

Phys 1444 GENERAL TECHNICAL COLLEGE PHYSICS II
Fall 2015

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Office Hours: Mon/Wed/Fri 13:30-15:00 pm or by appointment (ERB 340)

Section Information: Phys 1444-002

Time and Place of Class Meetings: M/W/F 10:00 - 10:50, in SH 121

Lab Rooms: SH ???

Description of Course Content:

The second half of a one-year technical physics course. Subject matter includes electricity and magnetism, light and optics, and modern physics, and is supplemented by laboratory experiments. The course will focus on the development of the critical thinking and quantitative skills needed to solve problems, while the lab will develop empirical skill as well as communication and teamwork.

Prerequisites: PHYS 1443 and Calculus.

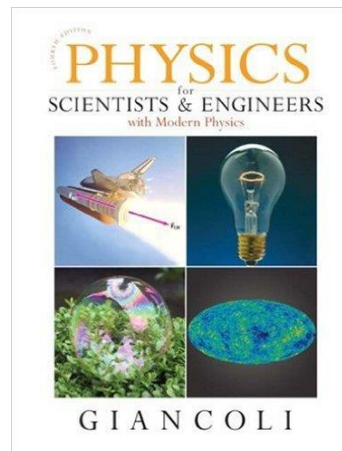
Student Learning Outcomes:

Upon successful completion of this course, students will:

- Articulate the fundamental concepts of electricity and electromagnetism, including electrostatic potential energy, electrostatic potential, potential difference, magnetic field, induction, and Maxwell's Laws.
- State the general nature of electrical forces and electrical charges, and their relationship to electrical current.
- Solve problems involving the inter-relationship of electrical charges, electrical forces, and electrical fields.
- Apply Kirchhoff's Laws to analysis of circuits with potential sources, capacitance, and resistance, including parallel and series capacitance and resistance.
- Calculate the force on a charged particle between the plates of a parallel-plate capacitor.
- Apply Ohm's law to the solution of problems.
- Describe the effects of static charge on nearby materials in terms of Coulomb's Law.
- Use Faraday's and Lenz's laws to find the electromotive forces.
- Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.
- Articulate the principles of reflection, refraction, diffraction, interference and superposition of waves. Solve real-world problems involving optics, lenses, and mirrors.

Required Textbooks and Other Course Materials:

- Douglas C. Giancoli " Physics for Scientist & Engineers"
4th Edition, Volume II, Pearson Prentice Hall



Homework: Homework done through “Mastering Physics”

(<http://www.pearsonmylabandmastering.com/northamerica/masteringphysics/>)

Course ID: MPKASH2015FA1444) Assignments must be finished and submitted on time to receive credit will be.

Lab: Lab attendance is required. If you have already taken a lab section, then you will require my signature to obtain credit.

Descriptions of major assignments and examinations:

The three midterms and final exams will be comprised of short-answer questions and derivational type problems, similar in style to homework questions. (HINT: The best way to prepare for exams is to do the required homework). Exams are closed book, and aids such as calculators and other electronic devices (cell phones, tablets, laptops etc.) are not permitted unless told otherwise. A standard formula sheet will be given to each student at the beginning of each exam.

Attendance:

At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, students are strongly encouraged to attend lectures (particularly due to some graded in class quizzes), come to office hours, and make use of all available educational resources.

Other Requirements:

Exams will be closed book, but students will be allowed to bring a two-sided sheet of letter-size paper. Students are expected to check the course website for updates to the course schedule throughout the semester.

Grading:

Grade percentages will be calculated based on the following weights:

• Homework:	25%
• Quizzes and Participation	10%
• 3 Exams (10% each):	30%
• Final Exam:	20%
• Lab:	15%
=====	=====
Total	100 %

Letter grades will be determined based on the following ranges:

Final Grade =	$0.25 \times \text{HW} + 0.10 \times \text{Quiz-N-Participation} + 0.30 \times \text{Exam} + 0.20 \times \text{Final_Exam}$
A	90 -100%
B	80 - 89 %
C	70 - 79%
D	60 - 69%

The instructor reserves the right to move the thresholds down based on the distribution of final percentages, but they will not move up (e.g., if a grade percentage is between 90 and 100, this will receive an A). Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

Make-Up Assignments and Exams:

If you miss an exam or quiz due to unavoidable circumstances (e.g., health), you must notify the instructor in writing via email as soon as possible and request a makeup approval. If it is a planned (non-emergency) absence, you must inform the instructor ahead of time! Do NOT ask for make-ups if you do not complete something due to travel (except when you are required to travel to represent the university or department on official business, but request at least 3 days ahead of the due date or exam time).

Grade Grievance Policy:

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog (see [here](#)).

The first step is as follows. If you do not believe a grade on a particular assignment is correct, you may appeal the grade in writing (by email) within 5 days. Grade appeals must be appealed to the appropriate GTA first, then to the instructor if necessary.

Drop Policy:

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way

through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering.

Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the [Office of Financial Aid and Scholarships](#).

Americans with Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found [here](#) or by calling the Office for Students with Dis. at (817) 272-3364.

Title IX:

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) "cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts" (UT System Regents' Rule 50101, §2.2). Suspected violations of academic integrity standards will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Electronic Communication:

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at [here](#).

Student Feedback Survey:

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

Final Review Week:

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures:

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Student Support Services:

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Emergency Phone Numbers:

In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911.