Master Thesis/Project Starter Kit

Pablo Hernández Alonso, PhD David Merino Arranz, PhD

It is important to know that...

- the master thesis/project (MTP) is **necessary** to obtain your master's degree
- the course load is 15 ECTS (375h, i.e. 22h/week)
- you will spend a lot of time working on your MTP, so choose what you want to do wisely:
 - Feel comfortable with the topic. It may be new to you, but you should not feel overwhelmed
 - Choose something that motivates you... 22 hours per week is a lot of time...



By the end of your project you will...

- produce a written report/thesis of your project
- build a product, whether it is an application, design, study, protocol...
 which may or may not be a part of your written report/thesis
- generate a presentation summarizing your work and its results
- participate on a public defence of your MTP



We can help you...

Use the resources we have prepared for you

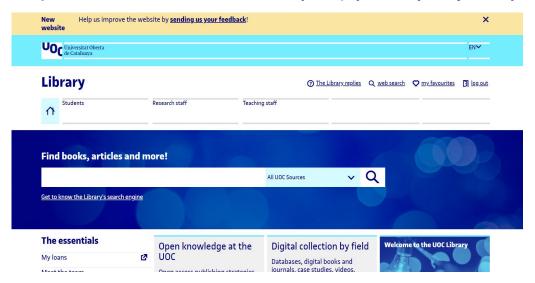




- Stay regularly in touch a with your supervisor:
 - You may request meetings to ask for advice, reformulate modules, discuss errors...
 - Don't send them an email automatically every time a problem arises. An important part of being a professional (i.e., a master) is to know how to handle problems.
- When a problem arises: breathe >> try again >> check for your issue on the internet
 (e.g. Stack Overflow) >> test it >> No luck? >> Repeat the process >> Still no luck? >>
 Send an email to your supervisor

We can help you...

<u>UOC Library</u> has a lot of resources that may help you on your journey



Maybe you can start by taking a look at this resource, which is available in <u>CAT</u> and <u>ES</u>.

Planification is key

- Plan ahead your workload to meet all your timelines
- Do not wait till the last minute to ask for help: if you foresee you may have issues meeting a deadline, let your supervisor know ahead of time
- If you are working with an external group, planification is even more important: your external supervisor may not be aware of the calendar of this course, so make sure you always have time to write any report you need to deliver
- Although there is an activity specifically related to writing your Thesis, it is a good idea to start writing from the very beginning. Start writing the state-of-the-art and your planification modules when you work on them during the first weeks of the project



CAA1 (PEC1 or PAC1): Definition and work plan

- Background and justification of the MTP
 - 1.1. General description
 - 1.2. Justification of the MTP
- 2. Objectives
 - 2.1. Main Objectives
 - 2.2. Specific Objectives
- 3. Approach and methodology
- 4. Planning with milestones and calendar. Use <u>GanttProject</u>, <u>Project</u>
 <u>Libre</u>, <u>Team Gantt</u> or <u>Gantter</u> to create a Gantt chart or chronogram)
 - 4.1. Main tasks and prioritization
 - 4.2. Extra tasks
 - 4.3. Risk analysis
- 5. Expected results
- 6. Structure of the MTP

CAA1: Definition and work plan

The result of this PEC is a document that needs to include, on top of all the points described in the previous slide, the following items:

- Student's name
- Supervisor's name
- Tentative Title(s)
- Language
- Keywords defining the MTP
- General topic
- Problem to solve
- Objectives
- Additional comments (e.g. prioritization, additional work)
- Main references

CAA1: Work plan

- Divide your project in tasks that you feel comfortable with. It will help you estimate the workload in a more precise manner
- Choose objectives that you can realistically achieve. A master's project requires certain level of difficulty or complexity. However, time to achieve your goals is finite, so, try not to overcomplicate things.

CAA1: Work plan Review of previous work/State of the art

- One of the main tasks is to review what has already been done in the field
- Use your library access to search for information. Use databases such as <u>PubMed</u> to build a clear overview of the topic. In the UOC library you can find <u>more tools to find bibliography</u> on your subject.

