
PSCI 3304 005: Physical Science II

CRN: 12373

Term: Fall 2017

Time: Monday and Wednesday 12.30 pm -2.20 pm

Where: PSCI 220

Instructor: **Dr. Rajendra Zope** (<http://quantum.utep.edu/?q=node/20>)

Office: PSCI 116 Phone: 747-8742

Email: rzope@utep.edu

Office Hours: Wednesday 11.00 AM-12.00 noon or by appointment

Required Materials:

Text: Conceptual Physics 12th edition by Paul G. Hewitt.

Lab Manuals: 1. Electricity Labs 1-7 and 2. Nature of Matter (Available for \$10 each at the Printing Center in the Library.)

Course Overview: Electricity will be the focus of roughly the first half of the course. Matter (the solids, liquids, and gases around you every day) will be the focus of the second half. Most importantly you'll better learn the physical science (physics and chemistry) that your future students deserve to understand.

The **emphasis** in this particular class will be on **understanding** the concepts such density, weight, buoyancy, electric field, electric potential, voltage etc. This emphasis will also be reflected in the homework assignments and tests.

Learning Objectives: A working understanding of

1. the concept of charge (positive and negative).
2. simple electrical circuits containing:
 - a. batteries, wires and light bulbs
 - b. batteries, wires and motors
 - c. batteries wires and capacitors
3. the atomic and molecular nature of matter
4. a sense of scale (size)
5. the concepts of mass, volume, density and their relationship

Understanding of concepts is to be demonstrated by:

- ★ accurately communicating them in written and verbal formats
- ★ correctly answering both short and long answer questions

★ completing hands-on activities

Textbook Chapters: Chapter 22: Electrostatics Chapter 11: Atoms Chapter 23: Electric current Chapter 12: Solids Chapter 13: Liquids Chapter 14: Gases

Assessment and Grading:(Approximate weights) Lab reports (completed in class) 15% Homework (course outline and assigned in class) 20% Quizzes 5% Midterm exams (2) 30% Final exam 30% .

Homework Standards:

- Must write the question before the answer for completeness.
- May be typed or hand-written.
- Due at start of each class. You are responsible to hand in all assignments. Late assignments may be accepted, but will be penalized. Remember, completing tasks on time makes a good impression!

Exams:

- Midterm Exams schedule will be discussed in the class.
- Make up exams will be given only in extraordinary cases of illness or emergencies. In all cases documentation will be required.
- Bring a calculator; cell phones will not be allowed.
- Final exam will be comprehensive.

Additional Course Policies:

- Punctual attendance is critical. Class begins promptly at 12:30 pm. Quizzes will be random and mostly be given at start of class.
- We will have breaks.
- Cell phones should be turned off during class.
No food is allowed during the class.
- It is strongly encouraged that you do not miss the class.
- Each group is required to do at least 3 measurements before the observations will be entered into the lab book.
- When absences occur, it is your responsibility to obtain handouts and notes from your peers. You are responsible to complete the activities you have missed.

These policies will be strictly enforced for two reasons: 1) you are going to be professionals and these policies are typical of professional behavior; and 2) I take your learning very seriously and simply do not want to waste one minute of the time that I have with you.

Military: Students being called for military duties need to contact the instructor as soon as possible.

UTEP Policies on Academic Dishonesty If an instructor suspects a student of cheating, he/she is to collect evidence that he/she believes indicates this (e.g. exams, student work, etc). This evidence is then turned over to the Assistant Vice President for Student Affairs (VPSA). The student will receive an incomplete

on whatever piece of work is under consideration. No other actions will be taken by the instructor until the case is closed: no discussion, no accusation, and no different treatment. The student is encouraged to continue participating in the class. The VPSA will consider the evidence provided her and then contact the accused student (and possibly peers) and investigate the allegations. She will then make a decision as to whether cheating occurred and determine what the consequences will be. The instructor will be consulted by the VPSA as to whether the results of the investigation are acceptable to him/her. If acceptable, the instructor will simply carry out the consequences sent to both the student in question and the instructor in a formal letter from Student Affairs. While the seriousness of the identified dishonest actions determines the nature of the consequences, possible consequences include: a counted "zero" on the piece of work, a letter grade reduction, or being placed on academic probation. Students have the right to appeal a decision and participate in a formal public hearing.