

### **Heat Transfer Lab:**

The heat transfer lab is equipped with facilities to enable the students to understand the mechanism of heat transfer from fundamentals. As heat transfer plays a vital role in design and analysis of thermal energy conversion systems, the main focus is to investigate and understand all the modes of heat transfer. Thermal conductivity of metals and insulators can be found out using conductivity measurement and also overall all thermal resistance for composite wall arrangement and fins as well. Natural convection, forced convection and two phase heat transfer arrangement enables the students to understand the mechanism of convective heat transfer. Further critical heat flux also can be analysed with the experimental setup. Determination of Stephen Boltzmann constant and emissivity measurement helps the students to know the fundamentals of radiative heat transfer. Heat exchanger arrangement for counter flow and parallel flow also can be analysed. By performing all the experiments students will have a clear understanding of the principles of heat transfer i.e. conduction, convection, Radiation boiling and condensation modes of heat transfer and principles of heat exchangers.



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