

- Faculté des sciences
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**Geophysics and remote sensing (3GH2172)**

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en hydrogéologie et géothermie</b>	<b>Cours: 40 pg</b>	<b>controle continu: 1</b>	4

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

**Période d'enseignement:**

- Semestre Printemps

**Equipe enseignante:**

S. Miller, P. Brunner, K. Holliger

**Objectifs:**

The objective of this course is to introduce geophysical and remote sensing techniques for quantifying and understanding earth system processes.

**Contenu:**

Geophysics:

The content includes 1) gravity measurements and gravity anomalies and analysis, 2) earthquake seismology 3) seismic methods including reflection and refraction seismology, 4) magnetotelluric methods, 5) ground penetrating radar, 6) hydrogeophysics.

Remote sensing:

Introduction to underlying principles of optical remote sensing  
Applications of remote sensing products for hydrogeological applications  
Data processing and handling

**Forme de l'évaluation:**

CC: marked assignments for geophysics. An oral exam (15 min) is organised for the remote sensing part during the semester. If an assignment is not passed an oral exam will be organised within 6 weeks.

**Documentation:**

Lecture notes will be provided in the form of PowerPoint presentations, and supplemented with relevant readings from international journals.

**Pré-requis:**

physics, geology & hydrogeology

**Forme de l'enseignement:**

Lectures and practical