COURSE DETAIL

MECHANICS OF SOLIDS 3
Country United Kingdom - Scotland
Host Institution University of Glasgow
Program(s) Scottish Universities,University of Glasgow
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 105
UCEAP Course Suffix
UCEAP Official Title MECHANICS OF SOLIDS 3
UCEAP Transcript Title MECHANICS OF SOLIDS
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description
This course develops the principles of stress and strain in three dimensions and illustrates the 2D plane stress and plane strain states as special cases of the 3D scenario. Stress and strain transformations in 3D and 2D are studied and special stresses and strains such as principal stresses and strains in 3D, etc. are discussed. Equilibrium, compatibility, and constitutive relationships are developed. Experimental stress analysis is treated in conjunction with laboratory exercises and the course concludes with a treatment of yield criteria and plasticity including assessment of the likelihood of failure in practical stress analysis scenarios such as in members undergoing combined bending and torsion and in pressure vessels.

Language(s) of Instruction
English

Host Institution Course Number
ENG3037

Host Institution Course Title
MECHANICS OF SOLIDS 3

Host Institution Course Details

Host Institution Campus
University of Glasgow

Host Institution Faculty

Host Institution Degree

Host Institution Department
School of Engineering

Course Last Reviewed

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