
Annex II Evaluation rubric of the TFM

I PURPOSE

Each Master's Thesis (TFM) will have to be assessed according to the competences specified in the subject's file in the degree report (MET):

Basic and general competences:

CB1. Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context.

CG1. Ability to project, calculate and design products, processes, and installations in all areas of telecommunication engineering.

CG5. Ability for the elaboration, strategic planning, direction, coordination, and technical and economic management of projects in all areas of Telecommunication Engineering following quality and environmental criteria.

CG8. Ability to apply acquired knowledge and solve problems in new or unfamiliar environments within broader, multidisciplinary contexts, being able to integrate knowledge.

CG11. Ability to communicate (orally and written) the conclusions - and the ultimate knowledge and reasons behind them - to specialized and non-specialized audiences in a clear and unambiguous manner.

CG12. Possess skills for continuous, self-directed, and autonomous learning.

Specific competences:

CE17/TFM. Completion, presentation, and defense, once all the credits of the study plan have been obtained, of an original exercise carried out individually before a university tribunal, consisting of an integral Telecommunication Engineering project of a professional nature in which the competences acquired in the courses are synthesized.

Transversal competences:

CT2. Develop sufficient autonomy to participate in research projects and scientific or technological collaborations within their thematic area, in interdisciplinary contexts and, where appropriate, with a high component of knowledge transfer.

CT6. Acquire advanced knowledge and demonstrate, in a scientific and technological or highly specialized research context, a detailed and grounded understanding of the theoretical and practical aspects and methodology of work in one or more fields of study.

Secondly, as specified in the degree report, students must have achieved the following learning outcomes:

- Research, ordering and structuring of information on a topic related to Telecommunication Engineering.
- Elaboration of a project report including background, problems or state of the art, objectives, project phases, project development, conclusions and future lines of action.
- Design of prototypes, software, circuits, procedures, etc., according to specifications.

The evaluation of a TFM should consider these competencies and results, for which the following rubric is provided to serve both as a guide in the evaluation process for the tribunal and as an aid for the preparation of the report by the tutors.

	LEVEL 1 (insufficient)	LEVEL 2 (superficial)	LEVEL 3 (average)	LEVEL 4 (advanced)	Evaluated competences
TECHNICAL ASPECTS OF THE TFM					
Overall approach to the work	The work developed does not correspond to a technological project in the field of telecommunications engineering.	The work developed has a superficial relationship with the context of telecommunication engineering.	The work developed is moderately related to the context of telecommunication engineering.	The work developed is clearly related to the context of telecommunication engineering.	CE17, CG1
State of the art and needs analysis	The study on the state of the art and needs analysis do not exist or are irrelevant.	The study on the state of the art and needs analysis is simple and poorly documented.	The study on the state of the art and needs analysis has a medium level, providing some relevant documentation.	The study on the state of the art and needs analysis is at an advanced level, providing very relevant documentation.	CG11, CT2
Objectives definition	The student does not have a global vision of the problem raised, so the objectives of the work are not clearly defined.	The student has a superficial view of the problem raised, so the objectives are diffusely defined.	The student reflects having a global vision of the problem raised, so the objectives are clearly explained.	The student stands out for their global vision of the problem and for their orderly, clear, and concrete exposition of the objectives to be achieved in the work.	CG1
Methodology and use of standards	The work methodology is not clear and does not guarantee the achievement of the objectives. The work does not make use of any technical specification, nor of any norm or standard solution in its field, nor does it justify this decision rationally.	The work methodology should be clearer to ensure the achievement of the objectives. The work makes superficial and not well justified use of technical specifications, standards and/or standard solutions in its scope.	The work methodology was explained, but not with all the necessary rigor. The work makes use of technical specifications, standards and/or standard solutions in its field. The justification is correct, but could be improved.	The work methodology is clearly stated. The work makes appropriate and correctly justified use of technical specifications, standards and/or standard solutions in its scope. Or, if applicable, it reasonably justifies the inadequacy of using this type of documentation in the work performed.	CG5, CT6
Proposed solution	The student does not show initiative or creativity in making decisions to solve the problems raised in the work. They are not aware, if applicable, of the implications and consequences of the proposed solutions (impact on privacy, security, etc.).	The student shows some initiative and creativity in making decisions to solve the problems raised in the work. They are slightly aware, if applicable, of the implications and consequences of the proposed solutions (impact	The student shows initiative and creativity in making decisions to solve the problems raised in the work. They are moderately aware, if applicable, of the implications and consequences of the proposed solutions (impact	The student stands out for their initiative and creativity in making decisions to solve the problems raised in the work. They are clearly aware, if applicable, of the implications and consequences of the proposed solutions (impact on privacy, security, etc.). Finally, common problems, such as integration into more	CB1,CG8, CG12, CT2

