Guide for the individual SIE project (ENV-591, 10 cr)

1. Foreword
The individual SIE project (ENV-591) is introduced in the new Master study plan from autumn 2022. It is therefore proposed to the students who are under the 2022-2023 plan and after. It is not available to those enrolled in the 2021-2022 Master's programme and earlier.

2. Objectives
The SIE individual project is mandatory and it is a personal work to be realized during the Master cycle. This project prepares the student to carry out research in a structured, coherent and rigorous way. It is an opportunity to approach a scientific work with the implementation of an adequate methodology and to write a complete and structured report.

For students, it is a chance to work in an EPFL laboratory and to be part of a research team.

The outcomes of the project will be presented in a report and defended during an oral presentation in front of a panel.

3. Organisation

The individual SIE project is carried out primarily in a laboratory of the SIE Section. It is conducted under the direction of a professor or an internal lecturer from SIE or ENAC. It can also be part of an EPFL initiative, such as the MAKE projects. However, it must be ensured that the academic supervision meets the requirements of the SIE Section. In this case, the student will ask the Section for prior notice.

The supervisor(s) are responsible for:
- advising the students in defining the project topic
- encouraging students to find bibliographic references
- pointing them towards other people to consult
- coaching the students during the semester (a weekly contact, even short, is expected)
- evaluating the work according to the criteria mentioned in point 6,

To select a topic, the students will visit the Web pages of the research labs in order to find a topic of interest, as well as they can contact directly a professor or an internal lecturer. They may also propose a topic, which must be accepted by a teacher in the Section. The teacher is then responsible for the supervision.

The students have the choice to conduct the project either during the M1, M2, M3 or the M3 semester. However if the project is done during the same semester of the Design Project, it is necessary to secure enough time to conduct both projects in parallel.

Reminder: it is a 10 credits projects, that corresponds to about 300 hours of work along the semester, almost 2.5 days each week.

4. Registration and schedule

Searching for a topic: the research topic must be selected before the beginning of the semester, as well as the organization of the supervision.

Registration: the registration deadlines on IS-Academia are the same as for the other courses.

Work submission: one week after the semester end or, with exception, as agreed upon with the professor.
5. **Report**

The report can be written either in French or in English. It should contain essential work elements in the form of text, graphics and images. Important documents and results should be included in the annex.

**Structure**

- Cover sheet: title - date - name of the student and the section - name of the responsible professor, EPFL official logo
- Official statement (SIE individual project, SIE master)
- Table of content
- One page summary
- Main content: Introduction – Goals – Hypothesis - Methodology – Developments/Results - Conclusion
- Bibliography in alphabetical order by author with numeration corresponding to text references
- Annexes.

**Tips for the students**

- See the proposals on the web pages of the IIE research labs:
- Once the topic is chosen and a professor/teacher agreed to supervise your work, you can proceed to the registration on ISA,
- You can start your project during the first week of the semester with a draft timeline, then you:
  - Define the problematic and its extent early on,
  - Based on a tentative table of content, discuss the topic content and limits with the supervisor. Propose a methodology,
  - Schedule the work throughout the semester, do not neglect the writing of the report,
  - Think of the presentation: structure, syntax, orthography, general presentation
  - All elements taken from an external source must be clearly identified (quotation marks, references, etc…),
  - Note down the references throughout the work process

**It is important to schedule meetings throughout the semester to discuss the mid-term results and to refine the workplan.**

6. **Oral presentation**

The oral presentation is **strongly recommended.** The SIE section encourages students to present their work to the members of the hosting lab. It is not only an opportunity for concluding the conducted work, but also for practicing oral presentation for the future defense of the master project.

The presentation, of a 20 minute-duration max., is followed by a question and answer session of about 10 minutes. It takes place in front of the professor / responsible person as well as of another person (e.g. the PhD student of the same laboratory). Other people or students may also be invited.
A little advice for the slides: they should be easy to read and they should not contain too much information (a dozen lines maximum, one concept per slides). The font size should be adapted to the size of the room.

7. Evaluation

The individual SIE project is worth 10 credits (1 credit corresponds to approximately 30h of work) within the block “Projects”.

The evaluation criteria for the student’s work are the following:

- Synthesis (writing, clarity, conciseness, structure and quality of the report)
- Analysis (subject depth and mastery, documentation, bibliography)
- Added value (personal contribution)
- Responsibility (clarity of the methodology, traceability of information, etc.)
- Quality of the oral defense

8. Propriété / confidentialité

The work’s propositions and conclusions are solely the responsibility of the student. The text, while remaining the student’s property, may not be distributed without the authorization by the professor or responsible person.

9. Valorisation, communication

Depending on the quality of the results, the Section may ask the student, with the agreement of the person in charge of supervision, to produce a summary (or other form of communication) with the goal to promote the work in the form of a news published on the ENAC website.

For any questions regarding the organization of this project, please contact the SIE Section.