

CS-491

Introduction to IT consulting

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Cursus	Sem.	Type
Computer science	MA1, MA3	Opt.
Cybersecurity	MA1, MA3	Opt.
SC master EPFL	MA1, MA3	Opt.

Language of teaching	English
Credits	6
Session	Winter
Semester	Fall
Exam	Oral
Workload	180h
Weeks	14
Hours	6 weekly
Lecture	6 weekly
Number of positions	

Summary

This course is an introduction to the alignment of enterprise needs with the possibilities offered by Information Technology (IT). Using a simulated business case, we explore how to define the requirements for an IT service that matches stakeholders explicit and implicit wishes.

Content**Target Audience**

Engineers who want to become

- Business Analysts
- Requirements Engineers
- Project Managers
- Management and IT consultants
- Product Owners

Content

Technological and societal changes are pressuring enterprise IT departments to hire engineers with excellent technical and business skills. Their roles are called business analysts, requirements engineers, or product owners. Their skills enable the bidirectional alignment of business needs and IT capabilities. With IT being the most important enabler of enterprise strategy, these roles are crucial in many organizations, large and small, private or public.

We use experiential learning beginning with concrete experience, followed by reflection and abstraction to encourage collaborative learning by doing. You will be part of a small team that needs to understand and solve a business case through fast-paced role-playing with the teaching staff. This is interspersed with lectures on the nature of organizations, business analysis and the role of enterprise IT. Several external speakers from industry illustrate what we see in class.

We will explore the following subjects:

- Problems and solutions
- Requirements elicitation
- Business process modeling
- Project management
- Change management
- Enterprise and service modeling
- The nature of organizations
- Creating a request for tender

Keywords

Ethnography, interviews, contextual inquiry, business service, business process, IT service, business analysis, requirements engineering, SEAM service modeling, SEAM motivation modeling, interpretivism, homeostasis,

appreciation, resilience, low-code development, request for tender

Learning Outcomes

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

- Elicit requirements with business stakeholders
- Analyze business stakeholder perception and motivations
- Assess / Evaluate business processes
- Define requirements for business and IT services
- Present problems and solutions to management
- Implement a prototype in a low-code platform

Transversal skills

- Demonstrate a capacity for creativity.
- Communicate effectively with professionals from other disciplines.
- Take feedback (critique) and respond in an appropriate manner.

Teaching methods

Experimental learning and teamwork.

Assessment methods

Group oral exam.

Resources

Virtual desktop infrastructure (VDI)

No

Bibliography

Beyer, H. and K. Holtzblatt (1999). "Contextual design." *interactions* 6(1): 32-42.

Markus M.L., Keil M. (1994). *If We Build It, They Will Come: Designing Information Systems that People Want to use*, Sloan Management Review; Summer 1994; 35, 4; ABI/INFORM Global pg. 11

Regev, G. et al.(2013) *What We Can Learn about Business Modeling from Homeostasis*, Lecture Notes in Business Information Processing, 142, 1-15, 2003

Zachman, J. A. (1987). "A framework for information systems architecture." *IBM Syst. J.* 26 (3): 276-292.

Weinberg, G.M., *The secrets of consulting*, Dorset House, 1985

Ressources en bibliothèque

- [A framework for information systems architecture / Zachman](#)
- [Contextual design / Holtzblatt](#)
- [What We Can Learn about Business Modeling from Homeostasis / Regev](#)

Moodle Link

- <https://go.epfl.ch/CS-491>