The Final Master Thesis definition

The Master’s Thesis is an independent project (graduation project) to develop and display the skills and abilities of the student to carry out individual, independent scientific work on a specific topic, exploring it in a trans-disciplinary manner, and assessing solutions and conclusions with respect to the different dimensions of ICT management.

Students are required to write a novel and individual report that collects all work-done throughout the Master Thesis and defend it in front of a tribunal.

The Master’s Thesis can be developed together with the internship in a company/department/unit or in a different framework. Some professors may propose some Master’s Thesis during the Third term where the students would apply according their interests and preferences.

Competences

- General: G1, G2, G3, G6, G8, G10, G11, G13
- Specific: E1, E2, E3, E5, E10, E11, E12, E14, E16

Methodology

Development of an individual or team project

Master’s Thesis Schedule

To organize the offer, assignment, development and evaluation of the Master’s thesis the following schedule is defined:

- During the third term: offer/demand of master thesis
- Before July: matching and selection of Final Master thesis topic and supervisor
- July- September: Project Charter –two page description, see below- related to each Master Thesis.
- 30th November: full draft of the Master Thesis
- December: final master thesis document and presentation

Expected learning outcomes from the thesis

On completion of the thesis, the student shall:

- To show a profound knowledge and understanding of the thesis topic, especially in relation to the different dimensions of management, innovation and strategy, and to previous and current ICT field, and relating it to a wider perspective
- To demonstrate deeper methodological knowledge and understanding of system analysis approaches to the problem statement defined in the thesis, and of
methodology suitable to identify more feasible solutions to the problems addressed in the thesis.

> To demonstrate ability to critically, independently and creatively identify and formulate solid statements for the thesis; to collect, evaluate and communicate knowledge on a professional level and to critically and systematically integrate multidimensional knowledge and data, using appropriate tools and methods and properly handling uncertainties, thereby contributing to the production of knowledge.

**Types of thesis**

Students can choose between the following types of thesis:

1. A research paper: You can choose to write a literature review, a theoretical, an empirical or an applied research thesis in a specific subject. You can find details of how to do a research paper in the Annex of this document.

2. A case study: If you choose to analyze a particular actor situation (person, team, company, industry...) within a specific time frame, around a specific issue or focusing on a specific decision, this is called a case study. You can find details of how to do a case study in the Annex of this document.

3. A business plan: It is a document that explains how to conduct a business idea to make it a reality since operationally and financially. You can find details of how to do a business plan in the Annex of this document.

**Structure**

For the preparation of the Thesis, a template is provided. This template contains indications relating to formats, font size, line spacing, logos, and the first page.

**Supervision of the work**

The supervision will be carried following two different models. When the Master thesis is developed in a company, a team joined by a professor of the program and a supervisor within the company will be selected. Both supervisors will take care of the progress of the student and co-ordinate and plan the work to be carried within the thesis.

In case of a professor from the private sector, he can also run both roles: academic and company supervisor.

If the Master thesis is developed in a Research Group in some University, the professor in charge will supervise the whole work.
**Final Master Thesis**

**Professor:** Carles Martin  
**Email:** carles.martin@upf.edu

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### Effort and Evaluation

The estimated dedication for a Master Thesis project in the program is 19 ECTS (European Credits Transfer System), which means between 400 and 500 of student-working hours. This effort can be concentrated during the last term of the program (October-December) in a full-time dedication (40h/week during 12 weeks) or distributed according to a broader schedule, sharing other teaching duties or internship, starting not earlier than mid-third term in May.

The Master thesis will be jointly defended in December in Barcelona. If the student is developing its Master Thesis abroad or is not having the chance to come and defend it in Barcelona, it can be done through a videoconferencing system previously arranged with the BSM facilities.

Each master thesis will be defended in front of a three-member jury that will evaluate the written documents as well as the presentation of the work. The jury for each thesis will be selected by the directing team of the program.

### Master Thesis Awards (Companies and Faculty)

Two outstanding Master’s thesis will be selected among the project presented for each cohort.

A committee involving directors from the Companies endorsing the program will make a selection of the best thesis presented in each cohort according to business-biased criteria. The work must blend innovation, excellence in management and impact among the thesis presented.

All the faculty of the program will also choose the best thesis according to more academic/research criteria. The selected thesis will receive an additional diploma and award and will have a minute of glory through a video presentation published on the master’s website.

### Project Charter as the first document of the TFM

During the TFM we will follow the methodology thought in the Project Management course during the first term (ICT skills track). This project management is based on the PMBok. Thus, the TFM must start with the Project Charter definition that will be delivered to Carles Martin after being validated by the TFM supervisor(s). The Project Charter contents must include the following items and should not exceed two pages:

- Title of the TFM
- Short description (max. 200 words)
- Main goal and objectives

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*Note: This document is only informational, detailed contents and faculty may change.*
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Milestones

- Overall schedule (ending before December)
- TFM Deliverables. (There may be at least: Project charter -first month-, Project Management, Monthly report of progress, Final report -including a presentation-)
- Supervisor or supervisors

Annex: Types of thesis

1. Research thesis
   Whether you choose to write a literature review, a theoretical, an empirical or an applied research thesis, your thesis should consider the following questions must be answered:
   > What is the field of research?
   > What is the research question?
   > Why is it relevant? What is your motivation?
   > What is the state of the art literature?
   > What methodology is used?
   > What results are obtained?
   > Why these results are contributing to the field of research?
   > What are the limits of your research?
   > What did you learn?
   > How could you move forward?

