



UNIVERSITÀ DEGLI STUDI DI MILANO



# Dissertation Guidelines

**Master degree in Data Science for Economics**

# The essential steps for your final dissertation

1. Timeline
2. Dissertation guidelines: how to choose the subject and timing to appoint a supervisor
3. The Advisor and Co-Advisor
4. Content and Format: writing your thesis
5. Final defense and evaluation

# 1. Timeline

## **Assignment:**

- The thesis is formally assigned by the Advisor (relatore)
- Students are strongly suggested to begin asking the availability and interest of professors to be their supervisor (relatore) as soon as possible, at least **four months** before the graduation session
- The graduation application should be made about two and a half months before the discussion

## **Data collection & writing:**

- Students work on literature review, data collection, analysis and writing;
- Advisors comment on the progress of the work, by giving feedbacks

## **Submission:**

- Students are responsible for checking deadlines and acting in compliance with formal procedures
- [Students submit the thesis following the formal procedures and in accordance with the graduation calendar](#); thesis should be uploaded from three to four weeks before defense.

## **Defense:**

- Students must defend their thesis in front of the assigned panel;
- Students must be prepared to discuss their thesis, answering questions and comment on the issues raised by the panel

## 2. Dissertation Guidelines

- The dissertation is an individual piece of research, where the student is able to demonstrate autonomy, and ability to summarise main theories and model on a topic, and to discuss its relevance. It is worth 12 credits.
- The topic is usually proposed by the student. It can also be suggested by the Advisor (if and only if the Advisor have proposed a [call for thesis](#))
- The thesis is formally assigned by the thesis Advisor, who will supervise the progress of the work
- It is mandatory to identify a Co-Advisor (correlatore)
- An adjunct Co-advisor may be indicated if the thesis is conducted at a company, institution, or other university (thesis abroad)

### 3. The Advisor

- The dissertation should be prepared under the guidance of an Advisor (relatore)
- The Advisor acts as a facilitator in highlighting mistakes in the general framework and methodology, with a role of guidance
- The Advisor is not an Assistant. She/he is a **Discussant** of your work
- Don't expect your Advisor to:
  - ✓ Define the research question
  - ✓ Find the data
  - ✓ Provide you with the list of references
  - ✓ Structure your thesis (don't ask: "What do I have to do?" Rather: "I see two alternatives, and I would go for the first one for the following reasons. Do you agree?")
  - ✓ Proofread or check orthography



# How to find your Advisor

- Try to start soon (waiting until the end of lectures, internships, and then rushing when close to the end is not productive)
- **Important!!!!** The best way to introduce yourself to Professors is during office hours, with concrete ideas, drafts of projects, or research designs.
- Administrative rule: you can have as Advisor only a Professor with whom you have taken at least one exam (or part of it) **as part of** your DSE study plan.

# How to find your Co-Advisor

- The Co-Advisor should be chosen in consultation with the Advisor when applying for graduation
- The Co-Advisor should have skills supportive of the thesis topic and provides a further independent and detailed evaluation of the thesis
- From then on, the Co-Advisor (who may also change) must be aware of what the candidate is doing in agreement with the thesis advisor.
- If the Co-Advisor receives the thesis a few days before uploading, he/she has not received any intermediate draft, he/she may block the uploading of the thesis and consequently the graduation.

## 4. Content and format: writing your thesis

### Originality

- The Thesis must be an *original, individual* work of the candidate
- Plagiarism is not only ethically wrong but also a severe infringement of the Honour Code and disciplinary sanctions are imposed (postponement of the defence date; change of advisor; new dissertation topic, capped final mark, etc.)
- All dissertations will be checked for plagiarism via the Internet-based plagiarism detection service [Compilatio](#)
- Accurate referencing and bibliography is an important element of the thesis. Students should adopt a standard citation system and bibliography format



## 4. Content and format: writing your thesis

### Structure and contents

The following sections are usually required in the dissertation :

- Title page (containing the name of the supervisor and co-supervisor, the student name and registration number - *matricola*)
- Table of contents
- Table of figures (if applicable)
- Summary / Abstract
- Introduction
- Main part (literature review, methods, discussion, results) organised on 3 or 4 chapters
- Conclusion
- References
- Appendices (if applicable)

