PHY 712 Electrodynamics
12-12:50 AM MWF Olin 103

Plan for Lecture 5:

Reading: Chapter 1 & 2 in JDJ

Introduction to numerical methods

1. **Finite difference methods with 2-dimensional example (Section 1.13 of your textbook)**

2. **Finite element methods with 2-dimensional example (Section 2.12 of your textbook)**

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PHY 712 Electrodynamics

MWF 12-12:50 PM OPL 103 http://www.wfu.edu/~natalie/s20phy712/

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Course schedule for Spring 2020

(Preliminary schedule -- subject to frequent adjustment.)

	Lecture date	JDJ Reading	Topic	HW	Due date
1	Mon: 01/13/2020	Chap. 1 & Appen.	Introduction, units and Poisson equation	#1	01/17/2020
2	Wed: 01/15/2020	Chap. 1	Electrostatic energy calculations	#2	01/22/2020
3	Fri: 01/17/2020	Chap. 1	Electrostatic potentials and fields	#3	01/24/2020
	Mon: 01/20/2020	No class	Martin Luther King Holiday		
4	Wed: 01/22/2020	Chap. 1 - 3	Poisson's equation in 2 and 3 dimensions	#4	01/27/2020
5	Fri: 01/24/2020	Chap. 1 - 3	Brief introduction to numerical methods	#5	01/31/2020
6	Mon: 01/27/2020	Chap. 2 & 3	Image charge constructions		
7	Wed: 01/29/2020	Chap. 2 & 3	Cylindrical and spherical geometries		
8	Fri: 01/31/2020	Chap. 3 & 4	Spherical geometry and multipole moments		
9	Mon: 02/03/2020	Chap. 4	Dipoles and Dielectrics		
10	Wed: 02/05/2020	Chap. 4	Polarization and Dielectrics		

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