COURSE SYLLABUS AND COURSE REQUIREMENTS
ACADEMIC YEAR 2022/2023 SEMESTER 3

Course title	*Fluid Mechanics 3*
Course Code	MSB285ANEP
Hours/Week: le/pr/lab	1 Lecture, 1 Practice
Credits	2
Degree Programme	Civil Engineering BSc.
Study Mode (TVSZ-ben training schedule)	
Requirements	Exam
Teaching Period	3rd semester
Prerequisites	None
Department(s)	Civil Engineering
Course Director	*Dr. Judit Pál-Schreiner*
Teaching Staff	*Dr. Judit Pál-Schreiner / Eng. Lujain Ben Khadra*
Hours/Week: le/pr/lab	*Every week*

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

MSB285ANEP: *Dr. Judit Pál-Schreiner / Eng. Lujain Ben Khadra /Fluid Mechanics 3*

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

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	TOPICS
LECTURE	1. *Types of Flow* 2. *Types of Fluids & Bernoulli's Equation* 3. *Pipe Flow* 4. *Channel Flow* 5. *Siphons*
PRACTICE	1. *Examples about Finding Flow Discharge* 2. *Examples about Bernoulli's Equation* 3. *Examples about Flow in Pipes* 4. *Examples about Flow in Channels* 5. *Examples about Flow in Pumps*
LABORATORY PRACTICE	*None*

DETAILED SYLLABUS AND COURSE SCHEDULE

ACADEMIC HOLIDAYS INCLUDED

LECTURE

week	**Topic**	**Compulsory reading; page number (from … to …)**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1.	Flow Types	First Presentation	-	-
2.	Flow Types and Finding flow discharge	First Presentation	First Homework	Week 3
3.	Fluid Types	Second Presentation	-	-
4.	Bernoulli's Equation	Second Presentation	Second Homework	Week 5
5.	Flow in Pipes	Third Presentation	-	-
6.	EGL & HGL	Third Presentation	Third Homework	Week 7
7.	Flow in Pumps	Fourth Presentation	-	-
8.	Examples about flow in Pumps	Fourth Presentation	-	-
9.	Autumn Break			
10.	Flow in Siphons & Examples	Fourth Presentation	Fourth Homework	Week 11
11.	Flow in Channels	Fifth Presentation	-	-
12.	Flow in Channels Examples	Fifth Presentation	Fifth Homework	Week 13
13.	Oral Exam			
14.	Practice Exam			
15.	Retake			

PRACTICE, LABORATORY PRACTICE

week	**Topic**	**Compulsory reading; page number (from … to …)**	**Required tasks (assignments, tests, etc.)**	**Completion date, due date**
1.	…			
2.	Flow Types and Finding flow discharge	First Presentation	First Homework	Week 3
3.				
4.	Bernoulli's Equation	Second Presentation	Second Homework	Week 5
5.				
6.	EGL & HGL	Third Presentation	Third Homework	Week 7
7.				
8.	Examples about flow in Pumps	Fourth Presentation	-	-
9.				
10.	Flow in Siphons & Examples	Fourth Presentation	Fourth Homework	Week 11
11.				
12.	Flow in Channels Examples	Fifth Presentation	Fifth Homework	Week 13
13.				
14.				
15.				

3. ASSESSMENT AND EVALUATION

Evaluation will be depending on:
Attendance
Assignments
Practice Exam
Oral Exam

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 will be filled during the Semester

ASSESSMENT

Course resulting in mid-term grade

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

Type	Assessment	Ratio in the final grade
Class Attendance	*max 10 Points*	*10%*
Assignments Till the Mid-term	*max 30 Points*	*30%*

Opportunity and procedure for re-takes

The specific regulations for improving grades and resitting tests must be read and applied according to the general Code of Studies and Examinations. E.g.: all tests and assessment tasks can be repeated/improved 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.

Grade calculation as a percentage

based on the aggregate performance according to the following table

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.

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 10 Points*	*10%*
2. *All Assignments*	*max 30 Points*	*30%*
3. *Practical Test*	*max 30 Points*	*30%*
4. *Oral Test*	*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 *(written, oral): Both Oral Exam & Practical Exam*

The exam is successful if the result is minimum 15 % in the Oral Exam & 15% in the Practical Exam

Calculation of the grade

The performance at the exam accounts for ***60***% 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 %

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

4. SPECIFIED LITERATURE

COMPULSORY READING AND AVAILABILITY

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