

# Course Syllabus

## Physics 135-2: Electricity and Magnetism (Fall 2007)

- Instructor:** Dr. Bart Willems  
Office: Dearborn Observatory, 1st Floor, #21  
Phone: (847) 467-3017  
E-mail: b-willems@northwestern.edu
- Office hours:** Wed. and Fri. 1pm-3pm in the Dearborn Observatory Library  
(room B-10 in the basement, across and to the right of the stairs)
- Lectures:** Tech L211, MWF 10:00AM-10:50AM
- Discussions:** Tech L211, Th 10:00AM-10:50AM  
There will be a quiz during each discussion session
- Text:** Fundamentals of Physics (8th Edition, Extended)  
by Halliday, Resnick & Walker
- Prerequisites:** Physics 135-1 and Math 230 (or equivalent)
- Grading:** Lab (16%), Quizzes (16%), Midterms (16% each), Final (36%)  
I do not give Pass (P) or No Credit (N) grades
- Exam policy:** Attendance and being on time is mandatory: absence or being late will get you an X grade.
- Exams will be aimed at testing your understanding of concepts and your ability to solve problems. I therefore will not ask you to write down definitions of quantities, nor to simply plug numbers into formulae. To prepare you for this, I will work out problems in detail in class.

Date	Lecture Topic
We 9/26	Coulomb's Law
Fr 9/28	Electric Fields I
Mo 10/1	Electric Fields II
We 10/3	Gauss' Law I
Fr 10/5	Gauss' Law II
Mo 10/8	Electrostatic Potential I
We 10/10	Electrostatic Potential II
Fr 10/12	Capacitors I
Mo 10/15	Capacitors II and Current and Resistance I
We 10/17	Review
Fr 10/19	<b>Midterm I</b>
Mo 10/22	Current and Resistance II
We 10/24	Circuits I
Fr 10/26	Circuits II
Mo 10/29	Magnetic Fields I
We 10/31	Magnetic Fields II
Fr 11/2	Biot-Savart Law
Mo 11/5	Ampere's Law
We 11/7	Review
Fr 11/9	<b>Midterm II</b>
Mo 11/12	Faraday's Law
We 11/14	Induced Electric Fields
Fr 11/16	Inductance
Mo 11/19	LC circuits
We 11/21	Electromagnetic Oscillations
Fr 11/23	<b>Holiday – No lecture</b>
Mo 11/26	Alternating Current
We 11/28	Maxwell's Equations
Fr 11/30	Review
Mo 12/3	
We 12/5	<b>WCAS Reading Period – No lectures, labs, or discussions</b>
Fr 12/7	
We 12/12	<b>Final Exam: 9–11am</b>