Course Syllabus

Course Information

Course Number/Section	Physics 1302-001
Course Title	College Physics II
Term	Fall 2013
Days & Times	TR 2:30 – 3:45 pm

Professor Contact Information

Professor	Mrs. B. Rasmussen
Office Phone	(972) 883-2842
Email Address	bearas@utdallas.edu
Office Location	SLC 3.310
Office Hours	T: 1 – 2 pm, W: noon – 3pm, R: noon-2 pm

Course Pre-requisites & Corequisites

Phys 1301
Corequisite: Phys 2126

Course Description

Continuation of PHYS 1301. Topics include electricity and magnetism and optics.

Student Learning Objectives/Outcomes

Upon completing this course, students will:

1. Be able to compute the sum, scalar multiplication, and vector multiplication of vectors
2. Be able to analyze force problems including electric and magnetic forces
3. Determine the electric and magnetic fields produced by continuous distributions in both the symmetrical and unsymmetrical cases
4. Calculate the electric potential, capacitance, resistance, and current density
5. Analyze electrical circuits including equivalent capacitance, resistance, and inductance
6. Calculate electric and magnetic flux
7. Calculate energy stored in electric and magnetic fields
8. Apply Faraday's Law and Lentz's law to induction
9. Classify electromagnetic waves and their spectrum
10. Work with reflection and refraction including focal point, magnification, and finding the image (for both mirrors and lenses)

Required Textbooks and Materials

College Physics, 9th edition, by Young

Assignments & Academic Calendar

Date	Week discussion	Reading Assignment
8/27-29	**W1 Electric charge and force**	**Ch 17 sec 1-5**
9/3-5	**W2 Electric fields**	**Ch 17 sec 6-9**
9/10-12	**W3 Electric energy and potential**	**Ch 18 sec 1-4,7**
9/17-19	**W4 Capacitors**	**Ch 18 sec 5-9**
9/24	**Exam 1 (Electric Statics)**	
9/26	**W5 Current, batteries**	**Ch 19 sec 1, chem. Bk.**
10/1-3	**W6 Resistors**	**Ch 19 sec 2**
10/8-10	**W7 Circuits**	**Ch 19**

10/15	**Exam 2 (Electric Motion)**	
10/17	**W8 Magnetic force**	**Ch 20 sec 1-6**
10/22-24	**W9 Magnetic sources**	**Ch 20 sec 7-10**
10/29-31	**W10 Induction**	**Ch 21 sec 1-10**
11/5-7	**W11 Magnetic circuits and Maxwell**	**Ch 21 sec11-12 Ch 22**
11/12	**Exam 3 (Magnetism)**	
11/14	**W12 Electromagnetic waves**	**Ch 23**
11/19-21	**W13 Optics**	**Ch 24**
11/26-28	**Fall Break**	
12/3-5	**W14 Optics cont**	**Ch 25**
12/10	**W15 Radioactivity**	**Ch 30**
	Final Exam time in Galaxy	

Grading Policy

Final grades are determined from a combination of the below items. **There will be no curving.**

Homework	25%	90-100	A (A+, A, A-)
3 Exams	45%	80-89.9	B
Quizzes and class participation	5%	70-79.9	C
Final Exam	25%	60-69.9	D
TOTAL	100%	Below 60	F

Course Policies

Exams

1. **Valid picture ID (Comet card or drivers license) must be on your desk during exams. These will be checked.**
2. **Calculators will be necessary** for all exams. **Graphing calculators and programmable calculators will not be allowed in the exams**. A little scientific calculator that has trig functions can be obtained very inexpensively and should be all that is used on the exams.
3. **You must show all work for exams. There will be no credit for just numbers (relevant equations are required). You will not receive full credit for correct answers without work.**
4. All exams will be **closed book**. **Formulas will be provided with the exam**. You must know the concepts and vocabulary for the exams. **Exams will cover both in-class examples and homework**.
5. **Exams must be done in ink.**
6. During the exam periodic information will be given on the overhead like time updates and any clarifications necessary. Look up before you ask.
7. A verbal warning of 10 minutes remaining will be given. When time is up I will request everyone to put their pens down and pass their exams to the right and leave to the left.
8. Exams will consist of a conceptual section (with 10 matching at 2 points each and 10 multiple choice at 3 points each) (50%) and a problem section (with 3 to 5 problems) (50%). No partial credit will be given on the conceptual section, but there will be for the problems based on the work shown including equations. **Points will be taken off if there are no equations.**
9. You will be responsible for all the reading assignments even if we do not discuss them in class. This includes the power point slides available on eLearning.
10. Any question about an exam grade must be addressed by the next class day after handing out of the exam to the class. After that all grades are final.

