SYLLABUS AND COURSE REQUIREMENTS
2023/2024. I. SEMESTER

Title	**Thin-walled structures**
Course code	**MSM413ANEP**
Weekly hours: lect/pract/lab	**0 / 0 / 2**
Credit points	**3**
Curriculum(s)/ type	**Structural Engineering MSc./ obligatory**
School	**full time**
Requirement	**semester grade with signature**
Registration semester	**fall semester**
Pre-requirement(s)	**MSM411ANEP Stability of structures**
Gestor Department(s)	**Department of Civil Engineering**
Responsible and lecturers	**Dr. Attila FÜLÖP associate professor**

COURSE DESCRIPTION

The goal of the semester is that the students should learn about the general basic information about thin-walled structures. Typical solutions of thin-walled steel structures, material and strength properties, codified design

SYLLABUS

1. GOALS AND OBJECTIVES

The definition and types of thin-walled structures, specialities of the structural behaviour. Production of cold-formed and welded thin-walled steel structures. Structural sections, corrosion protection, connections. Structural modelling and analyses methods. Design theory of cold formed structural sections and stiffened / unstiffened welded plates. Practical design according to Eurocode 3 parts 1-3, 1-5 and 1-7, strength and stability investigations.

2. COURSE CONTENT

	TOPICS
LECTURE + PRACTICE	1. *The definition and types of thin-walled structures, specialities of the structural behaviour.* 2. *Production of cold-formed and welded thin-walled steel structures.* 3. *Structural sections, corrosion protection, connections.* 4. *Structural modelling and analyses methods.* 5. *Design theory of cold formed structural sections and stiffened / unstiffened welded plates.* 6. *Practical design according to Eurocode 3 parts 1-3, 1-5 and 1-7, strength and stability investigations.* 7. *Case studies.*

DETAILED SYLLABUS AND COURSE SCHEDULE

LABORATORY PRACTICE

week	**Topic**	**Compulsory reading; page number (from … to …)**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1.	*Introduction*	[1], [2], [3]		
2.	*The definition and types of thin-walled structures, specialities of the structural behaviour.*	[1], [2], [3]		
3.	*Production of cold-formed and welded thin-walled steel structures.*	[1], [2], [3]		
4.	*Structural sections, corrosion protection, connections.*	[1], [2], [3]		
5.	*Structural modelling and analyses methods.*	[4]		
6.	*Design theory of cold formed structural sections and stiffened / unstiffened welded plates.*	[1], [2], [3]		
7.	*Design theory of cold formed structural sections and stiffened / unstiffened welded plates.*	[1], [2], [3]	HW 1	
8.	*Practical design according to Eurocode 3 parts 1-3, 1-5 and 1-7, strength and stability investigations.*	[1], [2], [3]		
9.	**National Holiday (1st November)**			
10.	*Practical design according to Eurocode 3 parts 1-3, 1-5 and 1-7, strength and stability investigations.*	[1], [2], [3]		
11.	*Case studies.*	[4]		
12.	*Case studies.*	[4]		
13.	*Consultation*			

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. To be in class at the beginning time and stay until the scheduled end of the lesson is required, tardiness of more than 20 minutes will be counted as an absence. In the case of an illness or family emergency, the student must present a valid excuse, such as a doctor's note.

Method for monitoring attendance

attendance sheet

Mid-term assessments, performance evaluation and their ratio in the final grade

Type	Assessment	*Weighting as a proportion of the pre-requisite for taking the exam*
1. *home assignment (project documentation)*	*max 90 points*	*90 %*
2. *attendance*	*max 10 points*	*10 %*

Opportunity and procedure for re-takes (PTE TVSz 47§(4))

The specific regulations for grade betterment and re-take must be read and applied according to the general Code of Studies and Examinations the assignment to be submitted can be repeated/improved each once every semester, and the home assignments can be repeated/improved at least once in the first two weeks of the examination period.

Grade calculation as a percentage

Course grade	Performance in %
excellent (5)	85 % -...
good (4)	70 % ... 84 %
satisfactory (3)	55 % ... 69 %
pass (2)	40 % ... 54 %
fail (1)	below 40 %

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

COMPULSORY READING

[1st] EN 1993-1-3 (2006) (English): Eurocode 3: Design of steel structures - Part 1-3: General rules - Supplementary rules for cold-formed members and sheeting

[2nd] EN 1993-1-5 (2006) (English): Eurocode 3: Design of steel structures - Part 1-5: General rules - Plated structural elements

[3rd] EN 1993-1-7 (2007) (English): Eurocode 3: Design of steel structures - Part 1-7: Strength and stability of planar plated structures subject to out of plane loading

[4th] SweedSteel Metecno design tables and samples

RECOMMENDED LITERATURE

[5th] Lindab design tables and samples