



**Jordan University of Science and Technology**  
**Faculty of Engineering**  
**Mechanical Engineering Department**

ME211B Statics - JNQF Level: 7

Summer Semester 2023-2024

**Course Catalog**

3 Credit Hours. Catalog Data 2017 3 Credit hours (3h lectures) Force vectors and resultant. Free-body diagram of forces and equilibrium of particles and rigid bodies. Moment of a force about a point and about an axis. Equilibrium of rigid body. Analysis of trusses and frames. Shear forces diagrams and bending moment diagrams. Center of area and moment of inertia of an area.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	Engineering Mechanics - Statics, By R. C. Hibbeler, 14th Edition in SI units, Global Edition, PEARSON.
<b>Author(s)</b>	R. C. Hibbeler
<b>Edition</b>	14th Edition
<b>Short Name</b>	1
<b>Other Information</b>	

**Instructor**

<b>Name</b>	<b>Prof. Khaled Bataineh</b>
<b>Office Location</b>	CH1 L2
<b>Office Hours</b>	
<b>Email</b>	k.bataineh@just.edu.jo

**Class Schedule & Room**

Section 1:  
Lecture Time: Sun, Mon, Tue, Wed : 08:30 - 10:00  
Room: M5126

Prerequisites		
Line Number	Course Name	Prerequisite Type
921010	PHY101 General Physics (1)	Prerequisite / Study
821016	HSS101PHY General Physics (1)	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	General Principles	
Weeks 1, 2	Force Vectors	
Week 3	Equilibrium of a Particle	
Weeks 4, 5, 6	Force System Resultants	
Weeks 6, 7, 8	Equilibrium of a Rigid Body	
Week 9	Structural Analysis	
Weeks 10, 11	Internal Forces	
Week 12	Friction	
Week 13	Center of Gravity and Centroid	
Weeks 14, 15	Moment of Inertia	
Week 16	Revision	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Calculate force vectors components and resultants [1SO1] [1L7K1]	15%	
Draw free body diagrams of particles and solve problems using equations of equilibrium [1SO1] [1L7S1]	16%	
Draw free body diagrams of rigid body and solve problems using equations of equilibrium [1SO1] [1L7S2]	47%	
Draw the shear and bending moment diagrams of a beam [1SO1] [1L7K1]	10%	
Determine the centroid and moment of inertia of a composite area [1SO1] [1L7S2]	12%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
100						

Relationship to NQF Outcomes (Out of 100%)		
L7K1	L7S1	L7S2
25	16	59

Evaluation	
Assessment Tool	Weight
First	25%
Second	25%
Quizzes	10%
Final	40%

Policy	
Evaluation	<p>Evaluation:</p> <p>1st Exam 25% Based on the registration office schedule            2nd Exam 25% Based on the registration office schedule            Quizzes 10% No quizzes makeup            Final Exam 40% Based on the registration office schedule</p>
Regulations	<ol style="list-style-type: none"> <li>1. Never come late to the classroom. You will disturb your mates and your instructor if you do so</li> <li>2. Makeup exams are not held without an official signed and approved excuse from the department chairman. Please understand that this is a university law</li> <li>3. Turn OFF your cell phones during the classroom. If your phone ring during the classroom, you will be asked to leave the classroom and considered absent on that lecture.</li> <li>4. Cheating is prohibited during quizzes and exams. If you caught up cheating, the university penalty rules will be enforced</li> <li>5. Please don't talk during the class except if you have questions for your instructor</li> <li>6. Office hours are the hours I dedicate for you to ask your questions about the course. If you think they do not suit you, then we can still arrange for a time of our convenience by sending an -email to me (you should expect an approval from my side)</li> </ol>
Contacts	<p>Email: nrabdelal@just.edu.jo            Facebook group: Classes I teach-Dr. Nisrin Abdelal</p>

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