

Course Information

PHYS 273 Fundamentals of Physics II Electromagnetism (4 credit hours)

Fall 2015. Faraday 143, Tuesday Thursday 12:30-1:45

Course website on blackboard

Instructor Information

Professor: Laurence Lurio (753-6470) (llurio@niu.edu)

Office location: La Tourette 202 (back of physics office)

Office Hours: Tuesday 2:00 – 3:00.

Course Description: Physical laws governing electricity and magnetism using calculus. PRQ: PHYS 253. CRQ: MATH 230.

Textbook: Physics for Scientists and Engineers with Modern Physics: 4th Edition, by Giancoli. Vol II, chapters 21-44.

Intended Learning Outcomes: Students taking this course will learn how the electrical and magnetic properties of matter can be understood in terms of basic laws of nature. Students will develop problem solving techniques and acquire facility in translating physical situations into mathematical terms in order to obtain answers to problems. Students completing this course will obtain a foundation in physical concepts that will prepare them for upper level courses in the sciences and engineering.

Student Assessment:

Student grades will be based on homework (5%), three exams (15% each) the laboratory grade (25%) and the final exam (25%). Students in PHYS 252 will have their grade based on homework (6.67%), exams (20% each) and final exam (33.33%). Points from all sources will be pooled with the ratio's described above and then the final grade will be calculated on a curve.

Grade Curves: The grade curve will not be determined until the end of the semester. However, ranges for final grades will be within the bounds listed below. Thus a grade of 80% might be curved to any grade between A and B-. A grade of 87% will never be curved below a B+, and a grade of 74% will never be curved above a B+. A grade below 45% will not be passing under any circumstances and a grade of 65% will always be at least a D. Approximate grade curves will be provided after each exam.

Grade	Max	Min
A	93%	80%
A-	90%	75%
B+	87%	70%
B	83%	65%
B-	80%	60%
C+	77%	55%
C	70%	50%
D	65%	45%

Labs: A separate syllabus will be provided for the labs.

Academic Integrity: Students are expected to hand in their own work for homework and on exams. Students found cheating on exams will receive a grade of F for that exam and be reported to the office of Community Standards and Student Conduct. Students found cheating on the final exam will receive a grade of F for the course.

Students with disabilities:

If you need an accommodation for this class, please contact the Disability Resource Center as soon as possible. The DRC coordinates accommodations for students with disabilities. It is located on the 4th floor of the Health Services Building, and can be reached at 815-753-1303 (V) or drc@niu.edu. Also, please contact me privately as soon as possible so we can discuss your accommodations. The sooner you let us know your needs, the sooner we can assist you in achieving your learning goals in this course.

Course Calendar

25-Aug	(Ch 21) Electric Charges and fields.	27	
1-Sep		3	(Ch 22) Gauss's law
8		10	(Ch 23) Electric potential
15		17	Exam 1
22	(Ch 24) Capacitance	24	
29	(Ch 25) Electric currents.	1-Oct	
6	(Ch 26) DC circuits	8	
13	Exam 2	15	(Ch 27) Magnetism
20		22	(Ch 28) Sources of magnetic fields
27		29	(Ch 29) Electromagnetic induction
3-Nov		5	Exam 3
10	(Ch 30) Electromagnetic oscillations	12	
17	(Ch 31) AC circuits	19	
24		26	Thanksgiving Break
1-Dec	(Ch 32) Electromagnetic waves	3	
8-Dec	Final Exam Tuesday noon – 1:50 pm Faraday 143		