Master's Thesis development

This document provides with important indications regarding the organization of the Master's Thesis of the Master on Big Data Analytics. Particularly, the Master's Thesis should follow the basic regulation framework given by the Graduate School of Engineering and Basic Science that can be found here:

http://e-archivo.uc3m.es/handle/10016/19667

Additionally to the previous regulation, this document gives some indications on the development of the Master's Thesis regarding enrolment, categories, contents and defense.

Enrolment

Enrolment for the Master's Thesis should be done according to the general regulation framework given by the Graduate School of Engineering and Basic Science. Therefore, students can only be enrolled in the Master's Thesis, if they are enrolled in all of their unfinished courses. Please, contact José Ángel García Martínez (joseagar@pa.uc3m.es), the Master's manager, for more information about the formal procedure.

Master's Thesis categories and contents

The Master's Thesis is a 6 ECTS formative activity based on the student's individual work under the supervision of one or more directors. The Master's Thesis should be a serious and relevant work mainly based on the knowledge acquired during the Master's courses. Particularly, the student must demonstrate substantial professional maturity in all steps of the analysis including writing and presentation skills.

The Master's Thesis can be focused on any aspect related with the analysis of Big Data sets, understanding this in a broad sense. Some examples can be the following:

1. The analysis of a certain massive data set with the goal of solving a particular and relevant problem. In this case, the student should treat the data set using appropriate and duly justified techniques and present the obtained results in a clear and useful way.

2. The profound analysis of a certain advanced technique for the study of massive data sets, including theoretical and computational aspects for an efficient implementation. Examples of application will be also required.

3. The analysis/development/treatment of any technological aspect related with the analysis of massive data sets.

There are four different options to develop the Master's Thesis:

1. Master's Thesis based on proposals made by professors of the Master, professors of one of the five departments involved in the Master's development (Department of Computer Science, Department of Mathematics, Department of Signal and Communications Theory, Department of Statistics, and Department of Telematics Engineering) and/or members of the UC3M-BS Institute of Financial Big Data (IFiBiD). The proposals will be made available to the students through Aula Global during the month of March. Then, the Director of the Master's Program will request the students if they are interested in any of these projects. Professors will freely select one of the students who have shown interest in their proposals. Professors also have the option to withdraw their proposals.

2. Master's Thesis based on agreements made by professors and students. One or several professors can get an agreement with one student and prepare a Master's Thesis proposal of particular interest for all of them.

3. Master's Thesis based on the collaboration between one/several professor(s) of the Master/Departments and one company. This category allows for Master's Thesis developed in the company in which the student is working or doing practices. In any case, such a situation should be supervised by one/several professor(s) of the Master/Departments. This category is not only restricted to this particular situation.

4. Master's Thesis based on the collaboration between one/several professor(s) of the Master/Departments and one/several professor(s) from another University/Research center. In this way, a Master's Thesis can be developed under the collaboration of professors of different Universities/Research centers.

In any case, the students must provide the Director of the Master's Program at the beginning of the fourth semester period (deadline March, 31th) with the following information:

1. Master's Thesis title.

2. Master's Thesis director(s).

3. Master's Thesis proposal containing a summary and a motivation of the main goals of the proposed Master's Thesis.

The Academic Commission of the Master will revise the Master's Thesis proposals and will take a decision of accept, revise or reject them in base of the information provided by the students.

There is not a particular format or template for the written document. The student can chose the most convenient format for her/his work. Anyway, the cover must

follow the guidelines given by the Graduate School of Engineering and Basic Science as shown in:

http://e-archivo.uc3m.es/handle/10016/19667

Students are warned to avoid plagiarism and other forms of academic dishonesty.

Master's Thesis Defense

The Master's Thesis can only be defended once the student has passed all the Master's courses within the periods authorized for this purpose in the current academic calendar for graduate studies. The Master's Thesis will be defended in front of an experts committee during one of the defense periods. Particularly, there are two periods for the Master's Thesis Defense. The exact dates corresponding to the course 2016-2017 are:

1. June, 26th, to July, 31th.
2. September, 1th, to September, 30th.

In the first step of the Master's Thesis defense, the student has to send by email to the Director of the Master (pedro.galeano@uc3m.es) the request of the defense of his/her Master's Thesis. This should be done depending on the period the student pretends to defend his/her Master's Thesis:

1. In the first period, the deadline is ten days before the period starts, i.e., June, 16th, 2017.
2. In the second period, the deadline is July, 21th, 2017.

In the second step, the student has to submit an electronic copy of the memory by email to the Director of the Master (pedro.galeano@uc3m.es), while the director/s of the Master's Thesis has/have to submit the defense recommendation form in the same way.

The two documents, i.e., the request form and the defense recommendation form, will be publicly available in the Ficha of the TFM as well as in Aula Global. The submissions should be done the day the period starts, i.e.:

1. In the first period, June, 26th.
2. In the second period, September, 1th.

All the information will be sent to the members of the Evaluation Committee and will be used to evaluate the Master's Thesis.

Finally, students enrolled but not requesting the defense of their Master's Thesis in the current academic course will be considered as "not presented" and will have to enroll themselves again in the next academic course.

The evaluation of a Master's Thesis will be carried out by a committee composed by three experts that will judge the written work, the oral presentation and the

proper defense. The same committee will evaluate up to 5 students. Consequently, there will be as many committees as required by the number of students defending their Master's Thesis. The committees will be selected by the Academic Commission among the professors of the Departments involved in the Master's development. The Academic Commission will notify the composition of the committees, the students assigned to each committee, the corresponding defense dates and the place of defense to the students at least one week before the defense date.

The defense will consist on an oral presentation of the Master's Thesis made by the student. The length of the oral presentation should be of a maximum of 20 minutes where she/he will summarize the Master's Thesis contents, focusing on the main contributions of the work. Then, the committee will have another period of a maximum of 20 minutes to ask questions to the student about the Master's Thesis contents. Evaluation of the Master's Thesis will be carried out according to the evaluation matrix found in:

http://e-archivo.uc3m.es/handle/10016/19667

Additional information

http://uc3m.libguides.com/TFM