

## COURSE SYLLABUS AND COURSE REQUIREMENTS

ACADEMIC YEAR 2024/2025

*Course title*      *Computer Aided Structural Design 2 (Tekla)*

<i>Course code</i>	MSB375ANEP
<i>Hours/Week: le/pr/lab</i>	1 Lab
<i>Credits</i>	2
<i>Degree Programme</i>	Civil Engineering BSc.
<i>Requirements</i>	Project Submission
<i>Teaching Period</i>	7. Semester
<i>Prerequisites</i>	<i>Reinforced Concrete Structures Design (BSc), Steel Structures Design (BSc), Finite Elements Knowledge (BSc).</i>
<i>Department(s)</i>	Civil Engineering
<i>Course Director</i>	Lőrincz Balázs
<i>Teaching Staff</i>	Lőrincz Balázs

## COURSE DESCRIPTION

The Structural Engineering Software's Course will be providing for the students the basic knowledge about the roles of the computer programs of structural engineering in the contribution of the designing and the calculation, and the knowledge of the usage of those programs and the most important ones of them around the world currently; especially those are in purpose of finishing and exporting and submitting the projects.

## SYLLABUS

### 1. GOALS AND OBJECTIVES

Upon successful completion of this course, the student will be able to know and understand:

1. The basics of the usage of the structural engineering modelling programs
2. The Applying of the previous mentioned points on the software of Trimble Tekla
3. Modelling and building a Reinforced Concrete Structure in the software
4. Modelling and building a Steel Structure in the software
5. Exporting the Drawings of the Projects
6. Modelling a Steel Stair
7. Modelling a Precast Concrete Stair
8. Modelling Curved Structures
9. Modelling Shade/ Canopy

### 2. COURSE CONTENT

#### LABORATORY PRACTICE

1. Introduction and Syllabus's Explaining and how to dedicate this course for the benefits of the diploma works and the graduation projects.
2. Building and Modelling a Steel Structure in Tekla.
3. Building and Modelling a Concrete Structure in Tekla
4. Building and Modelling different types of stairs in Tekla

## 5. Building and Modelling a Shade/Canopy in Tekla

### DETAILED SYLLABUS AND COURSE SCHEDULE

ACADEMIC HOLIDAYS INCLUDED

#### PRACTICE, LABORATORY PRACTICE

Week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Introduction and Syllabus's Explaining and how to dedicate this course for the benefits of the diploma works and the graduation projects.	-	-	
2.	Building and Modelling a Steel Structure in Tekla.	-	First Homework	Week 3
3.	Building and Modelling a Steel Structure in Tekla	-	Second homework	Week 4
4.	Building and Modelling Steel Stairs	-	Third Homework	Week 5
5.	Building and Modelling Steel Stairs	-		-
6.	Modelling Curved Structures	-		-
7.	Modelling Curved Structures	-		-
8.	Building and Modelling a Shade/Canopy	-	Fourth Homework	Week 10
9.	Autumn Break	-	-	-
10.	Building and Modelling a Shade/Canopy	-	Project Assignment	Week 14
11.	Exporting Drawings, Shop Drawings and Details, and the required tables and BOQ lists	-	-	-
12.	Consultation about the Project	-	-	-
13.	Consultation about the Project	-	-	-
14.	Submission Date	-	-	-

### 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.

#### Method for monitoring attendance

Fulfil The Attendance Sheet

#### ASSESSMENT

##### Course-unit with 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
1. Class Attendance	max 20 points	20 %
2. Submission of all assignments	max 50 points	50 %
3. Submission of the final Project	max 30 points	30 %

## Requirements for the end-of-semester signature

TO FULFIL ALL THE REQUIREMENTS ABOVE

### Re-takes for the end-of-semester signature

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

**Type of examination:** Submitting the Final Project

**The exam is successful if the result is minimum 40%**

### Calculation of the grade

*The mid-term performance accounts for 50%, the performance at the final submission accounts for 30 % 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 %

## 4. SPECIFIED LITERATURE

### COMPULSORY READING AND AVAILABILITY

Official Trimble Company Website, for the offline help of the software, as an official copy.