COURSE SYLLABUS AND COURSE REQUIREMENTS
ACADEMIC YEAR 2023-2024 SEMESTER FALL

Course title	**Fluid Mechanics in Engineering 3.**
Course Code	**MSB285ANEP**
Hours/Week: le/pr/lab	**1/1/0**
Credits	**2**
Degree Programme	**Civil Engineering BSc**
Study Mode	**Full-time**
Requirement	**Exam**
Teaching Period	**Semester 3**
Prerequisites	**Fluid Mechanics in Engineering 1.**
Department	**Civil Engineering**
Course Director	**Dr. Judit Pál-Schreiner**
Teaching Staff	**Dr. Judit Pál-Schreiner**

COURSE DESCRIPTION

This course exposes students to an expansive suite of topics and methods within the field of water resources engineering, emphasizes engineering applications of Fluid Mechanics.

SYLLABUS

1. GOALS AND OBJECTIVES

Fluid Mechanics is explores using fundamental conservation laws and ecologically-based design theory. Concept of this course is to learn about the flow of the Fluid, Types of flow in both Channels and Pipes, Pumps, Runoff, Flood, Infiltration, Groundwater Flow and more.

2. COURSE CONTENT

	TOPICS
LECTURE	*1. Types of Flow* *2. Types of Fluids & Bernoulli's Equation* *3. Pipe Flow, Siphons, Pumps* *4. Channel Flow*
PRACTICE	*1. Examples about Finding Flow Discharge* *2. Examples about Bernoulli's Equation* *3. Examples about Flow in Pipes, Siphons, Pumps* *4. Examples about Flow in Channels*

DETAILED SYLLABUS AND COURSE SCHEDULE

LECTURE

week	**Topic**	**Compulsory reading; page number**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
7.	Flow Types and Finding flow discharge	[1.]		
8.	Holiday - no classes			
9.	Bernoulli's Equation	[1.]		
10.	EGL & HGL	[1.]		
11.	Flow in Pumps and Siphons	[1.]		

12.	Flow in Channels	[1.]		
13.	Exam test		Exam test	27.11.2023

PRACTICE

week	**Topic**	**Compulsory reading; page number**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
7.	Flow Types and Finding flow discharge in practice + examples	[1.]		
8.	Holiday – no classes			
9.	Bernoulli's Equation in practice + examples	[1.]	Homework 1	06.11.2023
10.	EGL & HGL in practice + examples	[1.]	Homework 2	20.11.2023
11.	Flow in Pumps and Siphons in practice + examples	[1.]		
12.	Flow in Channels in practice + examples	[1.]	Homework 3	27.11.2023
13.	Practice Exam		Practice Exam	27.11.2023

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

Attendance sheet. Attendance Sheet will be filled during the Semester. Attending is required all classes, and will impact the grade (max. 10%). Unexcused absences will adversely affect the grade, and in case of absence from more than 30% of the total number of lesson will be grounds for failing the class. 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.

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	Ratio in the final grade
Homeworks	*10%(min 4%) -10%(min 4%)-10%(min 4%)*	*30%*
Examtest	*30% (min 12%)*	*30%*
Practice Exam	*30% (min 12%)*	*30%*
Class attendance	*10% (min 4%)*	*10%*

Requirements for the end-of-semester signature

Each individual assessment must be at least 40% on its own.

Re-takes for the end-of-semester signature (PTE TVSz 50§(2))

The specific regulations for grade betterment and re-take must be read and applied according to the general Code of Studies and Examinations

Examtest ans Practice exam can be repeated/improved each at least once every semester.

Type of examination: *written exam test*

The exam is successful if the result is minimum 40 %

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

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

Course grade	Performance in %
excellent (5)	85 % -100%
good (4)	70 % - 84 %
satisfactory (3)	55 % - 69 %
pass (2)	40 % - 54 %
fail (1)	0% - 39 %

4. SPECIFIED LITERATURE

COMPULSORY READING AND AVAILABILITY

[1.] Lecture notes ppt.

RECOMMENDED LITERATURE AND AVAILABILITY

[2.] Fluid Mechanics: Fundamentals & Applications, Fourth Edition by John M. Cimbala
[3.] 1000 Solved Problems in Fluid Mechanics by K Subramanya
[4.] Fluid Mechanics (SIE) by Frank White