



Jordan University of Science and Technology
Faculty of Engineering
Civil Engineering Department

CE202 Strength Of Materials

Summer Semester 2019-2020

Course Catalog

3 Credit Hours. Simple states of stress and strain; Hook's law; torsional stresses; axial deformation; internal forces in beams; bending and shearing diagrams and stresses; beam design; stress transformation; thin-walled pressure vessels; beam deflection, lab session and experiments.

Text Book

Title	Mechanics of Materials
Author(s)	Beer, Johnston, DeWolf, and Mazurek
Edition	5th Edition
Short Name	Beer and Johnson Book
Other Information	

Instructor

Name	Dr. WASIM BARHAM
Office Location	-
Office Hours	
Email	wsbarham@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun, Mon, Tue, Wed : 13:00 - 14:30
Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
232011	CE201 Statics	Prerequisite / Pass

Tentative List of Topics Covered		
Weeks	Topic	References
	1. Concept and types of stresses	
	2. Stress and strain and axial loading	
	3. Torsion- stress and deformation	
	4. Bending, composite beam, unsymmetrical bending	
	5. Shear stress in beams	
	6. Principle Stresses	
	7. Mohr's Circle	
	8. Combined loading, Design Problems	

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Determine stresses and deformations in prismatic members subjected to axial loading and temperature changes [1SLO1]	35%	
Determine stresses and deformations in prismatic members subjected to twisting and bending moments [1SLO1, 1SLO2]	25%	
Determine the shear stresses in prismatic members due to applied shear forces [1SLO1, 1SLO2]	10%	
Use stress transformation to determine the principal stresses and the maximum shear stress and their orientations [1SLO1, 1SLO2]	10%	
Determine the state of stress at a point in structural member subjected to combined loading condition [1SLO1, 1SLO2]	10%	
Work in a team to prepare a poster about different loads, stresses and deformations encountered in real structures [1SLO5, 1SLO6, 1SLO7]	10%	

Relationship to Program Student Outcomes (Out of 100%)						
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
62.50	27.50			3.33	3.33	3.33

Evaluation	
Assessment Tool	Weight
First Exam	25%

Second Exam	25%
Project and presentation	10%
Final	40%

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