## The thesis can be:

- A **methodological research project** aimed at producing scientific knowledge or methodologies
- An **applied research project** aimed at analyzing and finding a solution to a given problem

The work must include: #1 In-depth literature review (what are the main perspectives, theories and models on this topic); #2 research problem starting from a research gap (what is currently missing in the academic literature on this topic?); #3 research methodology (which research methodology is best suited to address the research problem?); #4 Analysis and discussion of data; #5 Experimental results and conclusions

# How to find your Topic

- *Topic* – How to define it
  - Be inspired by insights coming from courses you attend/ed, laboratories, conferences, web resources (e.g., blogs, specialized websites), contacts with companies or public bodies
  - Take a cue from professors' [call for thesis](#)
- *Suggestions:*
  - Start reading papers or articles and/or reflecting on the challenges and problems faced during internships or other company-related experiences you have had
  - Be creative (try to generate up to 10 ideas and select your best options based on feasibility and/or originality)

# Research Question

- It is important to search for an **interesting research question** (what are the questions to be answered on this topic?) rather than for a general topic (what do I want to focus on?)
- Relevance and originality are crucial, as well as the ability to effectively answer to the research question (rather than pure novelty)
- Being sharp in defining the context and/or the research question (as well as verifying the feasibility of the thesis) are drivers of the quality of your work

# Research Question

- The *feasibility* of your research question(s) has to be assessed. What does it take to answer to it? What are the potential risks?
- For example:
  - If you plan to analyse empirical data, are they available? Is there a dataset already there? How long does it take to collect data? Is the sample large enough to make analysis? Do you have the needed skills to perform the analysis you want to develop? Who owns data you would like to collect?
  - If you plan to have interviews or cases, how many informants do you have to involve to reach solid conclusions? Is it feasible to reach them? Do you have links with companies? Are you aware of the methodology you want to apply?

# Discussion and Conclusions

- Even though discussion and conclusion are the last step in the thesis work, it is important to ask yourself about the potential contributions of your study from the very beginning: **What do I expect to find out?**
- It is not a matter of deciding the outcome of the analysis ex ante. It is a matter of not being trivial or too generic. It represents a further test of the validity of your research question
- You will be evaluated on the strength of your policy and managerial implications and the “**so what?**”.

## 5. Final Defence

- Students must defend the thesis in front of an assessment panel
- Presentations have to be prepared. While it is hard to have a good presentation of a poor study, it is not that rare to ruin a good job with a bad presentation.
- You can printout and distribute your presentation to the Members of the Committee
- 10/12 min tops
- During the presentation, you have to include these points:
  - Objective of the thesis
  - Methodology
  - Key results
  - Contributions and implications

# Format

- Thesis should be written/defended in English
- The length of the thesis should be between 70-100 pages (around 25.000 - !!! words), including notes, tables and attachments.
- Approximately 4 months of full time job



# Format

All dissertations reports must follow these criteria:

- Arial size 12 font typescript
- Interlinea/line space: 1.5 using both sides of the paper.
- The paper should be A4 size (210 x 297 mm)
- Sufficient margins should be made on both edges to enable a binder to guillotine the pages if necessary - the left-hand margin being not less than 38 mm (1.5").
- Pages should be numbered consecutively. Tables and diagrams must be numbered serially in typescript
- [Template Latex](#)

# Evaluation of Dissertation

Points	Level	Evaluation
0-1	Sufficient	Purpose and objectives are clearly stated and of some relevance. There is basic coverage of relevant literature, methodology is reasonably explained with some attempt to use evidence to reach appropriate conclusions.
2-4	Fairly good	Well stated purpose, good coverage of prior research, clear and relevant methodological approach, some critical evaluation of results
5-7	Good	Objectives are innovative and very clearly stated, comprehensive and inclusive literature, very relevant methodological approach and good critical evaluation of results
8	Excellent	Exceptionally well stated purpose, creative and critical engagement with prior research. Rigorous theoretical understanding of the chosen methodological approach and sophisticated critical discussion of results (in general also for Research Dissertation)