

PHYS 252 UNIVERSITY PHYSICS II

Fall 2018

Instructor: Deyan Mihaylov	Time: M,Tu,W,F 11:00 – 11:50 a.m.
Email: deyan.mihaylov@ndsu.edu	Place: AGHILL CTR Building, 112

Office Hours: M,Tu,W 1:00-2:30 p.m. in South Engineering, 322

Textbook: Fundamentals of Physics 10th edition, Vol. II by Halliday, Resnick, Walker

Objectives: Integrate and apply principles of electricity and magnetism (charge, field, potential, current, circuits, waves, etc.) to solve conceptual and practical problems and to explain fundamental physics underlying EM technologies.

Prerequisites: PHYS 251 or ME 222 **Corequisite:** MATH 166

Tentative Course Outline:

Electric Charge	Aug. 21-24
Electric Fields	Aug. 27-31
Gauss's Law	Sept. 4-7
Electric Potential	Sept. 10-14
Capacitance	Sept. 17-25
Midterm Exam 1	Sept. 26
Current and Resistance	Sept. 28 - Oct. 5
Electric Circuits	Oct. 8-12
Magnetic Fields	Oct. 15-19
Magnetic Fields Due to Currents	Oct. 22-23
Midterm Exam 2	Oct. 24
Induction and Inductance	Oct. 26 - Nov. 2
EM Oscillations and AC Current	Nov. 5-7
Maxwell's Equations	Nov. 9-14
Electromagnetic Waves	Nov. 16-20
Midterm Exam 3	Nov. 21
Geometrical Optics: Images	Nov. 26 - 30
Wave Optics: Interference, Diffraction	Dec. 3 - 7
Final Exam (Comprehensive)	Friday, December 14, 8:00 a.m.

Grading Policy: A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: < 60%

Evaluation:

Homework Assignments	200 pts.
Midterm exam 1	100 pts.
Midterm exam 2	100 pts.
Midterm exam 3	100 pts.
Final Exam (Dec. 14)	200 pts.
No Make-up exams will be scheduled	

Communication:

Weekly homework will be posted on the LON-CAPA homepage: http://www.ndsu.edu/physics/lon_capa. Follow the log-in instructions to access our course and mind the assignment deadlines. Announcements and notes will be posted on our Blackboard course homepage <https://bb.ndsu.nodak.edu>.

Correct responses to 90% of the homework problems will earn the maximum 200 pts. To best prepare for exams, however, I recommend attempting all homework problems. Your final grade will be based on your homework score (200 pts. max.), your **best 2 out of 3** midterm exams (200 pts. max.) and your score on the final exam (200 pts. max.). Total available points: 600.

Tutoring:

- http://www.ndsu.edu/physics/current_students/ta_office_hours
- http://www.ndsu.edu/studentssuccess/tutoring_schedule

Academic Honesty and Special Needs: The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at www.ndsu.edu/academichonesty.

Any students with disabilities or special needs, who need accommodation in this course, are encouraged to speak with the instructor as soon as possible to make appropriate arrangements.