

University of Vermont
Department of Physics

Physics 213: Electricity & Magnetism

Fall 2022

Instructor: Dr. Dennis Clougherty	Time: MWF 2:20-3:10 PM
Email: dennis.clougherty+PHYS213@uvm.edu	Place: Votey 305

Course Description: Fundamental principles of electricity and magnetism; electrostatic fields, and magnetic fields of steady currents. Electric and magnetic properties of matter and electromagnetic energy.

Prerequisites: PHYS 152 or PHYS 125 and MATH 121.

Objectives: Students will gain experience in using Maxwell's equations in quantitative problem-solving and will increase proficiency in visualizing scalar and vector fields.

Course Personnel:

Ms. Beth Stinebring, administrative assistant (beth.stinebring@uvm.edu).

Office Hours: W 3:15-3:50 PM & by appointment.

References:

Course Outline:

1. Electrostatics
2. Electric fields in matter
3. Magnetostatics
4. Magnetic fields in matter
5. Electromagnetic induction
6. Maxwell's equations

Online Resources:

1. Course web site: <http://bb.uvm.edu>
2. UVM Physics help sessions web site: <https://www.uvm.edu/cas/physics/help-sessions>
3. UVM tutoring center web site: https://www.uvm.edu/academicuccess/tutoring_center
4. UVM Physics web site: <http://www.uvm.edu/physics/>
5. UVM student accessibility services (SAS): <http://www.uvm.edu/access>
6. Prof. Clougherty's web site: <http://go.uvm.edu/dpc/>

Grading Policy:

Homework (30%), Exams (15% each), Final (25%).

Important Dates:

Exam #1 September 23, 2022

Class expectations:

1. *Attendance:* Regular attendance is important in masterinb2