

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

Course #: PHYS 2421, CRN 20894
Course Title: Introductory Electromagnetism
Credit Hrs: 4
Term: Spring 2020
Course Meetings & Location: Liberal Arts Building 222, MW 3:00 - 4:20 pm
Associated Course: Lab & Workshop
Prerequisite Courses: PHYS 2420
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: MW 10:30 - 11:30 am or by appointment
Textbook(s), Materials: Required: Physics for Scientists and Engineers: A Strategic Approach, 4th Edition, by Randall D. Knight.
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 lectures, homework, tests, 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% Blackboard Tests
10% Workshop Quizzes
20% Lab
Test and Quiz Policy: Written quiz is given at workshop and online test is given on blackboard. Classroom quiz is given by using iClicker Cloud and counts for 5% extra credit for the final grade. There is no makeup for missed quiz or test. The worst quiz or test score will be dropped off.
Exam Make-up Policy: No makeup exam is given. The worst midterm exam will be dropped off. The final exam is mandatory. The student loses 30% credit if the final exam is missed. Bring a calculator; cell phones are not allowed.

- Attendance Policy: Two extra points are given for the final grade for attendance. 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 Dean of Students, as required at <http://academics.utep.edu/Default.aspx?tabid=23785>.
- 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: Feb. 24th, Monday, class time
Exam II: Mar. 23rd, Monday, class time
Exam III: Apr. 27rd, Monday, class time
Final Exam: May 11th, Monday, 1:00 – 3:45 pm

Important Dates

Feb. 5th Spring Census Day

Apr. 3rd Spring Drop/Withdrawal Deadline

PHYS 2421 CRN 20894 Electromagnetism, Spring 2020 Tentative Timeline
 Class meeting time: MW 3:00 – 4:20 pm, Liberal Arts Building 222

Week	Date	Lecture Topics*	Workshop Activities**	Tests and Homework***
1	Jan 22	CH 22 Electric Charge	No workshop	Test 1 assigned
2	Jan 27	CH 22 Electric Field	Review Ch 22 & 23, quiz 1	Test 2 assigned
	Jan 29	CH 23 Electric Field		Test 1 due
3	Feb 3	CH 24 Electric Flux	Review Ch 24, quiz 2	
	Feb 5	CH 24 Gauss's Law		Test 2 due, Test 3 assigned
4	Feb 19	CH 25 Electric Potential	Review Ch 25, quiz 3	
	Feb 12	CH 25 Electric Potential		Test 3 due
5	Feb 17	CH 26 Potential and Field	Review Ch 26, quiz 4	
	Feb 19	CH 26 Capacitance and Capacitors		Test 4 due
6	Feb 24	Exam I	Review Exam I	
	Feb 26	CH 27 Current and Resistance		Test 5 due, Test 6 assigned
7	Mar 2	CH 28 Kirchoff's Laws	Review Ch 27, quiz 5	
	Mar 4	CH 28 Energy and Power		Test 6 due
8	Mar 9	CH 28 Series and Parallel Circuits	Review Ch 28, quiz 6	
	Mar 11	CH 28 RC Circuits		Test 7 due
9	Mar 16	Spring Break		
10	Mar 23	Exam II	Review Exam II	
	Mar 25	CH 29 Magnetism		Test 8 assigned
11	Mar 30	CH 29 Sources of Magnetic Field	Review Ch 29, quiz 7	
	Apr 1	CH 29 Ampere's Law		Test 8 due
12	Apr 6	CH 29 Magnetic Force	Review Ch 29, quiz 8	
	Apr 8	CH 30 Induced Currents		Test 9 due
13	Apr 13	CH 30 Magnetic flux	Review Ch 30, quiz 9	
	Apr 15	CH 30 Faraday's Law		Test 10 due
14	Apr 20	CH 30 Inductors	Review Ch 30, quiz 10	
	Apr 22	CH 30 LC and LR Circuits		Test 11 due
15	Apr 27	Exam III	Review Exam III	
	Apr 29	CH 31 Maxwell's Equations		
16	May 4	CH 32 AC Circuits	Review for Final Exam, quiz 11	Test 12 due
	May 6	CH 32 AC Circuits		
17	May 11	Final Exam	1:00 – 3:45 pm	

* Lecture topics and homework are based on Physics for Scientists and Engineers: A Strategic Approach, 4th Edition, by Randall D. Knight.

** Workshop gives quizzes, and reviews problems in blackboard tests and homework. The worst quiz score will not be counted for grade.

*** Test and homework are assigned online in Blackboard. A new test is assigned when the previous one is due unless noted otherwise. The worst test score will not be counted for grade. Homework is not counted for credits.