ENV-491 **Interdisciplinary project in sustainability**

Profs divers *

Cursus	Sem.	Type
Minor in Engineering for sustainability	E, H	Obl.

Language of teaching	English
Credits	10
Session	Winter, Summer
Semester	Fall
Exam	During the semester
Workload	300h
Weeks	14
Hours	**10 weekly**
Project	10 weekly
Number of positions	

Summary

The student, or a group of students, realize a project putting into practice the skills and knowledge acquired in the minor Engineering for Sustainability.

Content

The project will be defined in a project proposal, which can be initiated by the student or proposed by an EPFL unit associated with the minor. The proposal must include a title, the name of the supervisor, a short description of the topic, the main objectives, as well as some methodological aspects. The proposal must be validated by the supervisor and the coordinator of the minor.
An interdisciplinary approach as well as academic or industrial partnerships, entrepreneurial or innovation project are welcomed and encouraged. Students are encouraged to do their project towards the end of their minor and cannot be done in the first semester of enrollment in the minor as the aim of the project is to apply knowledge and skills learned during the minor.
The academic supervision of the project is under the responsibility of an EPFL professor or an internal lecturer. The framework of the project includes the different EPFL labs and Centres, as well as other educational initiatives (e.g. MAKE Projects).

Keywords

Project, Applied research, Sustainability, Engineering, Interdisciplinarity

Learning Outcomes

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

- Develop a working methodology and plan
- Analyze a complex problem
- Apply sustainability concepts in engineering
- Assess / Evaluate social, economic and environmental aspects in the project development
- Apply multidisciplinary engineering skills

Transversal skills

- Use a work methodology appropriate to the task.
- Take account of the social and human dimensions of the engineering profession.
- Communicate effectively, being understood, including across different languages and cultures.
- Plan and carry out activities in a way which makes optimal use of available time and other resources.

- Demonstrate the capacity for critical thinking

Teaching methods

The teaching approach can vary from one project to another and will depend on the integration of the student (or group of students) within a research group or initiative.
The supervisor(s) will follow the work of the student at each step and will ensure the work progress from the project proposal to the final deliverable(s). The supervisor will communicate the grading policy to the student and the main milestones of the project (e.g. mid-term review and final report).

Expected student activities

The student, or group of students, is responsible for:

- Writing a project proposal
- Project planning and contact with partners
- According to the type of project: literature review, collecting data, developing an experience, prototyping, â#Š
- Linking sustainability at each step of the project
- Writing a report and preparing any other deliverable

Assessment methods

Criterion and deadlines will be defined by the supervisor.
The deliverables can have different formats (e.g. written report, oral presentation, video, reflective note, academic paper, prototype, conceptual design, model, etc.) as discussed with the supervisor.