



“Techno – Social Excellence”
MarathwadaMitraMandal’s
INSTITUTE OF TECHNOLOGY (MMIT)
Lohgaon, Pune-411047.

“Mechanized Design Application”
Department of Mechanical Engineering

Course Name: Heat Transfer
Course Code: 302042

Class: TE Mechanical Engineering
(2015Pattern)

Course Objectives:

1. Identify the important modes of heat transfer and their applications.
2. Formulate and apply the general three dimensional heat conduction equations.
3. Analyze the thermal systems with internal heat generation and lumped heat capacitance.
4. Understand the mechanism of convective heat transfer
5. Determine the radiative heat transfer between surfaces.
6. Describe the various two phase heat transfer phenomenon. Execute the effectiveness and rating of heat exchangers.

Course Outcomes:

- CO1 - Analyze the various modes of heat transfer and implement the basic heat conduction equations for steady one dimensional thermal system.
- CO2 - Implement the general heat conduction equation to thermal systems with and without internal heat generation and transient heat conduction.
- CO3 - Analyze the heat transfer rate in natural and forced convection and evaluate through experimentation investigation.
- CO4 - Interpret heat transfer by radiation between objects with simple geometries.
- CO5 - Analyze the heat transfer equipment and investigate the performance.
- CO6 - Analyze the heat exchanger and design heat exchanger based on practical consideration