

- Faculté des sciences
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Economical, political and societal aspect of geothermics (3GH2190)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en hydrogéologie et géothermie (*)	Cours: 20 pg	controle continu: 1	4

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

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

B. Valley, Gunter Siddiqi, Anna-Lena Köng

Objectifs:

The objective of the course is to familiarize students with the basic principles of geothermal energy project maturation.

Contenu:

First, provide students with the basic principles of geothermal energy project economics. The fundamental aspects of a project lifecycle will be described, followed by cost estimates of geothermal energy projects. Next, fundamental aspects of project economics will be developed such as a project cashflow, discounting of cashflows and some economic indicators that are used to rank projects. In a general treatment, project risks will be described with a particular focus on political and legislative impacts on project development and maturation such as exploration licenses/concessions, development licenses/concessions, and Health, Safety and Environmental risk management.

As public acceptance and stakeholder engagement are becoming increasingly important issues for successful geothermal development the course will also focus on social aspects. The students will get to know the basics of risk perception and risk communication within geothermal projects and discuss different approaches.

Forme de l'évaluation:

Students will work together in teams and develop a number of case studies. The case studies will be presented to class in the final session of the course. The development and presentation of the case studies will be evaluated by the instructors.

Documentation:

Students are expected to have an understanding of geothermal energy projects as is described for example in

Energy from the Earth. Deep Geothermal as a Resource for the Future? TA-SWISS Study TA/CD 62/2015, Stefan Hirschberg, Stefan Wiemer, Peter Burgherr (eds.), vdf Hochschulverlag AG, 524 Seiten, CHF 57.00 / EUR 49.80 (D)
ISBN 978-3-7281-3654-1 (Buch) /

Note: a free-of-charge download via open access (TA 62/2015 e)

https://vdf.ch/index.php?route=product/product/download&ea_id=7417&product_id=1826
Chapter 4 and in particular 4.1, 4.3-4.7

Forme de l'enseignement:

Lectures and exercises

(*) Cette matière est combinée avec d'autres matières pour l'évaluation