COURSE SYLLABUS AND COURSE REQUIREMENTS
ACADEMIC YEAR 22/23 SEMESTER FALL

Course title	*Mechanics I. (Statics)*
Course Code	MSE256AN
Hours/Week: le/pr/lab	1/3/0
Credits	5
Degree Programme	Civil Engineering BSc, Architecture, Architectural Engineering undergraduate
Study Mode	*Full-time, In-person*
Requirements	Exam grade
Teaching Period	22/23 Fall
Prerequisites	None
Department(s)	Department of Civil Engineering
Course Director	Vanda Olimpia Pomezanski Dr.
Teaching Staff	*Tamas Juhasz*
Lecture	*Every other week M 1:15 – 2:45 p.m. class begins September 5th, A216*
Practice Group A	*M 3:00 – 5:30 p.m. A315*
Group B	*M 5:30 – 8:00 p.m. A315*
Group C	*T 3:00 – 5:30 p.m. A306*

COURSE DESCRIPTION

In this course, students examine principles of statics, studies of vectors and moments, force systems, and their resultants. It also covers force systems in equilibrium, static friction, and introduces section properties, and shear and moment diagrams.

SYLLABUS

1. GOALS AND OBJECTIVES

Specific, measurable student behavioral learning objectives.
Students should acquire 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.
Upon completion of the course, the student must be able to,

- Describe force and moment systems and identify all unknown loads as applied to statically determinate rigid bodies.
- Analyse statically determinate beams, trusses, frames, machines, and systems with friction forces.
- Introduce section properties.
- Draw shear and moment diagrams for statically determinate beams under given loads.

2. COURSE CONTENT

	TOPICS
LECTURE & PRACTICE	1. *Force Systems* 2. *Equilibrium* 3. *Trusses and frames* 4. *Machines* 5. *Internal force diagrams* 6. *Properties of sections*

DETAILED SYLLABUS AND COURSE SCHEDULE

ACADEMIC HOLIDAYS INCLUDED

LECTURE

week	**Topic**	**Compulsory reading; page number (from … to …)**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1st	Introduction	[1] Chapter 1	…	…
3rd	Forces and Force Systems	[1] Chapter 1		
5th	Analysis of Statically Indeterminate Trusses	[2] Chapter 3 [1] Chapter 6		
7th	Internal forces Developed in Structural Members	[2] Chapter 4 [1] Chapter 7		
9th	SEMESTER BREAK			
11th	Compound Structures and Machines	Lecture notes		
13th	Loads and Load Combinations	Lecture notes		
15th	Section Properties	[1] Chapter 9-10		

PRACTICE, LABORATORY PRACTICE

week	**Topic**	**Compulsory reading; page number (from … to …)**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1st	Registration			
2nd	Operation with Vectors	[1] Chapter 2		
3rd	Result Force of Concurrent and Parallel Force Systems	[1] Chapter 2		
4th	Result Force and Equilibrium of General Force Systems, Moment of Forces	[1] Chapter 2 [1] Chapter 3		
5th	Solving Statically Determinate Trusses Method of Joints, Shears, and Moments	[2] Chapter 3		
6th	Solving Statically Determinate Trusses Method of Joints, Shears, and Moments	[2] Chapter 3 [1] Chapter 6		
7th	1st Test		Manual calculation test.	90-minute test, due at the end of the class. Submission on engineering paper.
8th	Internal Forces Developed in Structural Members I	[2] Chapter 4 [1] Chapter 7		
9th	SEMESTER BREAK			
10th	Internal Forces Developed in Structural Members II	[2] Chapter 4 [1] Chapter 7		
11th	Compound Structures and Machines, Three Hinged Frames	Lecture notes		
12th	Compound Structures and Machines Gerber Beams	Lecture notes		
13th	Section Properties Area, Centroid 1st Moment of Inertia	[1] Chapter 9		
14th	Section Properties 2nd Moment of Inertia, Product of Inertia	[1] Chapter 10		
15th	2nd Test		Manual calculation test.	90-minute test, due at the end of the class. Submission on engineering paper.

3. ASSESSMENT AND EVALUATION

ATTENDANCE

By the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description.

Method for monitoring attendance

Attendance will be monitored by attendance lists.

Course-unit with a final examination

Mid-term assessments, performance evaluation, and their weighting as a pre-requisite for taking the final exam

Type	Assessment	*Weighting as a proportion of the pre-requisite for taking the exam*
Test 1	*50 points*	*50 %*
Test 2	*50 points*	*50%*

Requirements for the end-of-semester signature

Mid-term assessment of 40%

Re-takes for the end-of-semester signature

Each test can be repeated or improved once during the 1st week of the examination period.

Type of examination*: written exam*

The exam is successful if the result is a minimum of 40 %.

Calculation of the grade

The mid-term performance accounts for ***60*** %, and the performance at the exam accounts for ***40*** % in the calculation of the final grade.

Calculation of the final grade based on aggregate performance in percentage.

Course grade	Performance in %
excellent (5)	85 % …
good (4)	70 % ... 85 %
satisfactory (3)	55 % ... 70 %
pass (2)	40 % ... 55 %
fail (1)	below 40 %

The lower limit given at each grade belongs to that grade.

4. SPECIFIED LITERATURE

COMPULSORY READING AND AVAILABILITY

[1.] R.C. Hibbeler Engineering Mechanics: Statics (12th Edition) ISBN 978-0136077909

[2.] R. C. Hibbeler, Structural Analysis, ninth edition ISBN 978-0-13-394284-2