



The Hashemite University  
Faculty of Engineering  
Department of Civil Engineering  
Course Syllabus

<b>Course Title:</b>	Statics 3 (3,0, 0)	<b>Course Number:</b>	110401211
<b>Designation:</b>	Compulsory	<b>Prerequisite(s):</b>	0101101& 0102101
<b>Instructor:</b>	Eng. Iqbal Marie	<b>Instructor's e-mail:-</b>	iqbal@hu.edu.jo
<b>Office Hour</b>	10:00-11:00 S,M,T,W.		

**Course Description (catalog):** Vectors, force systems (2D and 3D), equilibrium of particles and rigid bodies (2D and 3D), structures (trusses, cables, frames and machines), distributed forces (centroids and centers of mass), fluid pressure, internal forces (shearing force and bending moment diagrams), friction, moment of inertia.

**Textbook(s) and/or Other Supplementary Materials:** Hibbeler, R.C., Engineering Mechanics- STATICS, 14th SI- Edition, Prentice Hall

**Major Topics Covered:**

Topics	No. of Weeks	Contact hours*
1. Introduction and Overview; Units; Significant Figures	1/3	1
2. Force Vectors	1.5	5
3. Equilibrium of a Particle	1	3
4. Force System Resultants	2	6
5. Equilibrium of a Rigid Body	2	6
6. Structural Analysis ( Trusses and frames)	2.1/3	7
7. Internal Forces ( shear, moment and axial forces)	2.5	6
8. friction	1/3	1
9. Center of Gravity and Centroid	1.5	5
10. Moments of Inertia	1.5	5
<b>Total</b>	<b>14</b>	<b>45</b>

**Specific Outcomes of Instruction (Course Learning Outcomes):**

**CLO1:** After completing the course, the student will be able to:

Physics based models developed throughout the course, are generally solvable by trigonometry and algebra-based vector operations. Integration is required for distributed loads equivalence, the centroid of bodies and the moment of inertia .Use of the properties of derivatives is required for understanding of shear , moment diagrams and deflection. (a)

**CLO2.** An ability to identify, formulate, and solve engineering problems dealing with equilibrium of particles, frames and trusses. The students will gain sufficient proficiency that they

will be able to learn effectively in future courses (e)

**Student Outcomes (SO) Addressed by the Course:**

#	Outcome Description	Contribution
<b>General Engineering Student Outcomes</b>		
(a)	an ability to apply knowledge of mathematics, science, and engineering	(M)50%
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	(M)50%

(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	

<b>Grading</b>	1st Exam	25 Points	<b>Wed 7/3/2018</b>
<b>Plan:</b>	2nd Exam	25 Points	<b>Wed 11/4/2018</b>
	HWs.	10 Points	
	Final exam	40 Points	

**General Notes:** Homework should be submitted on high quality A4 paper with neat sketches. Neatness will count and messy unorganized problems will reduce credit. **NO Makeup Exams**