COURSE DETAIL

MATERIALS SELECTION AND MECHANICAL MODELLING
Country United Kingdom - England
Host Institution University of London, Queen Mary
Program(s) University of London, Queen Mary
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 132
UCEAP Course Suffix
UCEAP Official Title MATERIALS SELECTION AND MECHANICAL MODELLING
UCEAP Transcript Title MAT SELECT&MECH MOD
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
This module introduces principal modelling techniques in solid mechanics and serves as a macro-mechanical complement to the courses Materials Science 1: Properties of Matter (MAT 100) and Functional Materials (MAT203) focusing on micromechanical aspects of materials science. Fundamental concepts (e.g. Newton's laws, force/movement, stress/strain, energy/work, statics/dynamics, friction/creep/fatigue etc.) will be studied to derive mechanical models for the description of the behaviour of materials. Corresponding applications for real-life design tasks are finally discussed to get insight into basic mechanics-based material selection criteria.

Language(s) of Instruction
English

Host Institution Course Number
MAT102

Host Institution Course Title
MATERIALS SELECTION AND MECHANICAL MODELLING

Host Institution Campus
QMUL

Host Institution Faculty

Host Institution Degree

Host Institution Department
Engineering and Materials Science

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