COURSE SYLLABUS AND COURSE REQUIREMENTS
ACADEMIC YEAR 24/25 SEMESTER FALL

Course title	*Mechanics I (Statics)*
Course Code	*MSB112AN*
Hours/Week: le/pr/lab	1/3/0
ECTS	5
Degree Programme	Civil Engineer BSc
Study Mode	*Full-time, in-person*
Requirements	Exam
Teaching Period	24/25 Fall
Prerequisites	N/A
Department(s)	Department of Civil Engineering
Course Director	
Teaching Staff	*Tamas Juhasz | juhasz.tamas@mik.pte.hu*
Schedule	

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, PRATICE, LAB	1. *1. Force Systems* 2. *2. Equilibrium* 3. *3. Trusses and frames* 4. *4. Machines* 5. *5. Internal force diagrams 6. Properties of sections*

DETAILED SYLLABUS AND COURSE SCHEDULE, TENTATIVE

UNFORESEEABLE CIRCUMSTANCES MIGHT AFFECT THE SCHEDULE BELOW.
ACADEMIC HOLIDAYS INCLUDED

LECTURE

week	**Topic**	**Compulsory reading**	**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 Determinate Trusses	[2] Chapter 3 [1] Chapter 6		
7th	Internal Forces Developed in Structural Members	[2] Chapter 4 [1] Chapter 7		
9th	Compound Structures and Machines	Lecture notes		
11th	Loads and Load Combinations	Lecture notes		
13th	Section Properties	[1] Chapters 9-10		

PRACTICE

week	**Topic**	**Compulsory reading**	**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	Internal Forces Developed in Structural Members II	[2] Chapter 4 [1] Chapter 7		
10th	Compound Structures and Machines, Three Hinged Frames	Lecture notes		
11th	Compound Structures and Machines Gerber Beams	Lecture notes		
12th	Section Properties	[1] Chapters 9- 10		
13th	2nd Test		Manual calculation test.	90-minute test, due at the end of the class. Submission on engineering paper.

3. ASSESSMENT AND EVALUATION

ATTENDANCE

In accordance with 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. Online attendance is not available.

Method for monitoring attendance

Attendance lists will monitor attendance. All relevant university regulations apply.

ASSESSMENT

There will be two 120-minute midterm tests. Preliminary dates 7th and 13th week. The exact dates are to be announced no later than 14 days prior.
No tests scored below 40% can be accepted and must be repeated.
Midterm test results cannot be combined.
A make-up test is available on the 15th week.
Neatness is part of the grade for all student work.

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*
1. *Test 1*	*max 100 points*	*40 %*
2. *Test 2*	*max 100 points*	*40 %*

Requirements for the end-of-semester signature

- Each semester test must score 40 points or beyond.
- Regular attendance as per the Code of Studies.
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Re-takes for the end-of-semester signature

- *A make-up test is available on the 1st week of the examination term.*

Type of examination spoken

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

Calculation of the grade *(TVSz 47§ (3))*

The mid-term performance accounts for 50%, and the performance at the exam accounts for 50% of the final grade calculation.

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