

HCAIM – Thesis proposal guidelines

The aim of this document is to define a set of instructions to be (almost) sure that all the thesis proposals look similar and focus on the same key points. Despite the number of credits (and thus expected time) would be different across the Universities, the next sections provide a set of guidelines to support stage and thesis proposal development.

General notes and requirements

To deal with the different policies existing across the partner Universities, each thesis will be considered **local**, with an internal supervisor (a professor from the University in which the student is pursuing the degree) and an external supervisor belonging to the party proposing the thesis (if any). This latter aspect, despite not being mandatory, is strongly suggested. The proposing party can be an SME, an Excellence Center or another University, both at a national and international level. Proposing parties are expected to provide both national and international theses (i.e. theses organised in with a University from the same country or from a foreign one).

The whole process is considered student-driven, meaning that is up to the student to ensure the thesis matches the HCAIM requirements. The proposing party must ensure to acquire all the authorizations needed to set up a thesis with the local University in advance of the start of the master's activities. At the same time, the student must ensure to have all the required paperwork (e.g., authorization to enter the proposing party office, etc.) ready before the start of the stage period.

We expect proposing the party to be transparent and clear from the beginning about all the required documentation (e.g., NDA for accessing the data, etc.), also supporting the student in acquiring it.

Please note:

If you send in a thesis proposal, the institution proposing it, (must) commit itself to:

- Joining the online general introductory session with students in the afternoon of November 22nd (at least one representative for each company or university);
- Joining the session (remotely or in person) in the afternoon of December 4th;
- Being present during the Blended-IP from 27 - 29 January 2025 in Utrecht;
- Offering the student that chooses your proposal, an appropriate and high quality project/ learning experience during his or her thesis period (timing depending on University).

Topics and thesis proposal

The thesis and stage are considered as a unicum, with the proposing party suggesting a topic and a research question that has to be addressed by the student (supported by the internal and external supervisor). From Period D description:

“The Body of Knowledge and Skills covered in this module covers all of the BoKS from modules A – Modelling, B – Deployment, and C – Evaluation (see respective module descriptions). The level of coverage is determined by the project cases chosen by the student, but should at least have a technical, ethical, and a research-related focus.”

The three mentioned aspects are not required to be totally balanced, **but in each proposal it has to be explained clearly which technical, human-centered and research aspects are covered**. HCAIM will collect proposals from SMEs and Excellence Centers, providing students with a set of topics and theses matching all the requirements (both in terms of coverage and timeline). Nonetheless, students are free to propose a new thesis. In this case, it is up to the student to ensure that the proposed thesis is compliant with the HCAIM requirements.

To submit a thesis proposal, it is required to i) identify the topic and the research questions and ii) define an entry deadline (to ensure all the paperwork can be produced and obtained according to the HCAIM timeline). Moreover, the proposing party has to provide all the information regarding the stage period (see the next section). The topic can be both already covered by the HCAIM program or be a new one, coherent with the master. In this latter case, it is up to the proposing party to provide teaching material to the student. At the same time, it is up to the student to organize studying time according to the master's deadlines.

All the received proposal (each party can submit more than one proposal) will undergo a review process. Among all the proposals, those based on topics covered by the HCAIM program will be preferred. It is expected of the parties to propose both national and international thesis projects. Each student is suggested to pick a thesis as soon as possible (and in any case before the chosen thesis entry deadline) in order to start working on it as soon as possible, constructing it block after block, while studying and learning. A feasible timeline plan (GANTT like) is recommended to be planned and associated with the thesis proposal.

Stage

The stage will occupy most of the ETCS in period D. It is expected to be extra-moenia (i.e., with the student physically hosted by the proposing party), but this is not mandatory. Please consider that 1 ECTS usually corresponds to 20-30 hours, with 40 hours long weeks (e.g., 15 ECTS corresponds to 3 months). For the first year, the four Universities have allocated the following ETCS for thesis and stage:

University	Stage	Thesis
Budapest University of Technology and Economics	20	10
Stichting Hogeschool Utrecht	15	
Technological University Dublin	15	
University of Naples Federico II	10	5

This implies that the proposing party should submit a thesis suited to the number of ETCS allocated by the local University (also proposing variants of the same thesis if the proposing party wants to propose it to different Universities).

Besides the topic and the entry deadline, the proposing party has also to:

- Describe the data that will be used
- Describe the expected outcome
- Describe possible research questions
- Describe the human-centred and technical elements and their proportion in the project
- Describe what is expected from the student to do
- Describe the given support
 - Computational Power
 - Experts and expertise to support the student (e.g. legal expert, AI/tech expert, and so on)
 - Other types of support provided by the party
- Details about the hosting (location, salary, etc.) are welcome
- Some background knowledge in the form of papers, learning events or other sources
- Other aspects and points may be added and asked for after the review process.

Thesis

During this period the student is expected to write and conclude the thesis, and also prepare its defense. All the requirements (e.g. thesis template) would be provided by the local University. All the students are also asked (mandatory) to produce a single page poster summarizing the thesis activities and the given contribution. The poster template will be provided by the HCAIM program, will be shared and the same across all the local Universities and the produced posters will be made publicly available on the Master's website

Review process and timeline

The theses must be submitted (by sending them to stefano.marrone@unina.it and/or meike.grol@hu.nl) **no later than Novembre 7th 2024**. All the collected theses will undergo a review process (to check that they meet the expected requirements). Please consider the review process not as a stage to accept or reject a thesis, but as a moment to tune it to the master's expectations. After this first round review, the period D group will work together with the proposing parties to revise the proposed thesis and prepare them for the final stage.