REGULATION OF THE MASTER’S FINAL WORK-TFM
(Approved by the Board of School May, 21th 2015)

PREAMBLE

Master’s Final Work, from this point TFM, is defined in the statement of the master’s degrees of the School as an integral synthesis exercise of the acquired knowledge during the Masters, which has to be presented and defended in front of a jury. The work must be a project in the field of specific technologies of each one of the masters. The TFM is compulsory and must have an equivalent work load of 12 ECTS, in all masters except for the master of Nuclear Engineering that will be of 15 ECTS. This regulation is complemented by TFM Delivery Protocol which shows the way how it has to be delivered.

DEFINITION AND CHARACTERISTICS OF TFM

The TFM should allow the student to demonstrate the ability to apply integrated knowledge of different masters.

The TFM must contain the appropriate characteristic elements coming from a project or engineering study, as example:

- Definition of the problem, the motivation, the aim and the scope.
- Specification and performance settings.
- Premise analysis and viability.
- Concrete proposal of solution.
- Calculations, experimental results, data processing ...
- Plans, outlines ...
- Concordance of results with the targets.
- Global Economic Analysis and comparison with the alternatives
- User’s manuals.
- Sustainability of the project: environmental, economic and social impact.
- Conclusions.
- Budget of the project or work.
- Bibliography.

Modalities to carry out the TFM

The TFM may be carried out by the following ways:

1. Under the direction of a member of PDI assigned to the ETSEIB carrying out the presentation and defense at the school.

2. Under the guidance of a person with higher degree education (national or international) external to the ETSEIB, and a presentation and defense at the school. In this case, a speaker among the PDI assigned by the center will be needed, who will be responsible of advising the
student doing the work to ensure that the TFM fulfils the academic goals.

3. Under the direction of a person external to the ETSEIB with higher degree education (national or international), and with the defense in a university or research center with which it has established an agreement that includes the TFM. The student must follow the regulations concerning the direction and presentation corresponding to the host university. The School recognizes the qualification obtained.

**Direction or presentation of the TFM**

Any member of the PDI with assignment at school may act as a director / speaker, even if does not give a course in the Masters in which the TFM belongs.

In justified cases by the subject of the TFM can act as co-directors two members of the PDI assigned to the ETSEIB.

**Realization of TFM**

The work of the realization of the MT implies, to each student, an approximate 25-30 hours dedication per ECTS credit. The students must have regular meetings with the directors so they guide and monitor them.

The School will dispose of the preparation guidelines to which the MT presented and defended must adjust.

**Documentation**

The necessary documents to defend the TFM, and how it has to be delivered, will be explained in the *Protocol of Delivery of TFM*.

The submitted documentation of the TFM will be under the supervision of the director, following the rules and guidelines established by the school.

**ADMINISTRATIVE PROCESS**

The administrative process has the following stages:
- Election of TFM
- Registration. The coordinator of the Mater’s or the person responsible of the academic area will have to validate the TFM. If that is done with an external director, the speaker must give approval for it to be registered.
- Enrolment
- Designation of the jury
- Delivery of the documentation, clearly defined in the Delivery Protocol, in the academic area.
- Presentation and defense
- Qualification
- Deposit and archive

Both, the registration and the enrollment of TFM, should be done in one of the periods set by the School. Along the academic year, there will be two or more periods of enrollment, previously announced.
**Election of the TFM**

Assigned PDI of the school will propose topics to carry out as TFM, taking into account the characteristics required (duration, extension and characteristic elements that must be included). School will set a place where students can check the proposed works.

The projects will be individual. In an extraordinary case, if the characteristics of the MT justify it, the number of students can be higher than one. In this case, the approval of the coordinator for the master or the responsible person is needed.

In addition, the students can propose a topic and look for a PDI assigned to the School as the director of the TFM or a person with higher degree who can direct it. In the case that the director would be external to the ETSEIB, the student will have to look for speaker before registering the TFM.

**Registration**

Before the beginning of the TFM, it must be registered. Registration involves the validation of the topic by the master coordinator or by the corresponding vice director responsible. For the TFM modality B registration it is necessary to have a speaker. Once it is accepted, it can be enrolled and will follow the rest of the process.

**Enrolment**

In each academic term, the enrolment, presentation and defence periods will be established. As much as if the TFM is started in the autumn semester as if is started in the spring semester, if the defence is not carried out in the semester in which has been enrolled, the student has to formalise the enrolment the following semester. In this new enrolment, the corresponding credits to this master’s thesis do not have to be paid, only the credits for the administrative services (management of the academic record, support for learning and school insurance if needed).

