

Selected Topics in Reservoir Characterization					
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Module number	Credits	Workload	Semester[s]	Duration	Group size
SE-CO-17	9 CP	270 h	2.-4. Sem.	2 Semester[s]	15
Courses			Contact hours	Self-study	Frequency
a) Deep geothermal energy			a) 3 WLH (45 h)	a) 85 h	a) each summer
b) Well logging rudiments			b) 2 WLH (30 h)	b) 55 h	b) each winter
c) Well logging II, analysis, interpretation			c) 2 WLH (30 h)	c) 55 h	c) each summer
Module coordinator and lecturer(s)					
Prof. Dr. Jörg Renner					
a) Prof. Dr. Jörg Renner					
b) Prof. Dr. Jörg Renner					
c) Prof. Dr. Jörg Renner					
Admission requirements					
Recommended previous knowledge:					
Basic knowledge in mathematics and physics, basic command of sheet-calculation software					
Learning outcome, core skills					
After successful completion of the module students					
<ul style="list-style-type: none"> • appreciate the differences of hydrothermal and petrothermal energy provision • learned to make basic calculations regarding the feasibility of geothermal energy provision (in general and site specific) • understand the approach to geophysical surveys in boreholes • are familiar with the basic data processing methods and correlation approaches applied to outcomes of different logging methods • can operate the "industry standard", wellcad 					
Contents					
a)					
<ul style="list-style-type: none"> • classification of geothermal systems • dimensioning geothermal plants • flow through porous and fractured rocks • monitoring fluid injection and stimulation measures • heat transfer mechanisms 					
b)					
<ul style="list-style-type: none"> • Borehole completion • Logging tools • Basics of measurements 					
c)					
<ul style="list-style-type: none"> • Introduction to wellcad • Case studies 					
Educational form / Language					
a) Tutorial (1 WLH) / Lecture (2 WLH) / English / German					

b) Tutorial (1 WLH) / Lecture (1 WLH) / English / German

c) Tutorial (1 WLH) / Lecture (1 WLH) / English / German

Examination methods

- Written exam 'Selected Topics in Reservoir Characterization' (3 h., Part of modul grade 100 %, + pass handed in assignments)
- Term paper 'Selected Topics in Reservoir Characterization - Homework I' (0 h., ungraded)
- Term paper 'Selected Topics in Reservoir Characterization - Homework II' (0 h., ungraded)

Requirements for the award of credit points

- Passed exams

Module applicability

- M.Sc. Subsurface Engineering

Weight of the mark for the final score

Percentage of total grade [%] = $9 \cdot 100 \cdot \text{FAK} / \text{DIV}$

FAK: The weighting factors can be taken from the table of contents.

DIV: The values can be taken from the table of contents.

Further Information