

Public Works I

Code: MK5VIZ1S4TX17-EN

ECTS Credit Points: 4

Evaluation: mid-semester grade

Year, Semester: 1st year, 2nd semester

Its prerequisite(s): -

Further courses are built on it: Yes (Public Works II)

Number of teaching hours/week (lecture + practice): 2 + 2

Topics:

This course presents basic technical parameters of water public work, water consumption and its features. Water resources in Hungary (in Europe). Water quality and water classification. Physical, chemical and biological parameters. Water purification methods. Water supply system. Drinking water distribution system, network.

The basic designing instructions are presented for drinking water distribution system.

Literature:

Required:

- Jonathan T. Ricketts, M. Kent Loftin, Frederick S. Merritt, **Standard Handbook for Civil Engineers**, McGraw-Hill Publishing Company, 2003; ISBN 0-07-136473-0

Recommended:

- Melvyn Kay, **Practical Hydraulics**, Taylor and Francis Group, 2008; ISBN 978-0-415-35115-7

Schedule

1st week Registration week	
2nd week: Lecture: Technical parameters of water public work. Practice: General public works plan of the street.	3rd week: Lecture: Water consumption and its features. Practice: Semester task issuing
4th week: Lecture: Water resources in Hungary (in Europe). Practice: Consultation.	5th week: Lecture: Type of water resources. Practice: Consultation.
6th week: Lecture: Water quality and water classification. Physical, chemical and biological parameters. Practice: Checking the water quality on website of Water Works Ltd.	7th week: Lecture: Water purification methods. Practice: Pipes and fittings.
8th week: 1st drawing week	
9th week:	10th week:

Lecture: Drinking water distribution system, network.

Practice: Pumps and pump curves.

11th week:

Lecture: Hardy-Cross method theory.

Practice: Practical application of Hardy-Cross method.

13th week:

Lecture: : Presentation of Epanet program results.

Practice: Graphical presentation of results.

Lecture: Designing instructions for drinking water distribution system.

Practice: Consultation.

12th week:

Lecture: EPANET program.

Practice: Input data for Epanet 2.0 modelling program.

14th week:

Lecture: Discussion of Epanet program.

Practice: Semester task finishing.

15th week: 2nd drawing week

Requirements

A, for a signature:

Participation at practice is compulsory. Students have to attend the practices and may not miss more than three practice classes during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. The attendance on practice will be recorded by the practice leader. Being late counts as an absence. In case of further absences, a medical certificate needs to be presented.

B, for a practical grade:

Semester task must be done in a good technical quality.