

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

<b>Course title</b>	<b>Fluid Mechanics in Engineering 2.</b>
<b>Course Code</b>	<b>MSB283ANEP</b>
<b>Hours/Week: le/pr/lab</b>	<b>1/1/0</b>
<b>Credits</b>	<b>2</b>
<b>Degree Programme</b>	<b>Civil Engineering BSc</b>
<b>Study Mode</b>	<b>Full-time</b>
<b>Requirement</b>	<b>Exam</b>
<b>Teaching Period</b>	<b>Semester 3</b>
<b>Prerequisites</b>	<b>Fluid Mechanics in Engineering 1.</b>
<b>Department</b>	<b>Civil Engineering</b>
<b>Course Director</b>	<b>Dr. Judit Pál-Schreiner</b>
<b>Teaching Staff</b>	<b>Dr. Judit Pál-Schreiner</b>

**COURSE DESCRIPTION**

This course exposes students to an expansive suite of topics and methods within the field of water resources engineering, emphasizes engineering fluid mechanics (Hydrostatics).

**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 properties of fluid, static fluid pressure, Euler's principle, manometers, hydrostatic forces, Pascal law, Archimedes's principle

**2. COURSE CONTENT**

	TOPICS
LECTURE	<ol style="list-style-type: none"> <li>1. <i>The properties of fluid</i></li> <li>2. <i>Hydrostatics's principle</i></li> <li>3. <i>Euler's principle</i></li> <li>4. <i>Archimedes's principle</i></li> </ol>
PRACTICE	<ol style="list-style-type: none"> <li>1. <i>The properties of fluid Examples about</i></li> <li>2. <i>Hydrostatics's principle Examples about</i></li> <li>3. <i>Euler's principle Examples about</i></li> <li>4. <i>Archimedes's principle Examples about</i></li> </ol>

## DETAILED SYLLABUS AND COURSE SCHEDULE

### LECTURE

week	Topic	Compulsory reading; page number	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	The properties of fluid, Hydrostatics's principle	[1.]		
2.	Euler's principle, Euler's principle in practice, manometers	[1.]		
3.	Hydrostatic forces	[1.]		
4.	Hydrostatic forces in practice	[1.]		
5.	Archimedes's principle	[1.]		
6.	Exam test		Exam test	09.10.2023

### PRACTICE

week	Topic	Compulsory reading; page number	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	The properties of fluid, Hydrostatics's principle in practice	[1.]		
2.	Euler's principle in practice, manometers	[1.]	Homework 1	18.09.2023
3.	Hydrostatic forces in practice 1	[1.]	Homework 2	02.10.2023
4.	Hydrostatic forces in practice 2	[1.]		
5.	Archimedes's principle in practice	[1.]	Homework 3	09.10.2023
6.	Practice Exam		Practice Exam	09.10.2023

## 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 and 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