

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

Course #:	PHYS 4342 CRN 22536												
Course Title:	Electromagnetics II												
Credit Hrs:	3.0												
Term:	Spring 2019												
Course Meetings & Location:	TR 12:00 – 1:20 PM, Worrell Hall 205												
Prerequisite Courses:	MATH 2326, 3323, and 3335, and PHYS 2421 and PHYS 4341 w/C or better												
Course Fee: (if applicable)	-												
Instructor:	Dr. Felicia S. Manciu												
Office Location:	PSCI 221 B												
Contact Info:	Phone # : (915) 747 8472												
	E-mail address: fsmanciu@utep.edu												
	Fax #: (915) 747 5447												
	Emergency Contact: (915) 747 5715												
Office Hrs:	Tuesday, Thursday 10:30 am – 11:30 am and 2:00 pm – 3:00 pm												
Textbook(s), Materials:	Main textbook: <i>Introduction to Electrodynamics</i> by <i>David J. Griffiths</i> (Fourth Edition)												
Course Objectives (Learning Outcomes):	<p>The objective of PHYS 4342, which is the second part of a sequence of advanced undergraduate physics courses at the junior or senior level, is to provide students with a further rigorous problem-solving abilities and description of physical phenomena. Electromagnetics I is a prerequisite.</p> <p>We will study the following topics: Review of Maxwell's Equations, Conservation Laws, Electromagnetic Waves, Potentials and Fields, Radiation, and Electrodynamics and Relativity. First midterm (Chapters 7, 8, and 9) will be scheduled before the Spring break and the second midterm (Chapters 10, 11, and 12) during the last week of April, at the latest.</p> <p>The final exam (comprehensive) is scheduled by the school (please see registrar's webpage). Final exams must be given at the scheduled time; any/all exceptions must be approved by both the Department Chair and the Dean.</p>												
Grading Policy:	<p>Grades in this course will be based on your scores on two midterm exams, a final exam (comprehensive; but with emphasis on the last part of the course), laboratory, and homework assignments.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Midterm exams:</td> <td>50%</td> <td>(25% each)</td> </tr> <tr> <td>Final exam:</td> <td>30%</td> <td>(comprehensive)</td> </tr> <tr> <td>Homework:</td> <td colspan="2">20%</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Midterm exams:	50%	(25% each)	Final exam:	30%	(comprehensive)	Homework:	20%				
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Final exam:	30%	(comprehensive)											
Homework:	20%												

<p>Course Activities/Assignments:</p>	<p>Homework Several homework sets will be assigned. Homework is a key component of this course, as acquiring and improving your analytical skills critically depends on the number and variety of problems you attempt to solve. Solving homework problems in groups is encouraged. Due dates for homework will be announced and no late homework will be accepted.</p> <p>It is essential that students become well versed in problem solving methods, which means developing the writing skills to set up a problem, including mathematical manipulation to achieve the final answer. A numerical score will be assigned for each homework set based on graded and counted problems.</p>
<p>Course Activities/Assignments:</p>	<p>Feel free to form study groups with your classmates and seek help from your lecture professor during office hours, as you attempt to solve the problems. <u>Make sure that you understand the solutions and write them up yourself. There is a strong correlation between homework scores and exam scores!</u></p> <p>Exams Exams will consist of problems very similar to the worked example problems in the text and the assigned homework problems.</p> <p>No cell phones allowed in the exams!</p> <p>The best way to prepare for the exams is to study the example problems and work out the assigned homework problems regularly. You should work as many additional problems from the text as you can: this is the best way to ensure your understanding of the material.</p>
<p>Make-up Policy:</p>	<p>An extension of the due date for the homework as well as the make-up of missing exams will be granted only in extraordinary circumstances.</p>
<p>Attendance Policy:</p>	<p>Attendance is mandatory.</p>
<p>Academic Integrity Policy:</p>	<p>Please see: http://academics.utep.edu/Default.aspx?tabid=23785</p>
<p>Civility Statement:</p>	<ul style="list-style-type: none"> • Cell phones and pagers should be turned off during class time. • When absences occur, it is your responsibility to obtain handouts and notes from your peers. When possible you will complete the activities you have missed. • Academic integrity is to be practiced at all times.
<p>Disability Statement:</p>	<p>If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East Building, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.</p> <p>The student is responsible for presenting to the instructor any accommodation letters and instructions.</p>
<p>Military Statement:</p>	<p>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 the instructor at the beginning of the semester.</p>

Course Schedule:

REVIEW MAXWELL EQUATIONS

CHAPTER 7 – ELECTRODYNAMICS

CHAPTER 8 – CONSERVATION LAWS

CHAPTER 9 – ELECTROMAGNETIC WAVES

CHAPTER 10 – POTENTIAL AND FIELDS

CHAPTER 11 – RADIATION

CHAPTER 12 – ELECTRODYNAMICS AND RELATIVITY