

HUM-397

Design for sustainability I

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Cursus	Sem.	Type
Humanities and Social Sciences	MA1	Obl.
UNIL - Autres facultés	H	Opt.
UNIL - HEC	H	Opt.

Language of teaching	English
Credits	3
Session	Winter
Semester	Fall
Exam	During the semester
Workload	90h
Weeks	14
Hours	3 weekly
Lecture	2 weekly
Project	1 weekly
Number of positions	60

Remark

Une seule inscription à un cours SHS+MGT autorisée. En cas d'inscriptions multiples elles seront toutes supprimées sans notification.

Summary

This course explores and practices some of the fundamental tools of designing for sustainability with a focus on the sustainability, desirability, and economic viability of solutions.

Content

Design for Sustainability takes the participants through practical concepts, tools and processes to propose design solutions that aim to improve the co-existence of humans, preserve biodiversity, and life-supporting systems. It integrates environmental, economic, social and cultural dimensions.

The course explores approaches at different levels (material, product, product-service system, social innovation, and system transformation). It covers the framing, ideation and prototyping phases of designing for sustainability.

Teams will be made up of engineers (EPFL) and industrial designers (ECAL).

Sessions in the fall semester are devoted to discovering and defining a project opportunity through a structured design approach. During the spring semester, sessions are devoted to the prototyping of a solution through a project-based approach.

There will be two workshops (one in fall, one in spring) aimed at strengthening professional competences (interdisciplinary and team work, etc.).

Keywords

design process, desirability, viability, sustainability, prototyping, interdisciplinarity

POLY-perspective :

- perspective interdisciplinaire
- perspective créative

<https://www.epfl.ch/schools/cdh/fr/la-vision-du-cdh-poly-perspective/>

Learning Prerequisites**Required courses**

None

Learning Outcomes

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

- Identify opportunities for ill-defined problems through a structured design process
- Apply a sustainability and viability centered design process
- Develop a project proposal

Transversal skills

- Communicate effectively with professionals from other disciplines.
- Take account of the social and human dimensions of the engineering profession.

Teaching methods

- Mix of mini-lectures and flipped classes
- In-class and out-of-class activities
- Consultations with lecturers

Expected student activities

- Work in interdisciplinary teams
- Document and valorize the processes of designing for sustainability

Assessment methods

- Project proposal: 2/3 (group, end of the semester)
- Reflexive note: 1/3 (individual, end of the semester)

Supervision

Office hours	No
Assistants	No
Forum	No

Resources

Bibliography

- Ceschin, F., & Gaziulusoy, I. d. (2020). Design for sustainability : a multi-level framework from products to socio-technical systems. Abingdon, Oxon ; New York, NY: Routledge/Taylor & Francis Group.
- Manzini, E. (2015). Design, when everybody designs : an introduction to design for social innovation. Cambridge, Massachusetts: The MIT Press.
- Papanek, V. J. (1972). Design for the real world; human ecology and social change. New York,: Pantheon Books.
- Thompson, P. B., & Norris, P. E. (2021). Sustainability : what everyone needs to know. New York, NY: Oxford University Press.
- Verganti, R. (2016). Overcrowded : designing meaningful products in a world awash with ideas.

Cambridge, Massachusetts: The MIT Press.

- Wizinsky, M. (2022). *Design after capitalism : transforming design today for an equitable tomorrow*. Cambridge, Massachusetts: The MIT Press.

Ressources en bibliothèque

- Manzini, E. (2015). *Design, when everybody designs : an introduction to design for social innovation*
- Verganti, R. (2016). *Overcrowded : designing meaningful products in a world awash with ideas*
- Ceschin, F., & Gaziulusoy, I. d. (2020). *Design for sustainability : a multi-level framework from products to socio-technical systems*
- Papanek, V. J. (1972). *Design for the real world; human ecology and social change*
- Wizinsky, M. (2022). *Design after capitalism : transforming design today for an equitable tomorrow*
- Thompson, P. B., & Norris, P. E. (2021). *Sustainability : what everyone needs to know*

Websites

- <https://designforsustainability.studio>

Moodle Link

- <https://go.epfl.ch/HUM-397>

Prerequisite for

HUM-398: Design for sustainability II