CAA2: Work development (phase 1)

- 1. Identification of the work and date of the report
 - 1.1. (NEW) TITLE
 - 1.2. DATE OF THE REPORT
- 2. Description of the progress of the project
 - 2.1. Degree of fulfillment of the objectives and results foreseen in the work plan
 - 2.2. Justification of the changes (if necessary)
- 3. List of activities carried out
 - 3.1. Activities planned in the work plan
 - 3.2. Unplanned and carried out activities or programs
- 4. List of deviations in timing and mitigation actions (if applicable) and update of the schedule (if appropriate)
- 5. List of partial results obtained so far (deliverables that are attached)
- 6. Comments from your private director if you consider it necessary
- 7. Personal assessment



CAA3: Work development (phase 2)

- 1. Identification of the work and date of the report
 - 1.1. (NEW) TITLE
 - 1.2. DATE OF THE REPORT
- Description of the progress of the project
 - 2.1. Degree of fulfillment of the objectives and results foreseen in the work plan
 - 2.2. Justification of the changes (if necessary)
- 3. List of activities carried out
 - 3.1. Activities planned in the work plan
 - 3.2. Unplanned and carried out activities or programs
- List of deviations in timing and mitigation actions (if applicable) and update of the schedule (if appropriate)
- 5. List of partial results obtained so far (deliverables that are attached)
- 6. Comments from your private director if you consider it necessary
- 7. Personal assessment

CAA4: Final report and presentation

At the end of this CAA you will need to submit your final report, and the presentation of your project. We have divided this information onto these two blocks.

In the timeline of the classroom we have suggested a work calendar for these two documents. This is only a suggestion. The only hard deadline is at the end of CAA4 where you have to submit both your final report and presentation.



CAA4: Final report and presentation. Final Report.

1. Start writing your Thesis or final report as soon as possible

2. Remember

- 2.1. You have access to a free version of Office 365
- 2.2. You are writing an <u>Academic and Scientific report</u>. A certain language and structure is expected.
- 2.3. The **format** you use is important: select a suitable font (e g Calibri, Times New Roman), and be consistent with the format throughout the document. You can use the template we provide.
- 2.4. Beware of the **code of conduct** (i e plagiarism, citing and its consequences)
- 2.5. A bibliography of previous work is essential. Use <u>Mendeley</u> or <u>Zotero</u> to help.

CAA4: Final report and presentation. Final Report.

Beware of the limits of the report:

90 pages max! This limit does not include annexes

Bear this in mind:

- You don't need to reach the 90 pages limit, but if you fall short it will look like you don't have a lot to say... And that is probably not true!
- Use **graphic resources**: plots, images, tables... This will organize and show your results in a more convenient way.

CAA4: Final report and presentation. Presentation.

- The design of the slides is important:
 - Use as little text as possible
 - Use visual resources to display information:
 - Bullet points
 - Figures
 - Tables
- Record yourself explaining your work. You can use <u>OBS studio</u> or <u>Zoom</u>.
- If your slide has text in it: explain it, don't read it.
- Use the slides as a **tool** to help you explain yourself better, and remind you your script.
- Include a small window showing your face on a webcam as you present.
 Post-production and cuts on your video are not appreciated.
- You have 20 minutes (max.) for your presentation. Use them wisely.

CAA4: Final report and presentation. Presentation.

The script of your presentation should be standard, so you don't have to spend time explaining what the outline of your presentation is. You can follow this script if it suits you:

- Introduce yourself and the main concepts you have based your work on.
- Highlight previous work, and explain where they fall short. Explain the problem you are solving.
- Summarize what you have done. You probably cannot explain everything you have done, but you need to find a balance to make sure your audience follows you.
- Clearly present the results. Make sure you highlight what you think are your most important findings.
- Include strengths and limitations of your work. Knowing your limits shows maturity.
- Explain **future perspectives** of your work

PEC5: Public defense

The board of examiners will review your **presentation** and your **thesis report** before the defense.

The day of the defense, the examiners will give you **feedback** of work and ask **questions** about it. They want to assess if you **made** your work, if you are **confident** with it and to what extent you have **learned** from it. You have more information here.

Be prepared:

- To listen carefully to the feedback your supervisor has on your work before the defense.
- The day of the defense there will be constructive criticism: there is always room for improvement. We want you to grow and improve as a scientist, so we will point what you can improve. There will also be feedback on your work. This is a good chance for you to discuss your work!
- You are the **expert** on the work you have presented. Be confident but don't be pedantic.
- Do not rush: try always to be very clear and concise.

Universitat Oberta de Catalunya





Pablo Hernández Alonso ORCID: 0000 0002 9977 8976 paheral@uoc.edu



David Merino Arranz
ORCID: 0000-0002-0119-9459
dmerinoar@uoc.edu