

FORDHAM UNIVERSITY, N.Y.

PHYS 1502 GENERAL PHYSICS, 2nd Summer Session 2019

Instructor: Prof. Petr Shibayev

Textbook: Physics by Cutnell and Johnson (Wiley , 10th edition)

This algebra based Physics course will cover the topics listed below. The main concentration of this course is on understanding physical concepts. We will also spend time on discussion of Physics problems and their solutions. This is important for students who intend to take MCAT. Three quizzes (tests) will be given during the session. The final examination is scheduled for the end of the semester. The final grade will depend on test results (45-50%), final exam (40%) and activity in the class (10%-15%).

Topics to be covered in this course

- 1) Simple harmonic motion and elasticity
- 2) Waves and Sound
- 3) The Principle of Linear Superposition and Interference Phenomena
- 4) Electric Forces and Electric Fields
- 5) Electric Potential Energy and the Electric Potential
- 6) Electric Circuits
- 7) Magnetic Forces and Magnetic Fields
- 8) Electromagnetic Induction
- 9) Alternating Current
- 10) Electromagnetic Waves
- 11) The Reflection of Light: Mirrors
- 12) The Refraction of Light: Lenses and Optical Instruments
- 13) Interference and The Wave Nature of Light
- 14) Particles and Waves
- 15) The Nature of the Atom, Nuclear Physics, Radioactivity