

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

<b>Course title</b>	<b>HYDROLOGY</b>
<b>Course Code</b>	<b>MSB047ANEP</b>
<b>Hours/Week: le/pr/lab</b>	<b>1/1/1</b>
<b>Credits</b>	<b>4</b>
<b>Degree Programme</b>	<b>Civil Engineering BSc</b>
<b>Study Mode</b>	<b>Full-time schedule</b>
<b>Requirement</b>	<b>Mid-semester grade</b>
<b>Teaching Period</b>	<b>Semester 4</b>
<b>Prerequisites</b>	<b>None</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 applications of hydrology.

**SYLLABUS**

**1. GOALS AND OBJECTIVES**

This course exposes students to an expansive suite of topics and methods within the field of Hydrology. Hydrology is explored using fundamental conservation laws and ecologically-based design theory. Concepts include the properties of water, the water cycle, precipitation, runoff, flood, infiltration, groundwater flow, evaporation.

**2. COURSE CONTENT**

**TOPICS**

<b>LECTURE</b>	<ol style="list-style-type: none"> <li>1. <i>The water cycle, evaporation, condensation</i></li> <li>2. <i>Precipitation</i></li> <li>3. <i>Runoff</i></li> <li>4. <i>Infiltration</i></li> </ol>
<b>PRACTICE</b>	<ol style="list-style-type: none"> <li>1. <i>The water cycle, evaporation, condensation in practice</i></li> <li>2. <i>Precipitation in practice</i></li> <li>3. <i>Runoff in practice</i></li> <li>4. <i>Infiltration in practice</i></li> </ol>
<b>LABORATORY PRACTICE</b>	<ol style="list-style-type: none"> <li>1. <i>The water cycle, evaporation, condensation in lab</i></li> <li>2. <i>Precipitation in lab</i></li> <li>3. <i>Runoff in lab</i></li> <li>4. <i>Infiltration in lab</i></li> </ol>

## SYLLABUS AND COURSE SCHEDULE

### LECTURE

week	Topic	Compulsory reading; page number	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	The water cycle, evaporation, condensation	[1.] 1-39		
2.				
3.	Precipitation	[1.] 40-90		
4.				
5.	Runoff, Surface Water Hydrology	[1.] 106-151		
6.				
7.	Infiltration	[1.] 187- 194		
8.				
9.	Spring holiday			
10.				
11.	Ground Water Hydrology	[1.]195-222		
12.	Theoretical Test			23-04-2024 7:45-9:15
13.	Consultation			
14.	Retake			07-05-2024

### PRACTICE

week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.				
2.	Evaporation, Precipitation 1	[1.] 23-90		
3.				
4.	Precipitation 2	[1.] 90-105	HW1	10-03-2024
5.				
6.	Surface Routing Models 1	[1.] 152-186		
7.				
8.	Surface Routing Models 2	[1.] 152-186	HW2	21-04-2024
9.				
10.	Infiltration	[1.] 187-222		
11.				
12.	Practical Test			23-04-2024 9:30-11:00
13.				
14.	Retake			07-05-2024

### LABORATORY PRACTICE

week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Full-day field measurement 09-05-2024	[2.]	Report	10-05-2024
2.	Data processing, consultation 10-05-2024			

### 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. 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 resulting in mid-term grade (PTE TVSz 40§(3))**

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

Type	Assessment	Ratio in the final grade
Theoretical Test	25% (min 10%)	25%
Practical test	25% (min 10%)	25%
Home works	2*10%(min 4%)	20%
Lab practical report	20% (min 8%)	20%
Class attendance	10% (min 4%)	10%

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

The specific regulations for improving grades and resitting tests must be read and applied according to the general Code of Studies and Examinations.

All tests can be repeated/improved at least once every semester. Each individual assessment must be at least 40% on its own.

#### **Grade calculation as a percentage**

based on the aggregate performance according to the following table

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.] Judit, Pál-Schreiner: Hydrology, 222 p. (2019)

The Hydrology course material was developed under the project EFOP 3.4.3-16- 2016-00005 "Innovative university in a modern city: open-minded, value-driven and inclusive approach in a 21st century higher education model", Megjelenés: Magyarország,

[https://issuu.com/pte\\_mik\\_english\\_edu\\_material/docs/019\\_a\\_hydrology\\_k](https://issuu.com/pte_mik_english_edu_material/docs/019_a_hydrology_k)

[2.] Lecture notes ppt.

#### **RECOMMENDED LITERATURE AND AVAILABILITY**

[3.] John C. Manning: Applied Principles of Hydrology 3rd Edition ISBN-13: 978-0135655320; ISBN-10: 0135655323