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Field camp I (3GH2170)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en hydrogéologie et géothermie	**Excursion: 5 j**	**Voir ci-dessous**	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante

Clément Roques, Landon Halloran, et assistants

Contenu

This introductory field camp is designed to provide students with a comprehensive foundation in hydrogeology, bridging their understanding of structural geology with its influence on catchment-scale hydrological processes. Through hands-on experience, students will delve into key concepts such as aquifers, permeability, porosity, karst systems, fractured networks, flow paths, and the availability and quality of groundwater resources.

Participants will engage in mapping major hydrogeological units, analyzing their storage and discharge capacities, and assessing their physico-chemical characteristics. They will be introduced to the essential tools and techniques used by hydrogeologists in the field. The course also highlights the critical role of hydrogeology in engineering and environmental projects, equipping students with the knowledge and practical skills necessary to contribute effectively in these areas.

Forme de l'évaluation

Students will complete an unmarked assignment, evaluated on an accepted/rejected basis. A written report, detailing the required content discussed during the introductory session, must be submitted on the final day of the field camp.

Modalités de rattrapage

In the event of failure, an oral examination will be arranged with the course supervisors following the official notification of the initial grade.

Documentation

Distributed by the instructors.

Pré-requis

None

Forme de l'enseignement

Field camp

Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Apply field techniques to develop hydrogeological maps, interpret data related to hydrogeological units, and solve problems related to water resource management.
- Describe key hydrogeological concepts, such as aquifers, permeability, and flow paths, and illustrate their relevance to catchment-scale processes.
- Conclude on the implications of hydrogeological processes for engineering projects
- Communicate findings and analyses effectively by presenting a structured written report and discussing their conclusions during oral examinations or group discussions.

Compétences transférables

- Work collaboratively, integrate diverse perspectives, and synthesise group findings, fostering teamwork and interpersonal skills.
- Manage field projects, including planning, data collection, and report writing, which are key skills in project management.
- Analyse complex data, compare different scenarios, and solve problems related to hydrogeological processes, which can be applied in diverse

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fields such as environmental management and engineering.
- Communicate complex information clearly and effectively.