

## COURSE DETAIL

### MATERIALS FOR MECHANICAL ENGINEERING

**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**

120

**UCEAP Course Suffix****UCEAP Official Title**

MATERIALS FOR MECHANICAL ENGINEERING

**UCEAP Transcript Title**

MECH ENGINEERING

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course equips students with knowledge on the unique properties of materials useful in engineering design selection. Topics include commonly used materials in different engineering designs and emerging materials and processes, and life cycle assessment. Students learn concepts of surface engineering, strengthening and hardening techniques, hardenability, heat treatment, friction and wear properties. The course introduces key material properties and testing such as tensile testing, compression testing, torsion test, 3-point bending test along with their specific relevance. Students learn the different ways of degradation of materials when it reacts with environment.

### Language(s) of Instruction

English

### Host Institution Course Number

ME3252

### Host Institution Course Title

MATERIALS FOR MECHANICAL ENGINEERING

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

Mechanical Engineering

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