

COURSE DETAIL

ENGINEERING MATERIALS

Country

Australia

Host Institution

University of Melbourne

Program(s)

University of Melbourne

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Engineering

UCEAP Course Number

103

UCEAP Course Suffix**UCEAP Official Title**

ENGINEERING MATERIALS

UCEAP Transcript Title

ENGR MATERIALS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course examines materials science, construction materials, and mechanics of materials. The material science component examines basic concepts on inter-atomic bonding, microstructure of solids and generic material properties related to density, deformation, yield, ductility, fracture, toughness, susceptibility to corrosion and fatigue. The construction materials component examines the engineering applications of structural and light-gauge steel, concrete, masonry, timber, glass, fibre-glass and composites. The mechanics component examines the basic concepts of stress-strain compatibility, composite actions, the concept of shear stress flow, basic two-dimensional stress analysis, strength and ductility and arching actions.

Language(s) of Instruction

English

Host Institution Course Number

ENGR20003

Host Institution Course Title

ENGINEERING MATERIALS

Host Institution Course Details

<https://handbook.unimelb.edu.au/2022/subjects/engr20003>

Host Institution Campus

University of Melbourne

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering

Course Last Reviewed

2022-2023

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