

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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