

Basic and Applied Science Courses (BA)

Basic and Applied Science Courses Group

BA 114 – Physics (2)

COURSE INFORMATION

Course Title: Physics (2).

Code: BA114.

Hours: Lecture – 2 Hrs. Laboratory – 2 Hrs. Credit –3.

Prerequisite: BA113 Physics (1)

GRADING

Class Performance/Attendance: 10%

Midterm1/Assignments – (7th Week): 30%

Midterm # 2/Assignments – (12th Week): 20%

Final Exam: 40%

COURSE DESCRIPTION

- The student will be provided with knowledge about the effects of the environment on the material whatever its form is indifferent purposes.
- The students will able to control dominate and protect the used materials.
- The students will be able to solve industrial problems in a scientific method.

TEXT BOOKS

Heat and thermodynamics ‘Eastop and Macckonhy ‘

REFERENCE BOOKS

References available in AAST Library.

COURSE AIM

The aim of this course is to develop the skills of students to solve the problems of Heat and thermodynamics and understanding the different cases and condition under which thermodynamic system operates.

SPECIFIC OUTCOMES OF INSTRUCTION

- The students will be able to understand the relation between heat, work and the conservation of energy through thermodynamic cycle.

APPENDIX A-20

- The student will be able to know the relation between the different units used through this Course.

COURSE OUTLINE

- Week Number 1:* Introduction to thermodynamics
- Week Number 2:* Reversibility and reversible work
- Week Number 3:* First law of thermodynamics' Non-flow equation
- Week Number 4:* Steady flow equation
- Week Number 5:* Working Fluid (1) (steam)
- Week Number 6:* Working Fluid (1) (steam)
- Week Number 7:* Working Fluid (2) (perfect gas)
- Week Number 8:* Working Fluid (2) (perfect gas).
- Week Number 9:* Reversible processes.(constant volume, constant pressure)
- Week Number 10:* Reversible processes (constant temperature, adiabatic)
- Week Number 11:* Reversible process(polytropic).
- Week Number 12:* Second law of thermodynamics(1)
- Week Number 13:* Second law of thermodynamics(2)
- Week Number 14:* Heat transfer(1)
- Week Number 15:* Heat transfer(2)
- Week Number 16:* Final Exam.

TOOLS REQUIRED :

Use of the steam table

COURSE COORDINATOR AND DEMAND

Course Coordinator: Dr.Hany Kaldas.

Course Demand: *Required*