

## SYLLABUS

**Class Hours/** M W 12 p.m. – 12:50 p.m. CCI 203  
**Room No** T Th 12 p.m. – 1:50 p.m. PHY 70

**Class No** 52690

**Instructor** Sharon Wu  
**Phone** 638-3641 ex-3497  
**Office Hours** WThF 11:00 am – 11:50 am, Or by appointment  
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**Instructor** Dr. John Heathcote  
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### Course Objectives:

Upon completion of this course, students will be able to:

- A. apply basic concepts and fundamental laws in thermodynamics, electricity, and magnetism.
- B. solve problems in thermal expansion.
- C. differentiate the heat transfer mechanisms of conduction, convection, and radiation.
- D. apply the First Law of Thermodynamics.
- E. understand the relationship between temperature and molecular kinetic energy.
- F. apply basic concepts and fundamental laws in electricity and magnetism.
- G. calculate the electric potential of various charge configurations.
- H. relate electric field and electric potential.
- I. determine the capacitance of various electrical systems.
- J. solve basic problems involving electrical circuits.

### Learning Outcomes:

In the process of completing this course, students will:

- A. complete assignments and lab reports outside of class requiring the application of concepts studied in class.
- B. use the scientific method for experiments illustrating basic ideas in physics, producing results which must be compared and/or correlated with what has been presented in class lectures.
- C. develop new ideas using previously held knowledge as their foundation.
- D. use the appropriate language of physics and mathematics in order to solve problems in physics.
- E. use problem solving processes developed in this course requiring sound reasoning skills that enhance responsible decision-making.

### Course Prerequisite:

Advisories: Eligibility for ENGL 1A  
Prerequisites: PHYS 4A

### Textbook:

Title: Physics for Scientists & Engineers with Modern Physics, 4<sup>th</sup> Edition.  
Authors: Douglas C. Giancoli  
Publisher: Pearson/Prentice Hall

### Blackboard

**Blackboard** is used for announcement and general class related information

To log-in Reedley College Blackboard:

**User name:** your student ID

**Password:** your student ID (\* Be sure to change your password after you login)

**Mastering Physics**

**MasteringPhysics** is an online learning and homework assessment system.

URL: <http://masteringphysics.com>

Course ID: (continue from last semester)

Course Title:

**Course Outline:**

1. Fluids
2. Oscillations
3. Wave Motion
4. Sound
5. Temperature, Thermal Expansion, and the Ideal Gas Law
6. Kinetic Theory of Gases
7. Heat and the First Law of Thermodynamics
8. Second Law of Thermodynamics
9. Electric Charge and electric Field
10. Gauss's Law
11. Electric Potential
12. Capacitance, Dielectrics, Electric Energy Storage
13. Electric Currents and Resistance
14. DC Circuits

**Homework Assignments:**

Homework is assigned for each chapter on **MasteringPhysics**. Due date is posted with each assignment.

**Laboratory:**

This class has a lab that is mandatory. There are data sheets that you will need to complete as part of your lab activity that will be due at the end of the lab session. You are required to follow a number of safety precautions in the laboratory. You must read and sign the safety agreement before beginning of the first lab.

**Tests:**

There will be a test every three or four chapters and the final exam. Each test has conceptual questions that are multiple choices; and detailed physics problems that will need to be solved. Early tests can be arranged with a very good reason. A more **difficult** late test can only be arranged if you have an excuse verified by an impartial party (i.e., a doctor or a court note).

**Grading:**

20% of the final grade points are from homework assignment.

10% of the final grade points are from laboratory work.

65% of the final grade points are from chapter tests.

5% of the final grade points are from class work.

Final grade is assigned using following scale:

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

- ❖ **If you have perfect attendance and your grade is within 1 point (or 1%) of the next higher letter grade, the instructor will award you the next higher letter grade.**

**Important Dates:**

Class begin	Monday	01/13/2014
Last day to register	Friday	01/31/2014
Last day to drop this class to avoid a "W"	Friday	01/31/2014
Last day to drop this class with a "W"	Friday	03/14/2014
No classes:		
Martin Luther King Jr. Day	Monday	01/20/2014
Lincoln Day	Friday	02/14/2014
Washington Day	Monday	02/17/2014
Spring Recess	Mon - Fri	04/14/2014 – 04/18/2014
<b>Final Exam</b>	<b>Monday</b>	<b>05/19/2014 12:00 pm – 1:50 pm</b>

**Attendance:**

Attendance will be taken at beginning of each class. Students are expected to attend all class meetings, be on time, and be in class the entire class session. Students, who leave the class before the end of class, will be counted as tardy. Two tardiness count as one absence. Your classmates and I would greatly appreciate that you take care of your personal needs (i.e., using the restroom, getting a drink...etc.) before the class begins.

Students will be dropped from the class if they fail to attend the first class session of the semester. During the semester up to final drop date, any student who missed more than two weeks of class meetings will be dropped from this class (8 classes).

**Canceled Class Notification:**

Click on "Canceled Class Meetings" on Reedley College webpage ([www.reedleycollege.edu](http://www.reedleycollege.edu)) for class cancellations.

**Student Conduct:**

Students are expected to conduct themselves in a responsible manner in the classroom. Specific rules and regulations have been established in Board Policy 5410. Failure to adhere to the accepted standards will result in disciplinary action. Campus Policies on Student Conduct is described in Reedley College Class Schedule.

**Accommodations for students with disabilities:**

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

**Plagiarism and Cheating Policy:**

Cheating and plagiarism is prohibited in the class. Incidents of cheating and plagiarism will result a failing grade on the particular examination or assignment in question.