11. The final exam will be **cumulative** and will be based on the previous exams, homework, and extra credit problems. The final exam will have all rules of a regular exam still in effect.
12. Makeup exams will only be offered once at the end of the semester.

Homework/Extra Credit

1. Homework assignments are given on the website http://www.masteringphysics.com Just go to the website and login as a student following the directions.
2. **Be aware my course ID for this class is BEARAS05.**
3. **Make sure the name you give the website matches your name of record.**
4. This homework **will** be graded. No handwritten homework will be accepted.
5. An extra credit assignment may be assigned on the website.
6. Homework are due on the date specified. Late homework will be accepted **but with a penalty**. Do not get behind.
7. Since late homework is accepted you must **never press GIVE UP**. I have withheld all answers. You will not get to see them if you press GIVE UP.
8. If you cannot get a problem after 4 tries you are welcome to get help. I answer homework help in my office hours or by email 7 days a week. The Gems center also has physics tutoring available.
9. You are welcome to work together on homework but everyone must do their own problems. You will notice everyone has different numbers.
10. I will also have a Redo for Practice available so you can study for exams. It is also helpful to print out your homework problems and do the work on your printouts. It is a convenient way to keep everything together.

Help for the class

1. There is room outside Mrs. Rasmussen's office, SLC 3.310, for students to meet and discuss the homework problems.
2. In the past students have used this location to have a "physics party" where they get together and help each other. It is very important that you all help each other, but this is a location where there will be help available.
3. Mrs. Rasmussen is available if her office door is open. The TA offices are close.
4. I strongly recommend you take advantage of this resource to help you with any questions you have. First and second semester questions are both welcome.

Class Notes/Quizzes/Class Participation

1. You can go to the course under eLearning and download power point slides which are part of the lectures. Be careful these lectures are not complete and will not be enough to pass the class. **Come to Class with these notes**. I will assume you have these notes with you.
2. The reading assignment includes the relevant sections from the chapters given above and the lecture notes available on eLearning. Therefore you must **read the chapters before the lecture**.
3. Keep a physics notebook of facts and formulas. This can be very helpful on homework, quizzes, and studying for the exam. You might be asked to turn in pages of this notebook for a class participation grade. This plus the quizzes you will find on eLearning will make up the quizzes and class participation part of your grade.
4. There will be 2 extra credit quizzes on an eLearning site that is separate from the eLearning site for your class. Information on this will be supplied later.

Classroom Citizenship

1. Do not disrupt your neighbors by talking during class times.
2. Cell phones must be turned off during all class time.
3. Do not disrupt the class by getting up and leaving the class.

Peer Led Team Learning (PLTL)

1. Peer Led Team Learning (PLTL) is a new program designed to provide an active learning experience in which students can gain the skills and confidence to be successful learners in Physics and future courses.
2. In weekly ninety-minute PLTL sessions, small groups of students will work together to solve problems written by UT-Dallas' physics faculty (me for this class).
3. An undergraduate PLTL leader who has training in group dynamics and mastery of course content will lead them.
4. This is an optional, free component to the course. **However, if you choose to participate, you are required to stay in the program throughout the semester**—the integrity of the group depends on it. If you sign up for PLTL and do not attend the sessions you will get no benefit from it and take the space from someone who can. Be aware it takes a commitment from you to sign up for this.
5. To participate in a PLTL group, you will need to sign up for it in ORION. More details of this highly beneficial program will be announced in class.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high

degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the deal will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:

The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address given below. Additional information is available from the office of the school dean. (http://www.utdallas.edu/Business Affairs/Travel_Risk_Activities.htm)

These descriptions and timelines are subject to change at the discretion of the Professor.

Important Dates:

Classes start	8/26 (Monday)
Last day to add	9/3 (Tuesday)
Census day, last day to drop w/o W	9/11 (Wednesday)
Drop w/ WL begins	10/8 (Tuesday)
Mid term grades due	10/18 (Friday)
Last day to drop w/ WL	10/31 (Thursday)
Last day of class	12/11 (Wednesday)
Reading Days	12/12 (Thursday)
Final Exams	12/13-19
Final grades due	12/21 (Saturday)
University Closings:	
Labor Day	9/2 (Monday)
Fall Break	11/25-30