

ME 317 : Heat and Mass Transfer

The Heat and Mass Transfer course addresses the basic concepts and applications of heat and mass transfer in real life practices and industrial processes and systems. This includes practical examples of analysis and design of various engineering systems and devices. Furthermore, the course introduces the modeling and analysis methods as well as solving techniques related to thermal-fluids residential and industrial related applications. The course covers and teaches introduction and basic concepts, heat conduction equation, steady heat conduction, transient heat conduction, numerical methods in heat conduction, fundamentals of convection, external forced convection, internal forced convection, natural convection, boiling and condensation, heat exchangers, fundamentals of thermal radiation, radiation heat transfer, and mass transfer.

Credits 3

Lab Hours 0

Lecture Hours 3

Tutoring Hours 0

Prerequisites

ME 216

Corequisites

None