

Faculty of Engineering & Technology

Fundamentals of Heat Transfer

Information :

Course Code : MEC445 **Level :** Undergraduate **Course Hours :** 2.00- Hours

Department : Mechatronics Engineering

Instructor Information :

Title	Name	Office hours
Lecturer	Anas Mohamed Abdelrahman Ali	
Assistant Lecturer	Moustafa Raafat Aziz Shousha	

Description :

Mechanisms of heat transfer. Steady heat conduction in plane wall; thermal resistance concept, thermal resistance networks, thermal contact resistance. Heat conduction in cylinders and spheres. Critical radius of Insulation. Heat transfer from extended surfaces. Optimum thickness of Insulation. Transient heat conduction. External forced convection over flat plates, cylinders, spheres. Internal forced convection inside pipes and ducts. Basics of heat radiation. Introduction to heat exchangers; types, fouling and analysis.