UE Hydrology and hydraulics

ECTS
6 credits

Component
UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)

Semester
Automne

- **Teaching language(s):** French
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX7STAH

Presentation

Description

This course covers an area and knowledge that will be useful for both vocational and research programmes.

1. Physical hydrology, slope processes (Cédric Legoût)
2. Hydrology for engineers (Théo Vischel)

Provide the hydrological concepts for addressing issues of predetermination of floods:

- analysis of the rainfall-runoff relationship;
- application of flood predetermination methods.

3. Open-channel hydraulics and river hydraulics (Philippe Belleudy)

Which elements of your fluid mechanics courses might be useful for the study and practice of river hydraulics problems?

- head loss and backwater curve;
- gradually varied flows;
- shocks and transitions of the water regime;
- gravity, inertia and friction: non-permanent open-channel flows;
- application: facilities to combat flood risk;
- solid transport and river morphology; several impact studies.

Non-contractual information.
Last update on 30 November 2023

4. Closed-conduit hydraulics (Jean-Pierre Vandervaere)

Course parts

UE Hydrology and hydraulics - CMTD	Lectures (CM) & Teaching Unit (UE)	48h

Recommended prerequisites

EES-UGA bachelor course (L3)

Alternatively, the knowledge acquired in the "Rivers and men" MOOC will be used in this course.

The course is taught in French. Additional information in English is provided to non-French-speaking students if necessary.

Period : Semester 7

Bibliography

In addition to the face-to-face classes and tutorials, additional course information and exercises are made available on the Chamilo platform http://chamilo1.grenet.fr/ujf/courses/STE7HH/

This also contains the course materials and exercises.

Useful info

Non-contractual information.
Last update on 30 November 2023

Contacts

Program director

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Place

Grenoble

Campus

Grenoble - University campus

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Last update on 30 November 2023