

Principles of Physical Science

Course Syllabus

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Basically Information

PSCI 1 - Prin Phys Science

Section 40518

Spring 2014

Instructor: Jack Penkethman

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Office hours: 4:30 pm to 5:30 at the Hollister facility

Meets: 6:00 pm - 9:05 pm,

Hollister Briggs Building Room 2,

Jan 27, 2014 - May 23, 2014

Course Details

An introduction to the physical sciences for the non-science major. Attention is focused on fundamental laws of nature, their development and relation to the physical world. PREREQUISITE: MATH 205, or MATH 430, or the equivalent, with a grade of "C" or better. ADVISORY: English 250 and English 260.

Text

Shipman, Wilson, Higgins, *An Introduction to Physical Science*, 13th Ed. Brooks/Cole Cengage Learning, 2013.

Learning Objectives

At the end of the course, the student will be able to identify, describe, compare, contrast and discuss the following major subjects in the physical sciences:

1. Measurement: Numbers, units, and the scientific method.
Chapter 1
2. Motion: Position, displacement, speed, velocity and acceleration.
Chapter 2
3. Force and motion: Newton's laws.
Chapter 3
4. Work and energy: Potential, kinetic, and thermal energy and the concept of conservation of energy.
Chapter 4
5. Temperature and heat: Specific and latent heat, heat transfer, phases of matter, kinetic theory of gasses and thermodynamics.
Chapter 5
6. Electricity and magnetism: voltage, current, resistance, electric circuits, and magnetism.
Chapter 8
7. Atomic and nuclear physics: Fundamental particles of matter and their role in the structure of an atom.
Chapters 9 and 10
8. Chemistry: chemical elements, chemical bonding, compounds, and mixtures and the properties of each, chemical bonding, chemical equations.
Chapters 11, 12, 13

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Lecture & Class Schedule

Jan 27 and Feb 3: Course description and lecture chap. 1
Feb 10: Review homework, break, quiz, lecture chap. 2
Feb 17: No class
Feb 24: Review homework, break, quiz, lecture chap. 3
Mar 03: Review homework, break, quiz, lecture chap. 4
Mar 10: Review homework, break, quiz, lecture chap. 5
Mar 17: Review chaps. 1 - 5, break, mid-term exam
Mar 24: Lecture chap. 8, break lecture chap 9
Mar 31: No class
Apr 07: Review homework, break, quiz, lecture chap. 10
Apr 14: Review homework, break, quiz, lecture chap. 11
Apr 21: Review homework, break, quiz, lecture chap. 12
Apr 28: Review homework, break, quiz, lecture chap. 13
May 05: Review homework, break, quiz, course review for final exam
May 12: Review homework, break, review for final exam
May 19: Final exam

Evaluation / Grading

Grading is by percent of homework turned in according to instructions. Quizzes, mid-term and final exams are graded strictly by percent correct answers. Homework, quizzes and exams are weighed as follows in calculating a final grade: 10% homework, 10% quizzes, 40% mid-term, 40% final exam.

Attendance Policy

Students missing one more class hours than the unit value for this course, without making prior arrangements, may, at the instructor's option, be dropped without possibility of credit. If you must be out of class for an extended period, get a leave of absence from the admissions office prior to your absence.

Other Policy Statements

ADA Accommodation:

Students requiring special services or arrangements because of hearing, visual, or other disability should contact the instructor, counselor, or the Disabled Student Services Office.

Occupational/Vocational:

Occupational/Vocational students – Limited English language skills will not be a barrier to admittance to and participation in Vocational Education Programs.

Student Honesty Policy:

Students are expected to exercise academic honesty and integrity. Violations such as cheating and plagiarism will result in disciplinary action which may include recommendation for dismissal.