DESIGN PROJECT 2023

Meeting: 6th December 2022
Pierre-Yves Gilliéron, SIE Deputy Head
Christina Treier, SIE Administrator

EPFL-Section des Sciences et Ingénierie de l'Environnement
Agenda

- Goals
- Skills
- Cycle of the design
- Work Organization
- Agreement, Budget
- Milestones, Report
- Final Presentation
- Wrap-up
Context and Goals

• The goal of the Design Project is to put your knowledge in practice within the context of professional work
• A team of students will be working as a consultancy company
  • Customer: company, administration
  • Mandate: context, objectives, problem to be solved, expectations
  • Salary: evaluation of your work (grade); learning outcomes
  • Responsibility: project management (meetings); searching for information/data; communication; deadlines
Overall Skills

- Using your knowledge in basic sciences and engineering within the context of a real project
- Understanding of a problem
- Defining the needs
- Developing a methodology
- Designing scenarios
- Leading a project and assessing solutions
- Working in a team
Specific & Soft Skills

• To identify, to express and to solve an engineering issue
  • Defining the project and writing a detailed proposal
  • Analyzing the different and potential options
  • Choosing the best option according to technical constraints and several characteristics
  • Solving a practical engineering issue

• To communicate in an efficient way: proposal, report, oral presentation
Cycle of the Design

- Objectives
- Problem
- Performance Evaluation
- Tests
- Design
- Adequation with respect to the goals
- Simulation Prototyping
- Methodology
Main Milestones of DP

- Identification of the topic and clarification of the problem to be solved
- Organization of the DP
  - Meetings, project proposal, definition of the tasks & planning
- The project proposal must be approved by the partner and by EPFL
- Main tasks
  - Work approach, methodology
  - Collect basic data and information
  - Bibliography and references
  - Development of scenarios/options
  - Presentation of selected options
  - Development of a prototype
  - Solutions assessment
- Communication of outcomes
Work Organization

• DP: Master MA2; Bloc 1; 10 ECTS
• Work load ~ 2 days/week
  • 10 ECTS = 250-300 hours x 2 students
• Working in a team
  • Timeline, description of the tasks
  • Sharing the tasks
  • Distributing the work load during the semester
  • Realistic work flow
Week Organization (W#)

- W1: Kick-off meeting; Partner-Academic supervisor-You
- W2: Signature of the agreement and budget
- W3: Project proposal (3 pages, 10% of the grade)
- W9: Mid-term report, technical paper (4-6 pages, 15%)
- W13: Draft final report for review, setup of poster
- W14: Poster session & Final event
- W15: Final report (50%)
- Oral presentation (25%)
Agreement

- Elements of the agreement
- Bilateral responsibilities
- Topic
- Names of parties
- Signatures
- Company representative
- Academic supervisor
- Students
Budget and Financial aspects

• Budget
  o Participation of the SIE Section to the costs
    o Travel
    o Some lab analysis
    o Various costs (small equipment)
  o Week 2: Submission of the Budget to the SIE Section (e-mail to christina.treier@epfl.ch)

• Reimbursement of expenses (at the end of the DP)

• Financial responsibility (one student/group)
  o Keeping accurate accounts
  o Record all the receipts, bills (original documents)
  o To inform the SIE Office (Ch. Treier) in case of budget overrun
Use the public transportation: keep your receipts/tickets for the reimbursement. No reimbursement for students who have a travel pass (ex. abonnement général)

Possibility to book a car with Mobility car sharing
  - https://www.epfl.ch/campus/mobility/vehicles/mobility-carsharing/
  - Contact christina.treier@epfl.ch for booking
Varia

• Responsibility for equipment
  • In case of loss, theft and damage
  • Replacement is under the responsibility of the students
  • Use of your own insurance (theft, civil liability)

• Phone
  • No reimbursement of telecommunication expenses
    Use the softphone and/or videoconference applications

• Printing
  • Final report: 20.- /printed bound report; 4 copies; add in the budget
  • Poster: use the ENAC printing service
    More information will follow in due time
### Starting the DP [SIE; students]

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
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<tbody>
<tr>
<td>Collect of proposals and evaluation (SIE ad-hoc committee)</td>
<td>~15th December 2022</td>
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<tr>
<td><strong>List of topics on SIE web pages</strong></td>
<td>~early January 2023</td>
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<td><strong>Building group of 2 students</strong> (preferably combine international with french speaking students)</td>
<td>End of January 2023</td>
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<td>Choice and repartition of the topics</td>
<td>Under the responsibility of students (one contact person for the Section)</td>
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<td><strong>Final choice and communication to partners &amp; professors</strong></td>
<td>~1st February 2023</td>
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<td><strong>Preliminary contacts with external partner and academic supervisor</strong></td>
<td>ASAP and before the beginning of the Spring semester</td>
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<td><strong>Kick-off Meeting</strong></td>
<td>Friday 24th February 2023 (or another day during the week)</td>
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Report and Presentation

• Final Report
  • Draft version for a review by partner and academic supervisor
  • ~15 pages + Annexes
  • Final version: to be submitted one week after the end of the semester

• Oral Presentation
  • 12-16 slides
  • Duration: 20 min (incl. discussion)
  • Scheduled by all parties; after the end of the semester
    • Individual organization by project

• Poster
  • Directives and templates provided by SIE Section
  • Public poster session on Friday 2nd June, afternoon; incl. Apéro
Projet de valorisation du territoire «Terrazza sui Bellinzonese»

Introduction
- Buts et objectifs du projet.

Méthodologie
- Description des méthodes utilisées.
- Étapes de la recherche.

Résultats
- Présentation des résultats obtenus.

Conclusions
- États des conclusions et perspectives.

Références
- Liste des références bibliographiques.
Important Dates

- **Friday 24th February 2023**: 1st meeting between the 3 parties
- **Friday 3rd March 2023**: submission of the signed contract and budget estimation to the Section
- **Friday 10th March 2023**: submission of the goals, expectations and calendar to the SIE Professor and external partner
- **Friday 28th April 2023**: submission of intermediate report to the SIE Professor and external partner
- **Wednesday 24th May 2023**: deadline for sending the draft version of report to the supervisors (prof, external partner)
- **until Thursday 1st June 2023, at 4 pm**: printing of A0 poster
- **Friday 2nd June 2023**: poster session, 3rd floor of GR Building; follow by an Apero
- **Friday 9th June 2023**: submission of the final report version (PDF) to the SIE Professor and external partner
- **Between 5th and 16th June 2023**: oral presentation of the Design Projects
  - Organized between the 3 parties
- **Monday 17th July 2023**: submission of the grades to the SAC (by SIE Professors)
QUESTIONS

Web Page: Design Project