

Syllabus Physics 452 Fall 2015

Meets: Monday, Wednesday and Friday @ 11:30-12:20 in Jorgensen Hall 149

Textbook: Introduction to Electrodynamics by David J. Griffiths 4th Edition

Office Hours: TBA

Instructor

Martin Centurion

Office: Jorgensen Hall 079

Email: mcenturion2@unl.edu

Phone: 472 5810

Time required to do well: 12-15 hours/week outside of class.

Lectures: You are required to read the relevant chapters in the textbook before coming to class. I will assume that you are familiar with the material. There will be occasional quizzes in class. The lecture will include going over the material and doing practice problems.

Homework: There will be weekly homework. No late homework sets will be accepted unless previously approved by the instructor. Homeworks are posted on Blackboard-print them out and please make sure all your answers are worked out on the answer sheets provided. The lowest HW score will be dropped. If you find yourself spending more than 30 minutes on getting started on a single homework problem, *get help*. Help is available via my office hours or by appointment. You are responsible for knowing the material on the homework. The exams will assume that the HW problems have been worked on, digested and understood.

Exams: Midterm 1: September 28 (Monday) 11:30-12:20

Midterm 2: October 26 (Monday) 11:30-12:20

Midterm 3: November 23 (Monday): 11:30-12:20

Final (Cumulative): December 17 (Thursday) 10:00 am -noon

<u>Grading:</u>	Homework	20 %
	Quizzes	5 %
	1 st midterm	15 %
	2 nd midterm	15 %
	3 rd midterm	15 %
	Final (cumulative)	30 %

Math Prerequisites: Physics 451. Math 220 or 221. The prerequisite for that is Math 208-Analytical geometry and calculus III. We will use all that you learnt in Math 208-read chapter 1 yourself and come to class prepared to use it!

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to

students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.

PHYSICS 452 FALL 2012 TENTATIVE LECTURE SCHEDULE

DATES	SECTION	TOPICS
08/24-08/28	7.1-7.3	EMF, Induction and Maxwell's Equations.
8/31-9/04	7.3, 8.1	Conservation Laws
09/09-09/11	8.2	Conservation Laws
09/14-09/18	9.1-9.2	EM waves in vacuum
09/21-09/25	9.2, 9.3, Review	EM waves in matter, Review
09/28(Mon)	1st MIDTERM	CHAPTERS 7, 8 and 9.1,9.2
09/30-10/02	9.3	EM waves in matter
10/05-10/09	9.4	Absorption and Dispersion
10/12-10/16	9.5	Wave guides
10/19-10/21	10.1, 10.2	Potentials
10/23	Review	Review
10/26(Mon)	2nd MIDTERM	SECTIONS 9.3, 9.4, 9.5, 10.1
10/28-10/30	10.2	Potential formulation
11/02-11/06	10.2, 10.3	Potential of point charges
11/09-11/13	11.1	Dipole Radiation
11/16-11/20	11.2, Review	Radiation from point charges, Review
11/23(Mon)	3rd MIDTERM	SECTIONS 10.1, 10.2, 10.3, 11.1, 11.2
11/26-11/28	NO CLASSES	THANSGIVING BREAK
12/01-12/05	11.2, 12.1	Radiation reaction and Special Theory of Relativity
12/08-12/12	12.2, 12.3, Review	Relativistic Electrodynamics, Review
12/17	FINAL 10am	CUMULATIVE

Holidays: Labor day (9/07), Fall Break (10/19-20), Thanksgiving (11/25-27).

Last week of classes: Dec 7-11.