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

Course Title:	**Statics 3 (3,0, 0)**	**Course Number:**	CE-211
Designation:	Compulsory	**Prerequisite(s):**	0101101& 0102101
Instructor:	Eng. Iqbal Marie	**Instructor's e-mail:**	iqbal@hu.edu.jo
Office Hour	1:30-2:30 Sun , Tue.,		

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
Total	**14**	**45**

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. (1)

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 (1)

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
	General Engineering Student Outcomes	
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	(H)
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3	an ability to communicate effectively with a range of audiences	
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	
	H=High, **M**= Medium, **L**=Low	

Grading Plan:

first	25 Points
2nd	25 points
HWs.	10 Points
Final exam	40 Points

General Notes: Quizzes and 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***

I. Marie 26/2/2022