DESIGN PROJECT 2022

Meeting: 7th December 2021
Pierre-Yves Gilliéron, Adjoint SIE
Christina Treier, Administratrice SIE

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 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
- Methodology
- Simulation Prototyping
- Adequation with respect to the goals
- Design
- Tests
- Performance Evaluation

EPFL-Section des Sciences et Ingénierie de l'Environnement
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: Oral presentation (25%)
- W15: Final report (50%)
Agreement

- Sections 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 environmental 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
Travel

• 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/](https://www.epfl.ch/campus/mobility/vehicles/mobility-carsharing/)
  • Ask christina.treier@epfl.ch for booking
Varia

- **Responsibility for equipment**
  - In case of loss, theft and damage
  - Replacement is 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 SIE computer service
  - More information will follow in due time
## Milestones of the DP

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/Details</th>
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<tbody>
<tr>
<td>Collect of proposals and evaluation (SIE ad-hoc committee)</td>
<td>~15th December 2021</td>
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<tr>
<td>List of topics on SIE web pages</td>
<td>~18th January 2022</td>
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<td>Building group of 2 students</td>
<td>End of January 2022</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>Final choice and communication to partners &amp; professors</td>
<td>~1st February 2022</td>
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<td>Preliminary contacts with external partner and academic supervisor</td>
<td>ASAP and before the beginning of the Spring semester</td>
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<tr>
<td>Kick-off Meeting</td>
<td>Friday 25th February 2022 (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)

• **Poster**
  - Dimensions ~ A0 (85 x120 cm), vertical
  - Directives and templates provided by SIE Section
Oral Presentations
Friday 3rd June 2022: 14h – 18h

SSIE DP 2022 (Draft Program)

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
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<tbody>
<tr>
<td>projet 1A</td>
<td>project 2A</td>
<td>project 3A</td>
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<td>projet 1B</td>
<td>project 2B</td>
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<td>projet 1C</td>
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<td>projet 1D</td>
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<td>Break</td>
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<td>projet 1E</td>
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<td>projet 1H</td>
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Poster session; best poster award; Apero
## Wrap-up

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<thead>
<tr>
<th>Event</th>
<th>Week</th>
<th>Date</th>
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<tbody>
<tr>
<td>Students-Partner-Academic Supervisor Kick off Meeting</td>
<td>1</td>
<td>Friday 25 Feb.</td>
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<tr>
<td>Signed agreement + Budget</td>
<td>2</td>
<td>Friday 4 March</td>
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<td>Objective &amp; Schedule</td>
<td>3</td>
<td>Friday 11 March</td>
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<td>Mid-term report</td>
<td>9</td>
<td>Friday 29 April</td>
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<tr>
<td>Draft report (for review)</td>
<td>13</td>
<td>Wednesday 25 May</td>
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<td>Printing Poster</td>
<td>14</td>
<td>Until Thursday 2 June</td>
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<tr>
<td>Oral Presentation</td>
<td>14</td>
<td>Friday 3 June</td>
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<tr>
<td>Final Report</td>
<td>15</td>
<td>Max. 10 June</td>
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QUESTIONS

Web Page: Design Project