

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF PHYSICS

Course #: PHYS 2421, CRN 11075
Course Title: Introductory Electromagnetism
Credit Hrs: 4
Term: Fall 2018
Course Meetings & Location: Undergraduate Learning Center 116, MW 3:30 - 4:50 pm
Associated Course: Lab & Workshop
Prerequisite Courses: Cal I & II
Course Fee: (if applicable)
Instructor: Dr. Huiyan Yang
Office Location: PSCI 215 B
Contact Info: Phone #: 7510
E-mail address: hyang4@utep.edu
Fax #: 915-747-5447
Emergency Contact #: 915-747-5536
Office Hrs: TR 1:30 - 2:30 pm or by appointment
Textbook(s), Materials: Required: Physics for Scientists and Engineers: A Strategic Approach, 4th Edition, by Randall D. Knight. Online study tool: MasteringPhysics (MPYANG10175) (Homework is assigned and graded in MasteringPhysics. All students are required to have access of MasteringPhysics.)
Course Objectives (Learning Outcomes): This semester you will be learning about the AMAZING world of electricity and magnetism and it all revolves around the physical property known as “charge”. A simple way to think about EVERYTHING you will learn in this course is that you will learn about 1) stationary charges, 2) flowing charges (moving together with more or less constant velocity), and 3) accelerating charges.
Course Activities/Assignments: Course activities include reading assignment, lectures, homework, quizzes, three midterm exams, and a final exam.
Assessment of Course Objectives: Outcomes will be measured by exams and other assignments.
Grading Policy: 30% Final Exam (comprehensive):
30% Three Midterm Exams
10% Quizzes
15% Lab
15% Homework
Homework Policy: Homework is to be submitted through Mastering Physics. Credit is reduced by 10% per day after the due day and a hard copy must be turned in. 30% credit will be granted when a turned-in homework is overdue more than a week. No homework will be accepted after the final exam.

- Quiz Policy:** Written quiz is given at workshop and counts for 10% towards the final grade. Classroom quiz is given by using iClicker Cloud and counts for 5% extra credit for the final grade. There is no make-up for missed quiz.
- Exam Make-up Policy** Attendance at exam is mandatory. Make up exams are given only on extraordinary cases of severe illnesses or emergencies. They can be arranged at the discretion of the instructor. A written excuse and official documents will be required and investigated.
- Attendance Policy:** Attendance in class is the responsibility of the students. If class is missed, you are responsible for obtaining the notes from another student or from the instructor.
- Academic Integrity Policy:** Acts of academic dishonesty will not be tolerated in this class. Lapses in academic integrity will be referred to the Office of Student Conduct and Conflict Resolution, as required at <https://www.utep.edu/student-affairs/osccr/>.
- Civility Statement:** This course requires positive behaviors: Be on time and be focused on your work. Please do not distract yourself or others with telephones or music.
- Disability Statement:** If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Center for Accommodations and Support Services (747-5148 or cass@utep.edu) or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.
- Military Statement:** If you are a military student with the potential of being called to military service and /or training during the course of the semester, you are encouraged to contact me as soon as it appears that your service will interfere with this course. The instructor will work with you to ensure that your service will not adversely affect your academic progress.
- Course Schedule:** Tentative List of Topics and Exam Dates
1. Electric charges and forces
 2. The electric field
 3. Gauss's law
 4. The electric potential
 5. Potential and field
 6. Current and resistance
 7. Fundamentals of circuits
 8. The magnetic field
 9. Electromagnetic inductance
 10. AC Circuits
- Exam I: Oct. 1st, Monday
Exam II: Oct. 22nd, Monday
Exam III: Nov. 26th, Monday
Final Exam: Dec. 10th, Monday

PHYS 2421 CRN 11075 Electromagnetism, Fall 2018 Tentative Timeline

Class meeting time: MW 3:30 – 4:50 pm, Undergraduate Learning Center 116

Week	Date	Topic	Workshop Activity	Homework*
1	Aug 27	Ch 22 Electric Charge		HW 1 assigned
	Aug 29	Ch 23 Electric Field	No workshop	HW 2 assigned
2	Sep 3	No Class (Labor Day)		
	Sep 5	Ch 23 Electric Field	No workshop	HW 1 due
3	Sep 10	Ch 24 Electric Flux		
	Sep 12	Ch 24 Gauss's Law	Review HW 2 & 3, quiz 1	HW 2 due
4	Sep 17	Ch 25 Electric Potential		
	Sep 19	Ch 25 Electric Potential	Review HW 4, quiz 2	HW 3 due
5	Sep 24	Ch 26 Potential and Field		
	Sep 26	Ch 26 Capacitance and Capacitors	Review HW 5, quiz 3	HW 4 due
6	Oct 1	Exam I		
	Oct 3	Ch 27 Current and Resistance	Review Exam I**	HW 5 due, HW 6 assigned
7	Oct 8	Ch 28 Kirchhoff's Laws		
	Oct 10	Ch 28 Energy and Power	Review HW 6, quiz 4	HW 6 due
8	Oct 15	Ch 28 Series and Parallel Circuits		
	Oct 17	Ch 28 RC Circuits	Review HW 7, quiz 5	HW 7 due
9	Oct 22	Exam II		
	Oct 24	Ch 29 Magnetism	Review Exam II**	
10	Oct 29	Ch 29 Sources of Magnetic Field		HW 8 assigned
	Oct 31	Ch 29 Ampere's Law	Review HW 8, quiz 6	
11	Nov 5	Ch 29 Magnetic Force		
	Nov 7	Ch 30 Induced Currents	Review HW 8, quiz 7	HW 8 due
12	Nov 12	Ch 30 Magnetic flux		
	Nov 14	Ch 30 Faraday's Law	Review HW 9, quiz 8	
13	Nov 19	Ch 30 Inductors		
	Nov 21	Ch 30 LC and LR Circuits	Review HW 9, quiz 9	HW 9 due
14	Nov 26	Exam III		
	Nov 28	Ch 31 Maxwell's Equations	Review Exam III**	
15	Dec 3	Ch 32 AC Circuits		
	Dec 5	Ch 32 AC Circuits	Review for Final Exam, quiz 10	
16	Dec 10	Final Exam	1:00 – 3:45 pm	

*Homework assignment is based on Physics for Scientists and Engineers: A Strategic Approach, 4th Edition, by Randall D. Knight. Homework is assigned and graded in the online study tool MasteringPhysics. All students are required to have access of MasteringPhysics.

**The workshop on Monday could provide a review session for the exam.