

Grading Policy and Course Schedule

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Course Description from the Undergraduate Bulletin:

Introduction to classical electromagnetic theory based on vector calculus. Electrostatics; Laplace and Poisson's equations; Dielectric media and magnetostatics fields in matter; Computer will be used to solve electromagnetic problems.

Textbook:

"Introduction to Electrodynamics", David J. Griffiths, 4th edition.

Grading Policy:

Homework	20%
Major 1	20%
Major 2	20%
Final	30%
Project	10%

Homework after the deadline will not be accepted. You may discuss your homework with other students but you are not allowed to copy their work.

The topic of the project is open, but it should be related to the material of the course. You are advised to choose the topic of your project as soon as possible but no later than 04 Dec. 2016. Here are some suggestions: review papers from American Journal of Physics or European Journal of Physics, write about advances or history, develop a computer program, or build a device. You are strongly encouraged to discuss your progress in your project with me during office hours. At the end of the term, you will give a presentation about your project in front of your fellow students.

As per KFUPM policy, a DN will be assigned if the number of unexcused absences exceeds one-fifth of the total class hours scheduled for the course. That is nine lectures.

King Fahd University of Petroleum and Minerals
 Physics Department
 Phys 305 Electricity and Magnetism I
 Term 161

	Date	Activity	Note
1	18 Sep	§1.1 Vector Algebra	
	20 Sep	§1.2 Differential Calculus	
	22 Sep		National Day Holiday
2	25 Sep	§1.3 Integral Calculus	
	27 Sep	§1.4 Curvilinear Coordinates	
	29 Sep	§1.5 The Dirac Delta Function	Dropping without permanent record
3	2 Oct	§1.6 The Theory of Vector Fields	
	4 Oct		
	6 Oct	§2.1 The Electric Field	
4	9 Oct	§2.2 Div. and Curl of Electrostatic Fields	
	11 Oct	§2.3 Electric Potential	
	13 Oct	§2.4 Work and Energy in Electrostatics	
5	16 Oct	§2.5 Conductors	
	18 Oct		
	20 Oct	Review	
6	23 Oct	First Major	From §1.1 till §2.5
	25 Oct	§3.1 Laplace's Equation	
	27 Oct	§3.2 The Method of Images	Dropping with "W"
7	30 Oct	§3.3 Separation of Variables	
	1 Nov	§3.4 Multipole Expansion	
	3 Nov		
8	6 Nov	§4.1 Polarization	
	8 Nov	§4.2 The Field of a Polarized Object	
	10 Nov	§4.3 The Electric Displacement	
	13 Nov		Mid-Term Break
	15 Nov		Mid-Term Break
	17 Nov		Mid-Term Break
9	20 Nov	§4.4 Linear Dielectric	
	22 Nov		
	24 Nov	Review	
10	27 Nov	Second Major	From §3.1 till §4.4
	29 Nov	§5.1 The Lorentz Force Law	
	1 Dec	§5.2 The Biot-Savart Law	Withdrawing all courses with "W"
11	4 Dec	§5.3 Magnetic Vector Potential	Submitting the topic of the project
	8 Dec		
	10 Dec	§6.1 Magnetization	
12	11 Dec	§6.2 The Field of a Magnetic Object	
	13 Dec	§6.3 The Auxiliary Field H	
	15 Dec	§6.4 Linear and Nonlinear Media	
13	18 Dec		
	20 Dec	§7.1 Electromotive Force	
	22 Dec	§7.2 Electromagnetic Induction	
14	25 Dec	§7.3 Maxwell's Equations	
	27 Dec		

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	Date	Activity	Note
	29 Dec	Review	Withdrawing all courses with "WP/WF"
15	1 Jan	Presentations	
	3 Jan	Presentations	
	5 Jan	Presentations	
	8 Jan	Presentations	
	10 Jan		Preparation Break
	12 Jan		Final Exam Period
	15 Jan		Final Exam Period
	17 Jan		Final Exam Period
	19 Jan		Final Exam Period
	22 Jan		Final Exam Period
	24 Jan		Final Exam Period
	26 Jan		Final Exam Period