COURSE DETAIL

HEAT TRANSFER
Country Singapore
Host Institution National University of Singapore
Program(s) National University of Singapore
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 124
UCEAP Course Suffix
UCEAP Official Title HEAT TRANSFER
UCEAP Transcript Title HEAT TRANSFER
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course covers the key concepts of the different modes of heat transfer (conduction, convection and radiation) and principles of heat exchangers. It develops proficiency in applying these heat transfer concepts and principles, to analyze and solve practical engineering problems involving heat transfer processes. Topics include introduction to heat transfer; steady state heat conduction; transient heat conduction; lumped capacitance; introduction to convective heat transfer; external forced convection; internal forced convection; natural/free convection; blackbody radiation and radiative properties; radiative exchange between surfaces; introduction to heat exchangers and basic calculation of overall heat transfer coefficient. The course requires students to take prerequisites.

Language(s) of Instruction
English

Host Institution Course Number
ME3122

Host Institution Course Title
HEAT TRANSFER

Host Institution Course Details
https://nusmods.com/courses/ME3122/heat-transfer

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical Engineering

Course Last Reviewed
2024-2025

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