

## 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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