

PHYS 101 COURSE CONTENTS

Chapters are given as follows:

- 1) Introduction to General Physics: *Units, Physical Quantities, Significant Figures, Measurements, Errors in Measurements, Dimensional Analysis and Vectors***
 - 2) Motion in One Dimension / Motion Along a Straight Line**
 - 3) Motion in Higher (*Two, Three, etc.*) Dimensions**
 - 4) Newton's Laws of Motion**
 - 5) Applying Newton's Laws**
 - 6) Work, Energy and the Concept of Energy Conservation**
 - 7) Momentum, Impulse and Collisions**
 - 8) Rotational Motion: Kinematics and Dynamics of Rigid Bodies**
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- 9) Equilibrium and Elasticity**
 - 10) Gravitation**
 - 11) Fluid Mechanics**
 - 12) Thermodynamics / Thermal Physics**
 - 13) Periodic Motion / Oscillations**

Reference Book:

- (Sear's and Zemansky's)
- ① University Physics with Modern Physics,
H.D. Young, R.A. Freedman, 13th edition,
Pearson Publication, 2012.

Auxiliary Books:

- ① Physics for Scientists and Engineers, R.A. Serway, R.J. Beichner, Brooks/Cole, 5th edition, 2000.
- ② Physics for Scientists and Engineers, J.W. Jewett Jr., R.A. Serway, Brooks/Cole Publication, 8th edition, 2010
- ③ Principles of Physics - Extended, D. Halliday, R. Resnick, J.R. Walker, John & Wiley & Sons, 9th edition, 2011
- ④ Physics for Scientists and Engineers, P.M. Fishbane, S. Gasiorowicz, S. Thornton, Prentice Hall, 2nd edition, 1996.