**Designation of the jury**

The juries of the TFM will be composed by three members of the PDI School, one of them will act as president. The president of the jury will be chosen from the teachers who belongs to the department of the director or the speaker of the TFM, another member of the same department will be chosen as well. The third member will not be related to this department.

Two supply members will be designated, one of them will be of the same department as the director or speaker and the third one will be related to the other department. The jury will be designated by the coordinator of the master’s or by the vice director responsible.

The academic area communicates the composition of the tribunals and the TFM assigned to each one of them.

**Delivery and standards test**

The student must deliver the documentation to the Academic Area within the deadlines established by the School. The documentation must be delivered according to the specifications in the TFM delivery protocol in order to check if the standards are fulfilled.
Once the examination of standards will be done, the academic area will inform to the president of the jury and the director of the TFM that they can proceed with the presentation and defense.

**Presentation and defense**

The presentation and defence of the TFM in front of a jury is public and consists on two stages: the exposition by a student/s of a review of the contents of his/her TFM and the defence where the students answer the questions the tribunal considers relevant about the contents and realization of the MT. The time of the exposition will be set by the president of the jury, which he/she will make know previously and which will last 30 minutes approximatively.

If the TFM has been carried out by more than one student, the presentations and defence of the TFM must be done together with an equivalent participation of all the students.

The School will put at the disposal of the students those audiovisual devices which they need. The application, confirmation of a good functioning and its use during the presentation and defence will be responsibility of the student. Periods of presentation and defense will be established from the academic area.

**Qualification**

Once the presentation or defense of the TFM is finished, in a closed session, the jury will deliberate about the qualification, being able to come to terms unanimously or by simple majority.

If the assistance of the director is not possible, he/she will have to have informed previously the jury about the project carried out by the student.

The jury will communicate the qualification in public session and will offer the possibility to improve the mark, if and when a new presentation can be carried out during the period in which the enrolment is valid.

Each member of the tribunal will evaluate the project and the presentation and defence in a report according to the established model.

If a TFM is passed, the mark is included in the certificate and it will be sent to the Academic Area along with the other documents spelled out in the Protocol of Delivery of TFM.

If a TFM is not passed, the president of the jury returns it entirely to the Academic Area with the notification of the comments he/she considers appropriate. The qualification will be FAILED. The students can defend the same TFM corrected enrolling it again and presenting it in a new period.

In the TFM the students who do not present to defend it are qualified with “NOT PRESENTED”. Also in this case, the students will have to defend the same MT once they have enrolled it again in a new period. The periods to deliver and defend it will be related to the new enrollment.
Confidentiality

In some special cases, the student and the director may request the confidentiality of the TFM. In these cases, the student must submit a motivated application of confidentiality, providing the information requested, with the approval of the director / speaker. The vice director responsible will have to approve this confidentiality.

The special cases where confidentiality is possible are:

1. When there is a possibility of generating patents. In this case the TFM will be considered confidential for 24 months from the deposit date or until the patent will be registered. After this period, the TFM will no longer be confidential.

2. When an institution or foreign company that has participated in the TFM significantly and it has a confidentiality agreement on the issue of TFM with the UPC. In this case, the TFM will be considered confidential during the period which is specified in the agreement, or for 3 years after the date of deposit. After this time, the TFM will no longer be confidential. It shall be an original confidentiality agreement and attach a copy of the application.

If the TFM is considered confidential, the student should develop its defense by providing all the information required by the jury. The members will be required to not divulge confidential information. Any member of the PDI of the ETSEIB may decline to join the jury of a confidential TFM.

Deposit

Once the TFM passed, the dissertation will be deposited in the archives of the School. This it will be published under the license CreativeCommons (Category Attribution-NonCommercial-NoDerivs) in the open access place of the Library Service, Archives and Publications of the UPC. If the author does not agree with this deposit, he/ she has to express it in a writing way.

If the TFM is confidential only bibliographic data and summary will be displayed. If it stops to be confidential in the future it will be published under the license CreativeCommons (Category Attribution-NonCommercial-NoDerivs).

Exceptions

In extraordinary cases the director of the School can exempt from the fulfilment of this partial regulation.

The direction will annually present to the CAAQ a report including an analysis of the TFM.