2. Case study
   If you choose to analyze a particular actor situation (person, team, company, industry...) within a specific time frame, around a specific issue or focusing on a specific decision, this is called a case study. Try to explain why your perspective is relevant and diversify your information sources on your research topic.

   1) Analyze the context of the case-study and present the core issue you would like to analyze. Be sure to convince the reader of the relevance of the case you are analyzing and of the key aspects of the situation.

   2) Develop your external analysis: what are the main external factor affecting the decision, company, industry, market, etc.? Specify your methodological framework (For instance: Opportunities/Threats, a PESTEL, a Porter and a stakeholder analysis might help you to identify the trends and competitors).

   3) Develop your internal analysis (Strength/Weaknesses) for which the following points could be interesting to observe:
      > Vision and mission (governance board, reputation)
      > Financial ratios and intangible assets
      > Core competencies and Operations (“competitive advantage”, value chain, organization chart)
> Strategic business units and product portfolio (GE and BCG Matrix, identify the corporate and the business unit strategies: are they coherent?, structure and control system)
> People (size of the workforce, structure, expectations)

4) Summarize your findings by highlighting the results of the current strategy and the main risks/opportunities you foresee. At this point, you should be able to make recommendations based on your previous analyses.

You will find here examples of case-studies which are typical of classical business strategy analysis: The Times 100 business case studies.

**Examples of Case-Studies**
There exists a series of case-studies available at the Department of Economics and Business at UPF, some of them been written by Master Students (61 and 62 for example). They could be consulted here.

3. **Business plan**

The business plan is a communication document. As such, it should be clear, convincing, and credible and formulate a clear request to investors, strategic partners or potential employees. Beside the relevance of your idea, a good way to be convincing is to both reassure and surprise your auditory by using the expected vocabulary in expressing your uniqueness.

“While templates and samples can be helpful, the key to a good plan is making your own argument—for your unique business—as convincingly as you can. Don't be constrained by hewing too closely to what others have done.” (Harvard Business School, Entrepreneurship Resources)

1. **“Make it simple” (Executive Overview)**
   > WHAT? Short and clear description of the project
   > WHY? Who are the people directly interested in this project? What is the need your project will respond to?
   > WHO? Who are you?
   > HOW? What do you need make this project come true?
   > WHEN? Expected outcome of the project for the identified stakeholders

2. **“Introduce your project” (Venture Summary)**
   > Specify the purpose of this business plan: Raising capital, internal document, etc.
   > Introduce the idea: Where did it come from? Is it a new or an adoption? (Your inspiration)
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1. Your background, qualifications, and skills which are relevant with the project
2. How can you convince the people to trust your project? (Marketing strategy)
3. Structure and Organization: is it an association? a business? How will it be organized?

3. WHY? “Why is your project interesting for other people?” (Market Opportunity)
   > Explain the need that your project can respond to
   > Who are the people with such a need? What do they do? How do they think? What do they like? Where do they go? How many are they?
   > Is there other person/organization which already does the same thing that you want to do? How is it similar? How your proposal can be different than theirs? Could you make any partnership?
   > Market research: primary (Survey) and secondary (Library, Internet) sources

4. WHAT? “Describe your idea” (Product/Service)
   > How do you address the identified need?
   > Pictures - What are the key features of your idea?
   > What are the benefits?
   > How is it made and/or delivered?
   > Legal and property requirements
   > If it has worked elsewhere: customer, market feedback.

5. WHO? “Who is carrying the project?” (Management and Human Resources)
   > Who is on your team?
   > Roles/Experience/Skills - Why is your core motivation to develop this project?
   > What gaps do you have? How will you overpass them?
   > Ownership?

6. HOW? “What are your models and resources?” (Strategic model, Operations, Other Resources)
   > Which existing organization’s development path would you like to follow?
   > How will you be organized?
   > What is the core strength of your project? (Competitive advantage)
   > How will you convince people to trust you to respond to their need? (Explain the different steps)
   > Who is going to help you? (Partners, agencies, employees,) How?
   (Financial support, material support, communication support, etc)
7. WHEN? “Make projections” (Milestones)
   > What and when can the persons involved in your project expect something back from you?
   > Propose different scenarios and action plans based on the expected or unexpected evolutions
   > Identify exit strategies

8. “Be impactful” (Conclusion)
   > What should the reader/auditory keep in mind?
   > Provide an explicit summary of your forecasts (use figures, charts)
   > Remind the uniqueness and usefulness of your project