



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.

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



Contacts

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Place

› [Grenoble](#)

Campus

› [Grenoble - University campus](#)