

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 Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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