COURSE SYLLABUS AND COURSE REQUIREMENTS
ACADEMIC YEAR 23/24 SEMESTER FALL

Course title	*REINFORCED CONCRETE STRUCTURE III*
Course Code	*MSB394AN*
Hours/Week: le/pr/lab	1/2/0
ECTS	4
Degree Programme	Civil Engineer BSc
Study Mode	*Full-time, in-person*
Requirements	Exam
Teaching Period	22/23 Spring
Prerequisites	Reinforced Concrete Structures II
Department(s)	Department of Civil Engineering
Course Director	
Teaching Staff	*Tamas Juhasz juhasz.tamas@mik.pte.hu*

COURSE DESCRIPTION

Throughout this course, students will expand their knowledge of analyzing and designing concrete structures. Building upon the foundation established in the previous two semesters, classes will focus on planar and spatial concrete frames, with a particular emphasis on designing large-span industrial halls. Lectures will showcase various precast element hall types, while also teaching students how to determine complex effects and loads on industrial halls, such as meteorological loads, stored loads, and suspended loads.

SYLLABUS

1. GOALS AND OBJECTIVES

Specific (Measurable) Student Behavioral Learning Objectives:
Upon completion of this course, the student should be able to
1. Determine loads acting on concrete frames.
2. Determine internal forces frames.
3. Design frame columns under complex loads of different load cases.
4. Justify precast and prestressed concrete beams of given failure loads.
5. Determine lateral loads acting on industrial frame halls.

2. COURSE CONTENT

	TOPICS
LECTURE, PRATICE, LAB	1. *Concrete Frames* 2. *Precast Concrete Structures* 3. *Prestressed Concrete Beams* 4. *Industrial Halls* 5. *Loads on Structures* 6. *Bracing Systems*

DETAILED SYLLABUS AND COURSE SCHEDULE, TENTATIVE

UNFORESEEABLE CIRCUMSTANCES MIGHT AFFECT THE SCHEDULE BELOW.
ACADEMIC HOLIDAYS INCLUDED

LECTURE, PRATICE, LAB

week	**Topic**	**Compulsory reading**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1.	Registration, introduction in general	[1]	TBD	TBA
2.	Reviewing Concrete Frames, Justification of Concrete Columns and Beams	[1]	TBD	TBA
3.	Types of Industrial Concrete Halls, Loads and Loads Combinations	[1]	TBD	TBA
4.	Long-span Beams, Principles of Prestressing	[1]	TBD	TBA
5.	Prestressed Concrete Beams	[1]	TBD	TBA
6.	Precast Concrete Elements in Building Construction	[1]	TBD	TBA
7.	Handing out take-home assignments	[1]	TBD	TBA
8.	Structural Models for Concrete Industrial Halls, Discussion	[1]	TBD	TBA
9.	Loads Applied on Concrete Halls, Discussion	[1]	TBD	TBA
10.	Bracing Systems, Discussion	[1]	TBD	TBA
11.	Concrete Footing, Discussion	[1]	TBD	TBA
12.	Engineering Drawings for Concrete Halls	[1]	TBD	TBA
13.	Evaluation and Grading	[1]	TBD	TBA

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. Online attendance is not available.

Method for monitoring attendance

Attendance will be monitored by attendance lists. All relevant university regulations apply.

ASSESSMENT

Assessment will be based on the quality of the take-home project and exam.
The take-home project will be assigned on the 7th week and must be turned in by the final week. No late submission is accepted.
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. ***Take-home project***	*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.] Bill Mosley, John Bungey, Ray Hulse Reinforced Concrete Design to Eurocode 2 7th Edition ISBN0230302858, 9780230302853