

BA 113 – Physics (1)

COURSE INFORMATION

Course Title: Physics (1).

Code: BA113.

Contact Hours (hours/week): Lecture – 2 Hrs. Tutorial-2Hrs. Laboratory – 1 Hrs. Credit – 3.

Prerequisite: none

Course Coordinator: Prof. Dr. Samir Youssef

GRADING

Class. Experimental physics	10%
Midterm # 1/Assignments – (7 th Week):	30%
Midterm # 2/Assignments – (12 th Week):	20%
Final Exam:	40%

COURSE DESCRIPTION

This course consists of four parts static electricity, electric current, magnetism and light

TEXT BOOKS

Physics for scientists and engineers, Serway, 8th edition

COURSE AIM

The aim of this course is to Supply the students with strong back ground in the field of electricity and magnetism which is really needed to complete their study in the field of engineering and technology.

COURSE OBJECTIVES

This course provides the students with good knowledge about the nature and the existence of static electricity, the interaction between different type of charges and the electric field types generated by these charges. The course also, allows the student to distinguish between the static electricity and the electric current through the application of ohm's law and gives the student basic information about the structure of simple electric circuit. This course gives a good background about the theory of magnetism and electromagnetic Induction.

COURSE OUTLINE

Week Number 1: Electrostatics

Week Number 2: Coulombs Law

Week Number 3: Electric Field

Week Number 4: Electric Potential

Week Number 5: Capacitors

Week Number 6: Capacitors with Dielectric

Week Number 7: 7th Week Exam

Week Number 8: Electric Current and DC Circuits

Week Number 9: Kirchhoff's Rules

Week Number 10: Magnetism

Week Number 11: Magnetism

Week Number 12: 12th Week Exam

Week Number 13: Electromagnetic Induction, Lenz's Law

Week Number 14: Faraday's Law

Week Number 15: Revision

Week Number 16: Final Exam