

# INFORMATION AND COMMITMENTS OF THE M2 INTERNSHIP SUPERVISOR

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## 1. Goals

The M2 internship is an introduction to research. The goal is for the student to carry out an original research project, with a certain degree of autonomy, in any area of cognitive science. The project is defined jointly by the student and the supervisor.

## 2. Time course

### 2.1 First-semester: internship preparation (October to January, 1 day per week, 6 ECTS)

The student must spend the equivalent of one day per week preparing the internship during the first semester. The times of presence in the lab are to be determined with the supervisor, taking into account the student's timetable (course attendance is compulsory) and the constraints of the lab.

The goals of the internship preparation are:

- To formulate a scientific question that is clear, well-defined, and relevant with respect to the scientific literature.
- To carry out the literature review in order to refine the scientific question, and to determine the appropriate methodology to answer it.
- To define the methodology and the analysis plan as precisely as possible, in order to write a full preregistration of the study (due end January).
- To ensure the feasibility of the internship (preparation of the experimental or theoretical work, additional training if necessary, pilot study, etc.).

This internship preparation is validated in the second half of January, in two parts:

- The submission of the preregistration of the study.
- The oral presentation of the planned study, during a pre-defense session (8 minutes talk + 10 minutes questions).

### Indications on the preregistration of M2 internships:

- This preregistration is internal to the Cogmaster, as it is a purely pedagogical exercise. Of course, the project supervisor retains full autonomy on the decision to make this preregistration public or not on the appropriate sites.
- During the 1<sup>st</sup> semester, M2 students receive training on “good research practices”, including preregistration, its goals, and its methods, with many supporting articles and documents. A whole set of example preregistrations of prior studies is available to them, including not only experimental but also modeling and purely theoretical studies. These documents can also be provided to supervisors on request. Finally, students also have a coaching session whose goal is to give them feedback on the first draft of their preregistration.
- The preregistration document can be modified. If the methods or the analysis plan change, the student should submit to the Cogmaster a revised version of the preregistration. The most important is to do so before running the experiment or the analysis. In the case of a series of experiments, it is possible to preregister the first one in January, and subsequent ones later as their design is finalised, based on the previous results.

### Indications on the pre-defense

The goal is to present the scientific question, the methods chosen, and the analyses planned, and to receive a first feedback on the project before starting it, in order to anticipate potential difficulties, as well as to get familiar with the expectations of the committee in the final defense. Internship supervisors are invited to the pre-defense and can participate in the discussion.

### 2.2. Second semester: full internship (February-June, full time, 30 ECTS)

The main part of the internship consists in carrying out the project and writing the thesis. It is carried out full time in the laboratory (the student may not validate extra courses in that period).

Validation is based on the thesis and on an oral defense, each contributing to half the grade of the internship.

Students are provided with a document giving all the instructions and expectations concerning the thesis. Supervisors can also obtain it on request. The thesis can be written in French or in English (student's choice). The usual sections of the thesis are preceded by:

- The last version of the preregistration.
- A declaration of contributions, indicating the respective contributions of the student, the supervisor, and collaborators.
- A declaration of originality, which briefly indicates the (potential) novelty of the project relative to the state of the art.

The results should be reported completely and transparently, rather than a selection of significant results supporting a hypothesis or deemed interesting (with the ensuing risks of p-hacking and HARKING). Thus the thesis should essentially look like a preregistered report.

The thesis is submitted early June (or end August), and is evaluated by 2 reviewers, one belonging to the pedagogical council of the Cogmaster, the other usually external. At any rate, both reviewers should be independent from the research team. Supervisors should inform us of any potential conflict of interest with the suggested reviewers.

The oral defense takes place within one of two defense sessions (June or September), as chosen by the student and the supervisor. It can be given in French or in English (student's choice). It is evaluated by a committee drawn from the Cogmaster's pedagogical council. It includes a 12-minute talk and 15 minutes questions. It is public, and the supervisors and thesis reviewers are invited.

Both the thesis and the defense are evaluated based on (among other things) the quality of the literature review, the rigour of the methodology and of the analyses of the results, and more generally the mastery of the subject. They are never evaluated based on the nature of the results (whether null or positive findings, whether confirming or refuting the initial hypothesis).

### 3. Commitments of the internship supervisor

The internship supervisor agrees to provide the student with the scientific and technical means to conduct the internship. In particular, he/she should:

- Integrate the student in the research laboratory or team (access to the lab, work space, participation in meetings/seminars, etc.)
- Give access to the resources necessary to conduct the project (access to journals, experimental participants, instruments, computing resources, etc.)

The supervisor is also expected to supervise and guide the student throughout the internship. In particular:

- Meet the student regularly (at least once a week).
- Provide additional training as needed.
- Offer to read the first draft of the thesis, and to rehearse the oral defense.

NB: the supervisor can partly delegate the internship supervision to a postdoc or PhD student, but he/she retains the full pedagogical and scientific responsibility for the supervision of the internship.

The Cogmaster reminds all supervisors of the French law stipulating that all internships must be paid when they are longer than 2 months or 44 days of presence. In public institutions, the stipend is approximately 550€ per month. This law does not apply outside France.

Thus, for investigators based in France, **submitting an M2 internship to the Cogmaster implies a commitment to offer the stipend** corresponding to the internship duration. It is each supervisor's responsibility to check that they have the necessary resources to host an intern.

### 4. Internships based outside the Paris region

Because the internship preparation in the 1st semester necessary takes place in Paris (in parallel with courses), internships outside the Paris region require special arrangements: one member of the Pedagogical Council should agree to host the student during the internship preparation. This involves helping with the preparation, offering access to the lab and participation in lab life, access to bibliographic and computing resources, etc.

Researchers based outside Paris hoping to supervise an M2 Cogmaster intern are therefore invited to identify a suitable partner in the [Pedagogical Council](#), and to discuss ahead of time the possibility of hosting the intern during the first semester. No internship will be accepted without guarantee that the student can be hosted in a lab during the internship preparation.