-10), Solids (1-4)	Kepler's Laws
9	Oct 13-17	13,14	Liquids, Gases	Projectile Motion
10	20-24	15,16	Temperature, Heat Flow	Archimedes' principle
11	27-31	17	Exam 3 (Ch 11-15), Change of phase	Specific heat of Solids
12	Nov 3-7	18,19	Thermodynamics, Vibes & waves	The pendulum
13	Nov 10		Holiday: Veteran's day	
14	Nov 11-14	20	Sound, Electrostatics	Speed of Sound
15	17-21	22	Exam 4 (Ch 16-20) , Electric current	Exp. 15 Electric current
16	24-26	23,24	Magnetism, EM Induction	Exp. 16 Circuits
17	27-30		Holiday: Thanksgiving	
18	Dec 1-5	25,26	Light properties, Reflection/Refraction	Lenses on light
19	8-9	28	Review	No lab
20	15-18		Final Exams start Dec 10	No lab

Exam dates are approximate.

Final Exam (comprehensive Ch 1-28): Monday December 15, 10:30AM-12:30PM



Library LLRC Reserve Desk

- Your textbook and optional workbook.
- Answers to all end of chapter exercises.
- Conceptual Physics Next Time Questions (class

discussion/exam practice).

- Inquiry Into Physics and The Physics of Everyday Phenomena (further reading).

Get more help at the Library (LLRC)

- Math Lab-127
- Tutoring Center.
- Writing Center.

Career Center: Student Center, 2nd floor.

Copyright Warning

According to the TEACH Act of 2002, the use of copyrighted materials in this course web site are restricted to enrolled students only.

Student Privacy

Your grades are considered private and will not be displayed with any identifying information to you. With your permission, I may post your grade using the last 4 digits of your Cypress College ID number. All of your personal information such as Email address are private and will not be shared with anyone other than Cypress College staff who have the right to view this information. All information you post in the Discussion Board area are NOT private and may be read by other students who are enrolled in this class.

Student Services

Quick Reference to Cypress College Services

<http://www.cypresscollege.edu/counseling.php>

Student Services Home Page

<http://www.cypresscollege.edu/student-services.php>

Cypress College Computer Labs Home Page

<http://www.cypresscollege.edu/instructionalservices.php>

District Issued Photo ID required at all labs!

LLRC – Library Learning Resource Center

(Library building East of the pond)

PCs with word processing, internet access, instructional software, and free tutoring. Elevator access is available from the ground floor. The closest parking lots are Lot 5 and Lot 7.

If you are a student of Cypress College, you need your photo ID to check out materials from the Library. Your Cypress College photo ID also provides library privileges at Fullerton College, Golden West College, Orange Coast College, Cal. State Long Beach and Cal. State Fullerton libraries.

Phone: 714 484 7193

Cypress College Library Home Page

<http://www.cypresscollege.edu/~library/>

See your Counselor

Academic Advising/Counseling Services

<http://www.cypresscollege.edu/counseling.php>

As a student, you are assigned to a counselor based on the major you indicated on your application to Cypress College. If you indicate "General Studies" or "undecided" you are assigned to a counselor on a random basis.

How to See a Counselor

<http://www.cypresscollege.edu/counseling.php?page=1>

Counselors Offices, Telephone Numbers, Email Addresses

<http://www.cypresscollege.edu/counseling.php?page=13>

Online Counselor

During Registration periods, you can contact an online advisor at

onlinecounselor@cypresscollege.edu.

Student Grievances

Students are advised to always try to resolve the matter with the instructor first. You may also wish to consult with your counselor. If these preliminary steps do not help, you may wish to discuss the problem with the Department Chair. If the problem is still unresolved, you may consult with the Division Dean. To pursue the issue further, you may file an appeal with the Campus Petitions Committee. Please see your counselor for assistance.

Distance Education Frequently Asked Questions

<http://www.cypresscollege.edu/~online/index.php?page=6>

Students with Disabilities

If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with DSPS (714 484 7104) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. (Adapted from University of Arizona: <http://drc.arizona.edu/teach/syllabus-statement.html>)

PHYS 130 Principles of Physics – Laboratory

Why experiment?

No scientific principle is accepted unless it has passed rigorous experimental tests. These ten or so experiments you will perform, will provide you with physical evidence that the principles you are learning may be verified by experiment.



Ground Rules

1. Read the experiment before you come to class, and arrive on time.
2. The three hour laboratory is an essential part of the course, so attendance will be taken and if you are absent, you cannot turn in a lab report using someone else's data.
3. You will be penalized for arriving late.
4. Lab reports are due at the end of class after the experiment is performed.
5. Late reports will not be accepted.
6. If you miss more than **two** reports, you may not pass the course.
7. No make-up labs will be given, but your lowest lab grade may be dropped.

During lab

1. Turn off your phone before the start of class.
2. Collaborate on all parts of the experiment. However, you are not supposed to divide the labor among your partners.
3. Always check your partners' work since you will use whatever data they gather.
4. You will collect the data and perform the calculations in **class writing all text in ink (black is preferred, blue is accepted, do not use other colors.)**
5. You may use a pencil for numbers.
6. Once you and your partners have reached a consensus (or not) **write your own report in your own words.**
7. Copying your partner's answers is cheating.
8. **Eating or drinking are NOT allowed in the classroom.**
9. **Before you leave, you must clean-up your area and neatly put all the equipment back on the carts.**

How to write lab reports

- You must **print clearly** and neatly in **black ink**. You may use pencil for numbers, calculations, graphs, and drawings.
- Always explain your answers to the **questions** and always draw a diagram.
- The report should be clear, concise, and concrete. **Neatness counts!** Include enough white space and check your spelling, grammar, and punctuation.



Grading

The reports are graded based on (1) format, and (2) content. A report is given a grade of 40 points if it is perfect. That is if you (1) follow the above guidelines, and (2) you understand the experiment and results.

No plagiarism. Copying your partners' paper or letting them copy from you is cheating. All involved will get no credit.