

## **SYLLABUS**

### *Physics 100 – Survey of Physics*

SEMESTER: Fall 2015 (August 24 – December 18, 2015)

COURSE TIME: MWF 1:30 am - 2:20 pm    CREDIT: 3 semester hours  
Section 001    CRN 72263    LOCATION: PSB 217

INSTRUCTOR: Dr. Mark H. Slovak    OFFICE: Watanabe 313  
TELEPHONE: (808) 956-2975    e-mail: mslovak@hawaii.edu  
OFFICE HOURS: M W F 10:30 – 11:30 am or by appointment.  
TEXTBOOK(S): *Physics: Concepts & Connections*, Art Hobson, 5th edition, (Addison-Wesley: San Francisco). ISBN 9780321661135. **(Required)**.

SUPPLIES: Notebook for class lectures, pencils. An inexpensive (non-graphing) scientific calculator will be useful but it is not required.

COURSE DESCRIPTION: Physics 100 is a general survey course of selected topics in physics for non-science majors. A minimum of algebra is used to support discussion of key developments in physics since the earliest developments around 500 BCE through exciting 21st century discoveries of mysterious dark energy and the elusive Higgs boson.

PREREQUISITE: Basic knowledge of geometry and algebra (Algebra 1). Students should be able to interpret graphs, tables and have a basic grasp of the System Internationale (SI) (metric) system of units.

LAB: Students may enroll in PHYS 100L for a one (1) semester laboratory credit. It is highly recommended that if students enroll in the lab that they do so concurrently with the lecture.

CLASS POLICIES: The University does not have a mandatory attendance policy nor is roll taken each class period. Each student is responsible for all materials presented, including lecture notes, demonstrations and quizzes. If a class is missed, it is the student's responsibility to contact the instructor (using e-mail) or other students to obtain any assignments or additional information. Be prepared to show dated lecture notes as proof of attendance. It is also the student's responsibility to be familiar with the University *Code of Conduct* outlining the University's policy regarding academic dishonesty.

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Specifically:

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B. Conduct – Rules and Regulations

The following are examples of the types of behavior that conflict with the community standards that the UH values and expects of students. Engaging in, or attempting to engage in any of these behaviors subjects a student to the disciplinary process and sanctions on each campus.

- 1 Acts of dishonesty, including but not limited to the following:
    - a Cheating, plagiarism, or other forms of academic dishonesty.
    - b Furnishing false information to any UH official, faculty member, or office.
    - c Forgery, alteration, or misuse of any UH document, record, or form of identification.
  - 2 The term "cheating" includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (3) the acquisition, without permission, of tests or other academic material belonging to a member of the UH faculty, staff or student (4) engaging in any behavior specifically prohibited by a faculty member in the course syllabus or class discussion. ALL cases of suspected academic dishonesty are referred to the Dean of Students for disciplinary action if deemed appropriate, up to and including expulsion from the University.
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**HOMEWORK:** In addition to weekly chapter reading assignments, there are **four (4) homework assignments**. Homework is to be completed *by class time* of the due date. (16% of course grade).

**QUIZZES:** Announced quizzes will usually be given during a Friday lecture for a total of **three (3) quizzes**. (24% of course grade)

**EXAMS:** **Two class period multiple choice/short answer exams** are scheduled during the semester. Each exam covers the material since the previous exam and includes extra credit questions. Each exam is weighted equally towards the course grade. See Class Schedule for exam dates. (40% of course grade)

**FINAL EXAM:** **A 2 hour final exam**. (20% of course grade)

**PROVISIONAL GRADING:** The preliminary grading scale used to assign the final grade is given below and is subject to minor revision (i.e. "curving") at the discretion of the instructor based on class performance.

A: 90 - 100%    B: 80 - 89%    C: 70 - 79%    D: 60 - 69%    F: < 60%

**MAKEUP:** Students are strongly encouraged NOT to miss any classes during the semester, unless a valid reason such as personal or family medical emergency arises. *All makeup exams will be scheduled during the instructor's office hours or by appointment only.* Missed quizzes are not made up as the lowest quiz score will be dropped. However, a copy of the quiz may be obtained for study purposes.

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**STUDENT LEARNING OUTCOMES (SLOS):**

After successfully completing Physics 100, students should be able to:

- describe key concepts of classical Newtonian physics;
- describe the basic tenets of Einstein's theory of special relativity;
- compare and contrast the planetary model and quantum model of the atom;
- discuss the particle nature of light and the wave nature of particles;
- relate fundamental physics principles to existing technologies;

**SPECIAL SERVICES:** Students with special needs and accommodations are requested to contact the UH Manoa KOKUA program for accommodation authorizations and information about testing procedures. Go to <http://www.hawaii.edu/kokua/> for more information.

**ADDITIONAL RESOURCES:** For additional help beyond forming your own student study groups, students can get individual assistance at:

- The **Natural Science Learning Emporium** in Bigler Addition 209 is open weekdays for *all* students to receive help with lower division math and science classes. Schedule for tutors for physics are posted in BilA 209 or can be found at <http://www.hawaii.edu/natsci/physics.php> but note that physics tutoring begins on the second week of August, starting August 31.