

ME 604 Conduction and Radiation (3-0-0-6)

Conduction: 1-D, 2-D, and 3-D steady conduction; 1-D unsteady conduction; Solution methods - analytical and numerical; Radiation: Fundamentals; Radiative properties of surfaces; Radiant exchange between surfaces; Radiative heat transfer in participating media.

Textsbooks:

- [1] M N Ozisik, *Heat Conduction*, 2nd ed, John Wiley & Sons, 1993.
- [2] F P Incropera and D P Dewitt, *Introduction to Heat Transfer*, 3rd ed, John Wiley & Sons, 1996.
- [3] V S Arpaci, *Conduction Heat Transfer*, Addison-Wesley, Reading, MA, 1966.
- [4] M F Modest, *Radiative Heat Transfer*, McGraw-Hill, 1993.
- [5] R Siegel and J R Howell, *Thermal Radiation Heat Transfer*, 3rd ed, Taylor & Francis, 1992