EPFL

MGT-419	**Systemic & strategic problem solving**

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Cursus	Sem.	Type
Management, Technology and Entrepreneurship minor	E	Opt.
Managmt, tech et entr.	MA2, MA4	Opt.

Language of teaching	English
Credits	2
Withdrawal	Unauthorized
Session	Summer
Semester	Spring
Exam	During the semester
Workload	60h
Weeks	14
Hours	**2 weekly**
Courses	1.5 weekly
Number of positions	**60**

It is not allowed to withdraw from this subject after the registration deadline.

Summary

This course provides key concepts and tools to understand complex systemic interactions and implement effective change strategies within teams and organizations. Participants will acquire essential knowledge for developing their leadership potential in areas such as systemic thinking, problem solvin

Content

Course framework: The systemic and strategic model
The course will kick off by providing a rigorous theoretical framework for understanding organizations and teams as living, adaptive, systems, in constant interaction with their environment, by drawing on systems theory, cybernetics, information theory and constructivist epistemology. The advanced communication techniques developed within the framework of the systemic and strategic problem-solving model will be used throughout the course to address a wide variety of management challenges.

Practical applications of systemic and strategic intervention
Once the framework has been introduced, the course will dive into a broad range of management challenges in order to illustrate how this rigorous and pragmatic problem-solving model can be used effectively to address them. Grounded in rigorous pragmatic communication-based research, real case scenarios of resistance to change, lack of motivation, conflicts within teams, burn-out, job performance, decision making and lack of communication and trust will be presented and analyzed.

Individual applications of systemic and strategic intervention
Building on these practical foundations, the weekly exercise sessions apply these concepts and operative strategies by asking students to work on case studies in their potential professional field. All students participant will submit solutions to one or two scenarios which will require them to refer to the strategies seen in the lectures.

Keywords

Systemic thinking
Strategic intervention
Problem solving
Change management
Interpersonal communication

Learning Outcomes

By the end of the course, the student must be able to:

- Describe key concepts underlying systemic/cybernetic thinking
- Recognize underlying interactional dynamics within an organization

• Assess / Evaluate management challenges using the systemic & strategic model

• Demonstrate the ability to devise and implement effective change strategies

• Apply advanced communication techniques and adapt them to a wide variety of counterparts

Transversal skills

• Demonstrate the capacity for critical thinking

• Continue to work through difficulties or initial failure to find optimal solutions.

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

• Respect the rules of the institution in which you are working.

• Communicate effectively with professionals from other disciplines.

• Communicate effectively, being understood, including across different languages and cultures.

• Negotiate effectively within the group.

Teaching methods

A series of interactive lectures introducing the systemic and strategic theory and illustrations of its application in the context of work-related problems.

Expected student activities

Personal study of relevant bibliography
Working on proposed case studies
Applying the problem-solving method to current and/or past work-related situations

Assessment methods

• Reflection paper (45%)

• Individual essay (55%)

Resources

Virtual desktop infrastructure (VDI)
No

Bibliography
Paul Watzlawick, Ultra solutions: How to fail most successfully?
Paul Watzlawick, The situation is hopeless, but not serious
Paul Watzlawick, John Weakland, Richard Fisch, Change: principles of problem formation and problem resolution
Paul Watzlawick, The invented reality (contributions to constructivism)
Paul Watzlawick, How Real Is Real?: Confusion, Disinformation, Communication
Paul Watzlawick, Jeanet Beavin & Don Jackson, Pragmatics of human communication
Lucy Gill, How to work with just about anyone