

**COURSE SYLLABUS SEMESTER 2021-2022/FALL**

|                                    |  |
|------------------------------------|--|
| <b>Name of Course</b>              | <b>Hydraulic Engineering</b>           |
| <b>Course Code</b>                 | <b>MSB432AN</b>                        |
| <b>Allotment of Hours per Week</b> | <b>1/2/0</b>                           |
| <b>Number of Credits</b>           | <b>5</b>                               |
| <b>Program</b>                     | <b>Civil Bsc</b>                       |
| <b>Evaluation</b>                  | <b>nappali</b>                         |
| <b>Semester</b>                    | <b>exam</b>                            |
| <b>Prerequisites</b>               | <b>Hydrology, Eng.Fluid Mech.3.</b>    |
| <b>Department</b>                  | <b>Department of Civil Engineering</b> |
| <b>Instructor</b>                  | <b>Dr. Pál-Schreiner Judit</b>         |

**INTRODUCTION, GENERAL COURSE DESCRIPTION**

This course exposes students to an expansive suite of topics and methods within the field of Hydraulic Engineering. Types and tasks of hydraulic engineering structures with the following topics: Watershed management of lowland and hilly areas. Regulation of lakes and rivers. Reservoirs and storage. Flood control and land drainage. Inland navigation. Water power development. Water intake and pumping stations. Small hydraulic engineering structures. Characteristic environmental impacts of hydraulic engineering structures.

**LEARNING OBJECTIVES****Methodology:**

Lectures, study cases will give an introduction to the basic knowledge of the hydraulic engineering. Exam test and presentations are tested the accumulated knowledge.

**Schedule:**

| Week    | Topic of lecture  |
|---------|---|
| Week 1  | Course description; Orientation                                   |
| Week 2  | Definition Hydraulic Engineering, preparing project, Case studies |
| Week 3  | Case studies  |
| Week 4  | Case studies  |
| Week 5  | Examtest  |
| Week 6  | Presentation 1-the problem  |
| Week 7  | Consultation  |
| Week 8  | Fall Break – no classes   |
| Week 9  | Holiday – no classes  |
| Week 10 | Presentation 2-the technics, method (part1)                       |
| Week 11 | Presentation 2-the technics, method (part2)                       |
| Week 12 | Consultation  |
| Week 13 | Presentations 3- the result (part1)                               |
| Week 14 | Presentation 3-the result (part2)                                 |
| Week 15 | Retake exam test (if required)                                    |

## ATTENDANCE AND GRADING

**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:**

25%- examtest (min 12.5%)  
25%- presentation 1 (min 12.5%)  
25%- presentation 2 (min 12.5%)  
25%- presentation 3 (min 12.5%)

**Offered exam grade:**

| Evaluation in percents | Numeric grade |
|------------------------|---------------|
| 89%-100%               | 5             |
| 77%-88%                | 4             |
| 66%-76%                | 3             |
| 50%-65%                | 2             |
| 0-49%                  | 1             |

**READINGS AND REFERENCE MATERIALS**

NED H. C. HWANG, ROBERT J. HOUGHTALEN: Fundamentals of Hydraulic Engineering Systems

JOHN A. ROBERSON, JOHN JOSEPH CASSIDY, M. HANIF CHAUDHRY: Hydraulic Engineering