General Information:

Name of Course: # HYDROLOGY

Course Code: MSB429AN

Semester: 3nd

Number of Credits: 2

Allotment of Hours per Week: 1 Lectures, 1 Practices

Evaluation: Exam (with grade)

Prerequisites: **None**

Instructor: **Dr. Judit PÁL-SCHREINER Ph.D.**
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Introduction, General 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.

Learning Objectives:

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.

Methodology:

- **Lectures**: Lectures will give an introduction to the basic knowledge of the hydrology.
- **Practical class**: Students will be able to practice the basic calculations and design through sample examples.
- **Exams:** Accumulated knowledge is tested in a exam test.
- **Practical test:** Accumulated practice in basic calculations is tested in a practical test.

Schedule:

Week	Topic of lecture
Week 1	Course description; Orientation
Week 2	The water cycle, Water in motion
Week 3	The process of evaporation, Measuring evaporation (Homework part1)
Week 4	The process of condensation, Measurement of condensation
Week 5	The process of precipitation, forms, types, measuring 1. (Homework part2)
Week 6	The process of precipitation, forms, types, measuring 2.
Week 7	The runoff cycle, Factors affecting runoff

Week 8	Measurement of runoff, The stream channel, Floods, Surface water (Homework part3)
Week 9	*Fall Break – no classes*
Week 10	Infiltration, Zones of subsurface water, Soil water
Week 11	Ground water reservoir, Aquifers, Aquifers as reservoirs
Week 12	**Check Homeworks (Submission date)**
Week 13	**Practical test**
Week 14	**Exam test**
Week 15	**Retake exam, retake practical test** (if required)

Attendance:

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.

Grading:

Grading will follow the course structure with the following weight
10% - Class attendance, class activity
30% Homeworks
30% Practical test
30% Exam test
A minimum of 55% is required to pass the exam

Offered exam grade

Numeric grade:	5	4	3	2	1
Evaluation in percents:	89%-100%	77%-88%	66%-76%	55%-65%	0-54%

Students with Special Needs:

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

Readings and Reference Materials:

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