

PHYSICS 170 - General Physics I (Mechanics, Periodic Motion, Fluids, Wave Motion)

SUMMER SESSION II- July 1, 2018 - August 9, 2019

MTWThF, 8:30 AM - 10:15 AM, Watanabe 420

http://www2.hawaii.edu/~plam/ph170_summer

Instructor: Prof. Pui Lam, (808) 956-2988, e-mail: plam@hawaii.edu

Office Hours: By appointment (Watanabe Rm. 433)

TA/Grader: Lexie Holthaus
Recitation/Office Hours: TBD

Note: The TA/Grader will conduct a daily recitation, except during exam days. You will do one or two practice problems that deals with concepts taught on that day. This should help you get started on your homework but more importantly you will learn and practice problem solving skills.

*** Anyone who attends the recitation and turns in the practice problems will received extra credit (maximum of 5% of course grade).**

The College of Natural Sciences also provides free tutoring at the "Learning Emporium", [see link](#).

Text: University Physics Volume 1, OpenStax.
A free online copy can be obtained from
<https://openstax.org/details/books/university-physics-volume-1>

If you want you can purchase a hard copy text from the UH Bookstore but it is not required.

Online Homework System: WebAssign: Please enroll before course starts.

1. Go to <http://webassign.net/login.html> and click "Enter class key"
 2. Enter class key (hawaii 2996 7404) and click Enroll.
 3. Make sure the course is: " PHYS 170-SSII-2019 "
- (If not, try again and make sure you have entered the class key correctly)
4. Sign in or create a new Cengage account (Cengage owns Webassign) and link with your Webassign account.

The cost for the account is ~\$20-\$40.

***** iclicker is required, please purchase an iclicker and bring it to every class meeting *****

Topics: Mechanics, Periodic Motion, Fluids, Wave Motion (Chapters 1-17)

Pre-requisite: Math 242 (Calculus II) or Math 252 (Accelerated Calculus II) or concurrently;

Math 216 (Applied Calculus II) may be substitute with consent.

Tentative Schedule:

WEEK	CHAPTERS	TOPICS
1 & 2	1 - 6	Kinematics measurements, Newton's Laws, Applications of Newton's Law.

Exam 1 (Ch. 1-6)

3 & 4	7 - 12	Work and Energy, Conservation of Energy . Linear momentum, Angular Momentum, Static Equilibrium,
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Exam 2 2 (Ch 1-14; mostly on Ch 7-12)

5 & 6	12-17	Law of Gravitation, Fluid Mechanics, Oscillations, Wave and Acoustics
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Final Exam (Ch. 1-20; mostly on Ch. 12 - 17)

Class Format (approximate time distribution):

Daily quiz ~ 30 minutes.

Lecture (30 minutes) + Class activities (30 minutes) - intermixed

Break ~ 5 minutes

Summary ~ 10 minutes

Lecture notes/reading are posted on class website. You should review the lecture notes before coming to class.

Exam Format:

Midterm and Final Exam: :35 conceptual/short questions (2 pts each), 1 calculational problem (30 pts each)

Only conceptual/short questions are cumulative.

A sheet of hand-written note (8.5" x 11") is allowed.

Homework:

Recommended homework problems are assigned everyday.

Due to limited time for the summer session, an online homework system will be used to allow for almost immediate feedback.

There is a Learning Center in Watanabe Rm 421 where you can do your homework.

I suggest that you attempt your homework in the Learning Center and then attend the recitation.

(Homework may take you an hour to complete. If it takes you more than two hours, you should see me or TA at office hours)

Daily quiz (except on midterm and exam days):

A quiz will be given at the beginning of class on materials covered on the previous day.

A total of 5 short questions (1.5 to 2 minutes each) and 1 "word" problem (5 minutes) *You will need your iclicker for the quiz.*

I will go over the answer after each question so that you have immediate feedback.

**** No makeup for the quizzes but you are allowed to miss 2. If you did not miss any quizzes, they are counted as extra credits ****

Grade: Based on an absolute scale.

Total (100%) = homework (10%)+ quizzes (30%) + (Exam 1+ Exam 2 + Final=(60%))

* The combined % for Midterm 1+ Midterm 2 + Final=60%; the highest score=25%, middle score=20%, lowest score=15%

96-100 (A+), 91-95 (A), 86-90 (A-)

81-85 (B+), 76-80 (B), 71-75 (B-)

66-70 (C+), 61-65 (C), 56-60 (C-)

51-55 (D+), 46-50 (D), 41-45 (D-)

<40 (F) No Incomplete will be given for this summer course.