Guidelines for the Master's Degree Thesis in Management Engineering

Case 1: Final exam with "extended" internship

In this case, the final exam consists of a Research Methods course (3 ECTS), an "extended" internship of at least 300 hours (10 ECTS), and a thesis project based on the internship (5 ECTS). The thesis, in this case, will be an **applied/experimental thesis.**

Applied/Experimental Thesis (up to 7 points).

The applied/experimental thesis is a detailed description and analysis of an "extended" internship project. This type of thesis must follow the structure below:

- **Introduction**: presentation of the area of interest, the goal of the internship, and the student's role in the project development.
- **Literature review**: complete bibliographic analysis, including "grey literature", to present the area of development of the project and the methods applied to address the problem tackled during the internship.
- **Project development**: detailed description of the analyzed case and the project carried out during the internship (e.g., "as-is" context description, project development phases, timeline organization, and modifications applied to the methodologies identified in the literature to contextualize the application).
- **Analysis of the results**: presentation of the results obtained from the application of the methodology, with critical analysis to evaluate the achievement level of the objectives set.
- **Conclusions**: Summary of the work done and proposal for future improvements.

Case 2: Final exam with "short" internship

In this case, the final exam consists of a Research Methods course (3 ECTS), a "short" internship of at least 180 hours (6 ECTS), and a research thesis (9 ECTS).
The thesis, in this case, will be unrelated to the internship and may be a review thesis, a research thesis, or a thesis with external evaluation.

Review thesis (up to 3 points)

The review thesis is a critical and logical elaboration of bibliographic sources on a chosen topic and an analysis of the practical applications of that topic. It must follow the structure below:

- **Introduction**: presentation of the topic of interest and the objectives of the analysis.
- **Literature analysis**: complete bibliographic analysis, also including "grey literature", to present the contents of the works present in the literature related to the previously introduced topic.
- **Practical applications**: analysis of the practical applications of the chosen topic and the results obtained from the literature analysis.
- **Conclusions**: summary of the work carried out and proposal of future insights related to the topic analyzed.

Research thesis (up to 7 points)

The research thesis starts from the identification of an existing problem and requires the performance of a critical analysis of the bibliographic sources, collected on the basis of the chosen topic, and the application of scientific methods to obtain valid and reproducible results. The research thesis must be set up according to the following structure:

- **Introduction**: presentation of the research area of interest and the objectives of the research. The research will have to address a practical and current problem.
- **Literature analysis**: comprehensive and effective presentation of the literature's content related to the research area, identifying a gap to be filled with a specific research question. The review must be exhaustive, covering major contributions from peer-reviewed scientific articles.
- **Methodology**: presentation and justification of the research method chosen to fill the theoretical gap and answer the research question. The method must be a quantitative or qualitative method of analysis, depending on the research question and the problem under analysis (case studies, surveys, focus groups, Delphi study, simulation, optimization, etc.) and applied to a practical and real context.
- **Application development**: detailed description of the application of the methodology previously presented to the (practical) context under analysis.
- **Analysis of the results**: presentation of the results obtained from the application of the methodology and critical analysis in order to answer the research question(s) previously asked.
- **Conclusions**: summary of the work done and proposal for future improvements.

Thesis with External Evaluation (up to 9 points)

If the research thesis achieves sufficient originality, methodological rigor, and potential impact to form the basis for a scientific publication, it can be nominated by the supervisor for external evaluation.

In this case, the document will be reviewed by a professor or researcher (external evaluator), different from the supervisor, internal or external to other universities, who will assess the thesis and decide if the student can receive up to 2 additional points.

The external evaluator is chosen by the School Director from two experts nominated by the supervisor in the student's research field.

To ensure sufficient time for the external evaluation, the student must submit their thesis to both the supervisor and the external evaluator at least one month before the thesis defense.