

Tárgytematika / Course Description

Hydraulics

EKNB_KETA023

Tárgyfelelős neve /

Teacher's name: dr. Bene Katalin

Félév / Semester: 2022/23/1

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 1/2/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

This course is an introduction to fluid mechanics and engineering hydraulics. The main objective of this course is to understand the fundamentals of the fluid mechanics such as fluid and flow properties, fluid behavior at rest and in motion and fundamental equations like mass, energy and momentum conservation of the fluid flow. Engineering hydraulics used to solve practical engineering problems.

TANTÁRGY TARTALMA / DESCRIPTION

1. Fundamental properties of water
2. Water pressures and pressure forces
3. Water flow in pipes
4. Pipe losses
5. Pipe networks
6. Water pumps
7. Water flow in open channels, basic principles
8. Water surface profiles
9. Hydraulic jump
10. Groundwater hydraulics
11. Well hydraulics

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

final exam

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Compulsory reading
Recommended reading

Chin, David A. Water-Resource Engineering (3rd edition)
Houghtalen, R. J. Fundamentals of Hydraulic Engineering