Basic heat transfer and thermodynamic

١٤- اساسيات علم انتقال الحرارة والديناميكا الحرارية

No.Trainees	Language	Target Audience	Course Duration
٢٠:١٢	Arabic - English	Mechanical engineers	٤٠ hours

Content

- Introduction to the science of heat transfer
- Different heat transfer methods
- Conduction of heat transfer in solid materials (brass) liquid and gaseous materials(air).
- Measurement of the flat surface heat transfer coefficient (with air)
- Calculate the calorific value of fuel
- Change the state of gases
- The boiling process

Objective

- Study the basics of heat transfer science and methods of its transmission in different materials and prove that with simple practical experiments.
- Study the basics and laws of thermodynamics for gases, as well as calculating the calorific
- values of fuels for (solids and liquids).

Prerequisites

- 1- Student of the Faculty of Engineering majors of mechanical power - Mechatronics - Chemical Engineering)
- 2- He/ she to have the basic principles of engineering materials science as well as fluid science
- 3- Or a recent graduate mechanical engineer in the previous majors