	Common problems, such as integration into more complex systems, maintenance, and adaptation, were not addressed.	on privacy, security, etc.). Common problems, such as integration into more complex systems, maintenance, and customization, were not addressed or were addressed simply and insufficiently.	on privacy, security, etc.). Finally, common problems, such as integration into more complex systems, maintenance, and adaptation, were addressed, but not in depth and with rigor.	complex systems, maintenance, and adaptation, were tackled thoroughly and rigorously.	
Results / Conclusions	The presentation of results is poor and shows shortcomings in the analysis of the work.	The presentation of results is sufficient but was not approached with the necessary global vision.	The presentation of results is adequate and complete.	The presentation of results stands out for being complete, approached with rigor and showing a clear capacity for analysis.	CG1, CG8, CG12, CT2
Bibliographic references	The bibliographic references provided are not relevant and/or are not complete.	The bibliographic references provided have some relevance, but they are not recent, are not complete and/or were not located in sources of recognized prestige.	The bibliographic references provided are mostly relevant, are relatively recent, are complete for the most part, and were mostly located in sources of recognized prestige.	The bibliographic references provided are very relevant to the work, are recent, complete and were in sources of recognized prestige.	CG12, CT6
TFM PRESENTATION AND DEFENSE					
Written documentation	The student is not able to conveniently communicate the work done in the documentation provided. The structure and writing are not clear. The graphs, tables and images provided are not	The student is able to communicate in a basic way the work done in the documentation provided. The structure and wording are not sufficiently clear. The graphs, tables and	The student is able to adequately communicate the work done in the documentation provided. The structure and wording are clear. The graphs, tables and images provided	The student stands out in the way they transmit the work done in the documentation provided.	CG11

	relevant or do not have the necessary quality. Formatting guidelines were not followed and there are serious spelling mistakes.	images provided are not very relevant or do not have the necessary quality. Formatting guidelines were also not followed correctly.	are relevant and of the required quality. Formatting guidelines were followed correctly.		
Oral presentation	The student is not able to adequately communicate the work done in the oral presentation. The time limit was not respected, relevant parts of the work were not explained, and the vocabulary used was not appropriate in the technical context of the work. The presentation does not show sufficient solvency.	The student is able to communicate sufficiently the work done in the oral presentation. The time limit was imposed by the examining board, and the student adapted his/her presentation, but not completely correctly. Parts of the work were not correctly explained, and the technical vocabulary should be more appropriate to the content of the work.	The student is able to conveniently communicate the work done in the oral presentation, which was adapted to the time constraint. All the important parts of the work were addressed, and the technical vocabulary was applied correctly.	The student stands out for the oral presentation of their work: respecting the time constraints, addressing all relevant parts, and correctly using the technical vocabulary.	CG11
Discussion	The student is not able to adequately defend the work done in the discussion with the examining board. The answers are not adequate and show serious deficiencies in their technical solvency.	The student is able to defend the work done in the discussion with the examining board. The student is able to answer most of the questions, although they are not able to answer correctly to relevant aspects of the work.	The student is able to defend the work done in discussion with the panel. The answers are accommodated.	The student excels in the discussion with the panel. The answers are well organized and show their knowledge of the subject matter of the paper.	CG11, CE17, CT6

