ME-700

Designing Testing Machines for Geomechanics

Violay Marie

Cursus	Sem.	Type
Mechanics		Opt.

Language of teaching	English
Credits	1
Session	
Exam	Oral presentation
Workload	30h
Hours	**14**
Courses	7
Project	7
Number of positions	**10**

Frequency

Every 2 years

Remark

Next time: Spring 2028

Summary

Develop your own machines to meet your scientific needs. Learn how to build high-pressure, high-temperature machines, as well as low-to-high-speed friction machines for geomechanics experiments. Additionally, gain knowledge about commonly used sensors in geomechanics.

Content

(1) Overview of testing machines in Geo-mechanics and Rock Physics
(2) Seals
(3) Pressure vessels
(4) Pressure-generating systems
(5) Strain gauges and force gauges
(6) Loading systems
(7) High-velocity testing machines
(8) Other types of sensors.

Keywords

Design, Testing machines, Geo-mechanics

Learning Prerequisites

Recommended courses

Rock mechanics, Geo-mechanics, MMC

Resources

Bibliography

T. E. Tullis & J. Tullis, 1986, Experimental deformation techniques, AGU Monograph (The Paterson Volume).

Ressources en bibliothèque

- T. E. Tullis & J. Tullis, 1986, Experimental deformation techniques, AGU Monograph (The Paterson Volume).

Moodle Link

- https://go.epfl.ch/ME-700