

General Information:

Name of Course:

ENGINEERING FLUID MECHANICS 3.

Course Code:

MSB285AN

Semester:

3rd

Number of Credits:

2

Allotment of Hours per Week:

1 Lecture, 1 Practice

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 fluid mechanics (Hydraulics).

Learning Objectives:

Engineering fluid mechanics concepts include fundamental concepts of fluid flow, pressurized flow in pipe and open-channel flow.

Methodology:

- **Lectures:** Lectures will give an introduction to the basic knowledge of the engineering fluid mechanics (hydraulics).
- **Practical classes:** Students will be able to practice the basic calculations and design through sample examples.
- **Exam test:** Accumulated knowledge is tested in an 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	Fundamental Concepts of Fluid Flow
Week 3	Classification of flow, Continuity equation (Homework part1)
Week 4	Energy equation, Bernoulli equation
Week 5	Venture meters, Pitot tube
Week 6	Laminar- and turbulent flow in pipes, loses 1.
Week 7	Laminar- and turbulent flow in pipes, loses 2. (Homework part2)

Week 8	Siphons, Pumps
Week 9	<i>Fall Break – no classes</i>
Week 10	Open-Channel Flow (rapidly varied flow, critical depth-general case)(Homework part3)
Week 11	Open-Channel Flow (hydraulic jump)
Week 12	Check Home works (Submission date)
Week 13	Practical Test
Week 14	Exam Test
Week 15	Retake exam test, 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:

Ernest Brater, Horace King, James Lindell, C. Wei: Handbook of Hydraulics 7th Edition ISBN-13: 978-0070072473; ISBN-10: 0070072477