Summary
The students will understand the factors which affect the learning of professionals (such as engineers or teachers). They will understand differences between learning during (a) initial training, (b) induction into the workplace, and (c) the on-going development of experienced professionals.

Content
Social and Cognitive Factors in Professional Learning
General Aim: To enable participants to understand the ways in which professionals learn their profession, in the initial training stage, the induction into practice stage and the continuing professional development stage.  
General Description of Material: The ability for individuals and organisations to learn is often regarded as central to their survival and success in the contemporary world. But how do professionals (like teachers, or engineers) learn their profession? What are the differences between how we learn (a) in initial training, (b) during the transition into work and (c) when an experienced professional?
Learning is partially a psychological concept, but professionals operate in social contexts and so an understanding of professional learning also draws on sociological research. Therefore understanding professional learning will involve a multi-disciplinary approach.
Plan of the course: Through exploring a number of types of studies on different aspects of learning, participants will build an understanding of some different research approaches which are used in studying learning. Students will also participate in studies and experiments to give them concrete experiences both of research approaches and of adult learning in practice.

Keywords
Learning, Education, Social and Behavioural Science Research, Interdisciplinary Studies
POLY-perspective:
• global perspective
• citizen perspective

https://www.epfl.ch/schools/cdh/cdhs-vision/

Learning Outcomes
By the end of the course, the student must be able to:
• Define the concept of learning, highlighting a range of definitions and their implications for the study of learning
• Describe the way in which information is processed and memories formed in humans, referring to Attention, Working Memory, Long Term Memory and related concepts
• Describe the role of individual differences (Intelligences, Personality, Approaches to Learning) in accounting for learning
Describe the role of motivation, emotion and emotional self-regulation in relation to learning

Describe the role of micro-social factors (interaction with teachers, peers and others) in accounting for learning

Identify examples of how macro social factors (social class, policy and institutional factors etc.) impact upon the learning of different social groups

Apply this knowledge to understand real-life learning situations

Apply research design principles to design a piece of survey or experimental research

Integrate psychological and social perspectives in studying learning

Design a survey or an experiment to study learning

Transversal skills

Communicate effectively with professionals from other disciplines.

Assess one's own level of skill acquisition, and plan their on-going learning goals.

Take account of the social and human dimensions of the engineering profession.

Teaching methods

First semester: lectures; labs; discussion of readings

Expected student activities

Attendance in lectures and participation in in-lecture discussions; Participation in research labs; Reading of assigned materials and discussion of readings; Communicating in oral or electronic form

Assessment methods

20% Group research project proposal
80% Exam

Supervision

Office hours: Yes
Assistants: No
Forum: Yes
Others: Forum for discussion in Moodle

Resources

Bibliography

Ressources en bibliothèque

- How People Learn / Bransford
- The Theory and Practice of Learning / Jarvis
- Contemporary Theories of Learning / Illeris

Moodle Link


Prerequisite for