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

IE216 Mechanics Of Materials 2
Summer Semester 2019-2020

Course Catalog
3 Credit Hours. the course covers the concepts of transverse shear, combined loadings, stresses in pressure vessels, multi axial loading and stress transformations, failure theories, deflection of beams, buckling forces and stresses in columns, thermal loading and creep phenomena, dynamic loading and fatigue, and introduction to fracture mechanics.

Text Book	
Title	statics and mechanics of materials,
Author(s)	R.C.HIBBELER
Edition	1st Edition
Short Name	Ref #1
Other Information	

Instructor	
Name	**Dr. ABDALLAH ALMOMANI**
Office Location	N1- L2
Office Hours	
Email	amalmomani0@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00 Room: منصة الكترونية

Prerequisites

Line Number	Course Name	Prerequisite Type
292130	IE213 Mechanics Of Materials 1	Prerequisite / Pass

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Bending	From **Ref #1**
Week 3	Transverse Shear	From **Ref #1**
Weeks 4, 5	Combined loading	From **Ref #1**
Weeks 6, 7	Stress and Strain Transformation	From **Ref #1**
Weeks 8, 9, 10	Design of Beams	From **Ref #1**
Weeks 11, 12, 14, 15, 16	Buckling of Columns	From **Ref #1**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
determining the stress distributions in a member subjected to either an internal axial force, a shear force, a bending moment, or a torsional moment. [1SLO1]	24%	
determine the State of Stress Caused by Combined Loadings [1SLO1]	20%	
understanding stress transformation using both equation and Morh's circle [1SLO1]	20%	
understanding the supper position method and how to use it in solving statically indeterminate beams [1SLO1]	25%	
determine critical load and critical stress for columns [1SLO1]	11%	

Relationship to Program Student Outcomes (Out of 100%)

SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
100						

Evaluation

Assessment Tool	Weight
first exam	30%
second exam	25%
quiz	5%
final exam	40%

Policy	
Attendance	Attendance will be checked at the beginning of each class. University regulations will be strictly followed for students exceeding the maximum number of absences. No make-up test will be given without an official university-approved excuse.
Homework and suggested problems	Homework problems are designed to give the students the opportunity to practice solving problems related to the course materials presented at the end of each chapter. Homework problems will be assigned but will not be collected and graded.
quiz	quizzes are assigned at the end of each chapter to prepare the students for the exam.

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