PHYS 1442: General College Physics II
Spring 2015

Instructor: Dr. Raymond Atta-Fynn

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Office Hours: Mon. & Wed. 11:00 AM - 1:30 PM or any time you can find me at the office.

Section Information: 004

Time and Place of Class Meetings: Mon., Wed., 5:30-6:50 PM, Room 103, Science Hall

Description of Course Content: The second half of a one-year, non-calculus introductory physics course. Subject matter includes electricity and magnetism, light and optics, and modern physics. Prerequisite: PHYS 1441 or equivalent, or permission of instructor.

Student Learning Outcomes:
1. Acquire a comprehensive knowledge of basic electromagnetism and optics.

2. Sharpen your critical thinking skills by recognizing physical principles and knowing when and how to apply them.

3. Improve your qualitative and quantitative problem-solving skills

4. Acquire skills to set up laboratory experiments, collect and analyze data, and write a report on your findings.

5. *A posteriori* application of physics knowledge in other courses.

Required Textbooks and Other Course Materials: *Physics: Principles with Applications* by Douglas C. Giancoli (Seventh Edition, Pearson Prentice Hall, 2014).

Descriptions of major assignments and examinations:

Homework
1. Homework problems will be assigned **online**. Students should also register online at **www.masteringphysics.com** using the course code RAFPHYS1442SPRING2015. Note that the **Mastering Physics online access code** must be purchased either with the textbook or separately.

2. Typically, after a chapter is completed, homework will be assigned and it will be **due in two weeks**. Students are strongly encouraged to solve the homework problems to enhance their understanding.

Exams

1. There will be two midterm exams and a final exam. Students will be informed in advance regarding the exam contents.

2. Exams will comprise multiple choice and short answer problems, with about 40% of the questions being of a qualitative nature and 60% being quantitative.

3. The classroom exercises and quizzes should be sufficient for your exam preparation. I will also give you some information in class on what to expect on each exam.

4. A formula sheet will be provided for each exam.

Assistance Outside the classroom

1. I will gladly provide assistance to those who need help in any aspect of the course work.

2. Students should also utilize a free homework assistance clinic provided by the Physics department. Information on this service can be obtained from http://www.uta.edu/physics/main/resources/clinics/index.html.

Attendance: Students are expected to attend classes regularly. There will be exercises/quizzes for each class. The extra credit earned from the in-class exercises/quizzes will count toward your final grade.

Grading:

Activity	**Percentage**
Lab.	10%
Homework	20%
Quizzes	5%
Exam 1	20%
Exam 2	20%
Final Exam	25%
Total	**100%**
Extra Credit (Classroom Exercises & Presentations)	**5-10%**

Scale*

90-100 A
80-89 B
70-79 C
50-69 D
0-49 F

As the instructor for this course, I reserve the right to adjust the grading scale. Also, a Lab. grade of F implies an automatic F in the course –Dr. Raymond Atta-Fynn.

Exam dates

Exam 1	Feb 23 (in class)
Exam 2	March 25 (in class)
Final Exam	May 11, 5:30-8 PM

Other important dates

Census date	February 04
Last day to drop classes; submit requests to advisor prior to 4:00pm	April 03
Spring Break	March 09-14
Last day of class	May 06

Make-up Exams: If you miss a test without an official documented reason, a make-up may be taken if you inform me the day prior to the test. The make-up test must be taken within one week after the test date.

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 (http://wweb.uta.edu/aao/fao/).

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 at www.uta.edu/disability or by calling the Office for Students with Disabilities 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: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) 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.

Lab Safety Training:
Students registered for this course must complete all required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., through the following August) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

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 http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

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, which is located close to the classroom. 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 individuals with disabilities.

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.

Course Schedule

Chapter 16: Electric Charge and Electric Field
Chapter 17: Electric Potential
Chapter 18: Electric Currents
Chapter 19: DC Circuits
Chapter 20: Magnetism
Chapter 21: Electromagnetic Induction and Faraday's Law
Chapter 22: Electromagnetic Waves

Chapter 23: Light: Geometric Optics
Chapter 24: The Wave Nature of Light
Chapter 25: Optical Instruments
Chapter 26: The Special Theory of Relativity
Chapter 27: Early Quantum Theory and Models of the Atom
Chapter 28: Quantum Mechanics of Atoms
Chapter 29: Molecules and Solids
Chapter 30: Nuclear Physics and Radioactivity
Chapter 31: Nuclear Energy; Effects and Uses of Radiation
Chapter 32: Elementary Particles
Chapter 33: Astrophysics and Cosmology

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. For non-emergencies, contact the UTA PD at 817-272-3381.

Library Information and Resources:

Library Home Page	http://www.uta.edu/library
Subject Guides	http://libguides.uta.edu
Subject Librarians.....	http://www.uta.edu/library/help/subject-librarians.php
Database List	http://www.uta.edu/library/databases/index.php
Course Reserves.....	http://pulse.uta.edu/vwebv/enterCourseReserve.do
Library Tutorials	http://www.uta.edu/library/help/tutorials.php
Connecting from Off- Campus	http://libguides.uta.edu/offcampus
Ask A Librarian	http://ask.uta.edu

The following URL houses a page where we have gathered many commonly used resources needed by students in online courses: http://www.uta.edu/library/services/distance.php.

The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For examples, visit http://libguides.uta.edu/os and http://libguides.uta.edu/pols2311fm . If you have any questions, please feel free to contact Suzanne Beckett, at sbeckett@uta.edu or at 817.272.0923.