

Course guide

280818 - TFM-ENO - Master's Thesis

Last modified: 27/05/2024

Unit in charge: Barcelona School of Nautical Studies
Teaching unit: 742 - CEN - Department of Nautical Sciences and Engineering.
709 - DEE - Department of Electrical Engineering.
707 - ESAII - Department of Automatic Control.

Degree: MASTER'S DEGREE IN NAVAL AND OCEAN ENGINEERING (Syllabus 2017). (Project subject).

Academic year: 2024 **ECTS Credits:** 15.0 **Languages:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: JAVIER MARTINEZ GARCIA

Others:

REQUIREMENTS

To enrol the TFM (Final Masters Thesis) it is necessary to have passed all master's courses.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

MUENO_CTFM. Realization, presentation and defense of an original exercise carried out individually before a university court, consisting of a comprehensive project of Naval and Oceanic Engineering of a professional nature in which the competences acquired in the teachings are synthesized

Generical:

MUENO_CG1. Ability to solve complex problems and to make responsible decisions based on the scientific and technological knowledge acquired in basic and technological subjects applicable in naval and ocean engineering, and in management methods

MUENO_CG2. Ability to conceive and develop solutions that are technically, economically and environmentally appropriate to the needs of maritime or integral transportation of people and goods, of the use of oceanic resources and of the marine subsoil (fishing, energy, minerals, etc.), adequate use of the marine habitat and means of defense and maritime security)

MUENO_CG6. Ability to conduct research, development and innovation in naval and ocean products, processes and methods

MUENO_CG7. Ability to integrate complex maritime systems and translation into viable solutions

MUENO_CG8. Ability to analyze and interpret measurements, calculations, evaluations, appraisals, studies, reports, work plans and other similar works

MUENO_CG14. Ability to analyze, assess and correct the social and environmental impact of technical solutions

MUENO_CG15. Ability to organize and direct multidisciplinary work groups in a multilingual environment, and to generate reports for the transmission of knowledge and results

Transversal:

CT1. ENTREPRENEURSHIP AND INNOVATION: Knowing and understanding the organization of a company and the sciences that govern the activity; be able to understand the business rules and relationships between planning, industrial and commercial strategies, quality and profit.

CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Know and understand the complexity of economic and social phenomena typical of the welfare society, being able to relate welfare to globalization and sustainability; acquire skills to use in a balanced manner compatible technology, technology, economics and sustainability.

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Manage the acquisition, structuring, analysis and visualization of data and information in the field of specialty, and critically evaluate the results of this management.

CT5. THIRD LANGUAGE Learning a third language, preferably English, with adequate oral and written and in line with the future needs of the graduates.

Basic:

CB6. Possess knowledge and understanding that provide a basis or opportunity be original in the development and / or application of ideas, often in a research context.

CB7. That the students can apply their knowledge and ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their study area.

CB8. Students should be able to integrate knowledge and handle the complexity of making judgments based on information that, being incomplete or limited, includes reflections on the responsibilities social and ethical linked to the application of their knowledge and judgments.

CB9. That students can communicate their conclusions and the knowledge and Latest rationale underpinning to specialists and non Specialty clearly and unambiguously.

CB10. Students must possess the learning skills that enable them continue studying in a way that will be largely self-directed or autonomous.

TEACHING METHODOLOGY

Self-learning based on the resolution of exercises and problems.

Learning based on problems/projects.

LEARNING OBJECTIVES OF THE SUBJECT

Capacity to use, consolidate and integrate the competences acquired during the mater's studies.

Capacity to develop, describe and defence an engineering project, or a research project, in the field of naval architecture and ocean engineering.

STUDY LOAD

Type	Hours	Percentage
Hours small group	1,0	0.27
Guided activities	35,0	9.33
Self study	339,0	90.40

Total learning time: 375 h

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THESIS DOCUMENT

Description:

The Final Master Thesis (TFM) is a theoretical and/or practical project which aims applying the learnings obtained by the student during the mater's studies, and his/her capacity to put them in practice.

The TFM is a work that has to be conducted in the field of Naval Architecture and Ocean Engineering. It has to have a professional approach, fitting in here also the research fields, and must synthetize the competences acquired by the student during his/her studies.

The work conducted by the student, and supervised by his/her director, must be compiled in a written document: The Master Thesis Document. This document must comply with the guide published by the FNB, which can be downloaded from the following link:

<https://www.fnb.upc.edu/sites/default/files/qualitat/FNB%20-%20Guia%20per%20a%20l%27elaboraci%C3%B3%20del%20Treb all%20Fi%20de%20Grau%20i%20M%C3%A0ster%20v2.pdf>

Full-or-part-time: 365h

Guided activities: 35h

Self study : 330h

PUBLIC DISSERTATION

Description:

The student must prepare and defend a presentation, in which are compiled the most relevant results of the TFM, in front of an evaluation committee. The defence of the TFM is a public event.

The student will have to respond to the questions or clarifications requested by the evaluation committee regarding the work presented.

The procedure that defines the public dissertation of the TFM is described in detail in the TFM regulation developed by the school:

<https://www.fnb.upc.edu/sites/default/files/qualitat/Normativa%20TFM%20-%20JF%20FNB%2022.05.19.pdf>

Full-or-part-time: 10h

Guided activities: 1h

Self study : 9h

GRADING SYSTEM

The final master thesis will be evaluated based on a written document prepared by the student, and its public defence.

The qualification of the TFM will be conducted using the evaluation guideline approved by the Barcelona School of Nautical studies when the thesis is defended. This evaluation guideline can be downloaded from:

<https://www.fnb.upc.edu/sites/default/files/qualitat/Fitxa%20Avaluaci%C3%B3%20TFGM.pdf>

EXAMINATION RULES.

The regulation that defines the procedures to propose, inscribe, enrol, develop and evaluate the final master thesis can be downloaded from the Barcelona School of Nautical Studies webpage:

<https://www.fnb.upc.edu/sites/default/files/qualitat/Normativa%20TFM%20-%20JF%20FNB%2022.05.19.pdf>

RESOURCES

Hyperlink:

- Guia per a l'elaboració dels Treballs Fi de Grau (TFG) i Treballs Fi de Màster (TFM). <https://www.fnb.upc.edu/sites/default/files/qualitat/FNB%20-%20Guia%20per%20a%20l%27elaboraci%C3%B3%20del%20Treball%20Fi%20de%20Grau%20i%20M%C3%A0ster%20v2.pdf>- Plantilla (word) per a la redacció de la memòria del TFG/TFM. <https://www.fnb.upc.edu/sites/default/files/FNB%20-%20Plantilla%20TFGM%20v3.docx>- Plantilla (LaTeX) per a la redacció de la memòria del TFG/TFM. <https://www.fnb.upc.edu/sites/default/files/qualitat/plantilla%20TFG%20v2.zip>- Guia de redacció científica del Servei de Llengües de la UPC. <https://www.upc.edu/slt/ca/recursos-redaccio/criteris-linguistics/guia-redaccio-cientifica-ca>- Normativa dels Treballs Fi de Màster (TFM). <https://www.fnb.upc.edu/sites/default/files/qualitat/Normativa%20TFM%20-%20JF%20FNB%2022.05.19.pdf>- Fitxa d'avaluació dels TFG i TFM. <https://www.fnb.upc.edu/sites/default/files/qualitat/Fitxa%20Avaluaci%C3%B3%20TFGM.pdf>