

# Masters thesis

**Titulaire**

Jean-François RASKIN (Coordonnateur)

**Mnémonique du cours**

MEMO-F524

**Crédits ECTS**

20 crédits

**Langue(s) d'enseignement**

Inconnu

**Période du cours**

1e et 2e quadrimestre

**Campus**

Plaine

## Contenu du cours

The master's thesis process begins with preparatory work, ensuring students are equipped with a deep understanding of their research topic and related questions. This preliminary stage involves collecting and comprehending the current state of knowledge, experimenting with necessary tools, and defining research questions, all documented in a preparation document approved by the thesis advisor. The main objective of the master's thesis is to apply acquired skills and initiate research on a chosen topic proposed by a thesis director. Students identify questions or open problems within the topic, conduct comprehensive literature reviews, and develop original solutions. The thesis includes a thorough literature synthesis and a detailed presentation of the research methodology and innovative problem-solving approaches. It culminates in a text of up to 100 A4 pages, written in either English or French, followed by an oral defense.

## Objectifs (et/ou acquis d'apprentissages spécifiques)

**Main objective of the master thesis**

The master thesis is a final work that comes at the end of the master study cycle which gives the student the opportunity to apply the skills that he/she has acquired during the MA. It is also an initiation to research.

The student chooses a subject proposed by a thesis director (this will be done in whole or in part during INFO-403). Then, the student identifies, under the guidance of the thesis director, one or more questions or open problems related to this subject.

To answer the questions asked or solve the problems that were identified, the student undertakes a study of the state of the art based on bibliographical and exploratory research in order to shed rigorous and innovative light on the precise questions or problems that have been defined.

The thesis will therefore naturally include the following elements:

1. A synthesis of the scientific literature which reports on the state of the art in the subject addressed. This bibliography work should make it possible to precisely define the research question(s) and to identify their originality and novelty. Particular attention will be paid to the precise definition of concepts on which the master thesis work are based, adhering to the rigor and the scientific standards of the field of research concerned by the work.

2. A detailed and rigorous presentation of the approach followed to provide original answers to the questions or problems posed. The thesis will therefore detail the methodology followed, and will contain a rigorous exposition of the new solutions brought to the problem(s).

The objective of the dissertation is therefore to bring students at the end of their master's degree to deal with a subject of their choice while respecting the approach and scientific methods that were taught to them during their Master's training. It will also be necessary to ensure that the solutions adopted will have been chosen by displaying appropriate critical thinking skills.

## Pré-requis et co-requis

### Cours pré-requis

MEMO-F403 | Preparatory work for the master thesis | 5 crédits

### Connaissances et compétences pré-requis

**Preparatory work for the master thesis (INFO-F403)**

The master thesis follows the course "preparatory works for the master thesis". The purpose of the preparatory work for the thesis is to have the students ready to start their research in the master thesis on the topic suggested by the promoter. This means that they need to have collected and understand the state-of-the-art, have potentially played with the basic tools they will need to initiate the research and have a clear understanding of the questions they wish to answer with their master thesis. All this needs to be clearly reported in in the preparation document and approved by the promoter before the next step can be taken.

## Méthodes d'enseignement et activités d'apprentissages

**Form of work and submission**

- The master thesis will be submitted in the form of a text, the length of which cannot exceed 100 A4 pages. Although there is no strict lower limit on the number of pages, the written text should be substantial and the length of a master thesis text is usually over 80 pages. The thesis will be written either in English or in French.
- The candidate must have the explicit agreement of his/her promoter to submit the thesis and the agreement of the adviser should only be given if the adviser judges that the work has enough qualities so that it is expected to convince

the jury. If this agreement cannot be obtained, and if the student still wishes to defend his/her thesis, the jury will be officially informed of this fact by the secretary office before the defense.

- The defense of the dissertation work will be organized during an oral defense. During this oral defense, the candidate will present his work for 20 minutes, emphasizing the original aspects of it. A question and answer session will follow the presentation of the work. The jury will then deliberate on the final grade. The following different aspects: originality, rigor, scientific quality of the text, autonomy of the student in carrying out the work, will be explicitly discussed by the jury.

Additional Informations:

a) Jury Composition

Your jury must consist of at least your promoter (the professor supervising your work) and two other professors who teach courses in the Bachelor or Master programs in computer sciences. The promoter must be a faculty member of the Master's degree program in computer sciences. The composition of your jury should be submitted via email to [maryka.peetroons@ulb.be](mailto:maryka.peetroons@ulb.be) no later than May 1st, 2023.

b) For a June 2023 submission

You must submit your master thesis via email to [maryka.peetroons@ulb.be](mailto:maryka.peetroons@ulb.be) by end of May (precise dates will be sent to students)

c) For a September 2023 submission

You must submit your master thesis via email to [maryka.peetroons@ulb.be](mailto:maryka.peetroons@ulb.be) by mid August (precise dates will be sent to students)

## Autres renseignements

### Lieu(x) d'enseignement

Plaine

### Méthode(s) d'évaluation

Autre, Rapport écrit et Présentation orale

### Langue(s) d'évaluation principale(s)

Anglais et Français

## Programmes

### Programmes proposant ce cours à la faculté des Sciences

MA-INFO | **Master en sciences informatiques** | finalité Spécialisée/  
bloc 2

