COURSE DETAIL

HEAT TRANSFER
Country Hong Kong
Host Institution University of Hong Kong
Program(s) University of Hong Kong
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 119
UCEAP Course Suffix
UCEAP Official Title HEAT TRANSFER
UCEAP Transcript Title HEAT TRANSFER
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course is on the fundamental principles of heat transfer, covering heat conduction, heat convection and heat exchangers. The course objectives are: (1) to provide an understanding of fundamental principles of heat transfer; and (2) to enable students to use the fundamental principles for conducting thermal analysis and design of engineering problems. At the end of this course, students who fulfill the requirements of this course will be able to: (1) demonstrate an understanding of the principles that govern heat transfer processes; (2) analyze heat-transfer problems quantitatively; and (3) identify relevant engineering solutions in thermal systems. Topics include: Fourier's law; heat-conduction equation; thermal conductivity; conduction; fins; basic convection principles; laminar and turbulent heat transfer in tubes and over plates; Reynolds analogy; types of heat exchangers; overall heat-transfer coefficient; log mean temperature difference; effectiveness-NTU method; heat exchanger design.

Language(s) of Instruction
English

Host Institution Course Number
MECH4411

Host Institution Course Title
HEAT TRANSFER

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed
2023-2024

Print