

University of Camerino
School of Science and Technology



Rules for the Final Thesis and Exam
Master of Science in Computer Science
(LM-18)

NOTE: This document is an English translation of the original document in Italian approved by the Council of the School of Science and Technology. Any discrepancy or possibly different interpretation of this document with respect to the original version will be resolved in favour of the latter.

This document establishes the rules, procedures and timings for the development of the final thesis to get the Master of Science in Computer Science (LM-18) at the University of Camerino.

Article 1 – Admission to the final exam

1. To be admitted to the discussion of the final thesis a student must have acquired all the ECTS credits planned in his/her last approved study plan (the standard one if no changes have been made), excluding the credits for the thesis itself.
2. To be admitted to the selected final exam session a student must have met the following conditions and deadlines:
 - a. he/she signed and submitted the Thesis Registration Form as defined in Article 3;
 - b. he/she passed the intermediate thesis assessment as established in Article 6;
 - c. he/she presented the final exam form request (“domanda di tesi” in Italian) to the student secretary office at least 45 days before the graduation day of the selected final exam session;
 - d. he/she acquired all the ECTS credits planned in his/her last approved study plan, excluding the credits for the thesis itself, at least 15 days before the graduation day of the selected final exam session;
 - e. he/she submitted the written thesis report to the student secretary office (using the procedures, means and formats specified by the office) at least 10 days before the graduation day of the selected final exam session.
3. If any of the conditions and deadlines specified above is not met the student may be excluded from the selected final exam session.

Article 2 – Supervision of the MSc Thesis

1. The student, based on his/her interests in the subject, identifies a teacher as a potential supervisor by asking for a thesis topic or by proposing one to be agreed on. The selected teacher becomes the thesis supervisor upon acceptance of the topic.
2. Teachers eligible for being supervisors of MSc Theses are those that are responsible for at least one teaching activity in the academic year to which the selected final exam session belongs. Such teaching activity must be offered within the BSc or the MSc in Computer Science of the University of Camerino.
3. If the supervisor is a contract teacher, a co-supervisor belonging to the Computer Science division must be nominated as well. Moreover, the supervisor must send an email to the Coordinator of the MSc in Computer Science LM-18 specifying that he/she is available to supervise the thesis as well as the name of the student and a brief description of the topic of the thesis.
4. The Coordinator of the MSc in Computer Science may not consent the nomination of the contract teacher as thesis supervisor. He/She communicates this decision by email to the student without having to specify any specific motivation. In this case the student must select another teacher as potential supervisor.

Article 3 – Procedures and obligations for the development of the MSc Thesis

1. The agreement between the student (the students in case of group thesis), the supervisors and the co-supervisors (if any) regarding the objectives of the thesis work is formalized in a Thesis Registration Form that must be filled in and signed at least by the student (the students in case of group thesis) and the supervisor.
2. To be eligible to sign the Thesis Registration Form the student (the students in case of group thesis) must have already acquired 78 ECTS credits (tolerance of 12 ECTS credits with respect to the 90 that must be acquired with exams to get the MSc). The possession of this requisite is certified by attaching to the Thesis Registration Form a screenshot of the student's career (or of the students' careers in case of group thesis) resulting from the student career system ESSE3. Moreover, in the period from the date of signing of the Thesis Registration Form to the graduation day the student must not acquire more than 12 ECTS credits (possibly after changes to the study plan).
3. The Thesis Registration Form (including the attachments), filled in and signed, must be sent by email to the Coordinator of the MSc in Computer Science using the official email address of the student name.surname@studenti.unicam.it. The deadline for sending this email is the Friday of the 22nd week preceding the one in which the graduation day of the selected final exam session is scheduled. August is considered to have zero weeks in this computation. If the resulting Friday is a holiday then the deadline is postponed to the first following working day.

Article 4 – Possible thesis types

1. The thesis work is a big part of the activities to get the MSc in Computer Science. The supervisor controls and guarantees that the work done gives an actual contribution and is congruent with the number of ECTS credits assigned to the final thesis in the last approved study plan of the student (30 in the standard plan).
2. Example of actual contributions are: designing and/or prototyping and/or development of a software/firmware/hardware system sufficiently complex; a theoretical contribution to one of the areas of computer science; a study or an innovative technique/methodology/technology that can be applied to a real world problem.

Article 5 – Group thesis

1. A teacher of the Computer Science Division satisfying the conditions listed in Article 2 (point 2) can assign a homogeneous or compound research topic to a group of students (of a maximum of 3 components) when this is justified by the complexity and the size of the subject, by the methods of the research and possibly by collaborations with companies on big size projects.
2. If the work to be carried out includes the development of a software system, the group must use a collaborative framework for the management of software projects. The tool to be used will be decided together with the supervisor, which may impose a certain choice if an agreement cannot be established.
3. Each candidate of the group will present as final thesis a common written report that describes the whole work of the group. The title and the content of this document will be unique for all the candidates and they will be listed as authors in alphabetical order by surname. All the candidates must graduate in the same final exam session and must discuss the thesis in the same sessions of intermediate evaluations, defence (pre-laurea) and final ceremony (laurea), as described in Article 6.

4. The group must present the thesis work to the evaluation committees in such a way that it can be clearly identified the contribution of each candidate. Each member of the group must present his/her contribution as a relevant and appropriate portion of the total work. The discussion of each member will be considered and evaluated individually.
5. The evaluation of the final thesis written report will be common for all the candidates of the group. Concerning this, the supervisor will instruct and monitor the students in order to guarantee that all the members of the group will contribute to the progress and the writing of the report in a substantially equal way. In any case, different evaluations can be given for the individual presentation of the work by each candidate, as established by the guidelines provided by the Coordinator for the Master of Science in Computer Science.
6. If the supervisor recognises that one of the members of the group is not effectively participating to the thesis work, he/she can exclude this member from the group. In this case, the excluded student will have to find again a supervisor and restart the whole procedure described in Article 1.

Article 6 – Discussion of the thesis work

1. Concerning the evaluation of the thesis, the student, to obtain the degree, must discuss the work with three different committees, as specified in the following:
 - a. during the intermediate evaluation the student (the group, if group thesis) presents the current state of the work to a committee nominated by the Coordinator of the Master of Science in Computer Science, as established in Article 8. The presentation will be individual and the time slot will be of 15 minutes (for each student in case of group thesis). The committee establishes if the student (the group) can present the total work in the corresponding final exam session, as described in Article 7.
 - b. The defence (pre-laurea) consists of a presentation of the work by the student (each member of the group, in case of group thesis) and of questions from the committee. Each student will have a time slot of 30 minutes for the presentation.
 - c. At the graduation ceremony (laurea) the discussion has mainly a dissemination purpose, therefore technical and methodological details can be abstracted in order to make the presentation suitable for an audience of people that are not expert on the topic of study. The time slot for the presentation is of 10 minutes (for each student in case of group thesis) and must be given in English.
2. The committee members must have the possibility of consulting the final thesis written report during the evaluation. For this purpose, the student must bring with him/her a printed copy of the report during the defence (pre-laurea) and during the graduation ceremony (laurea).

Article 7 - Intermediate evaluation committee

1. The Intermediate evaluation committee is appointed by the Coordinator of the Master of Science in Computer Science and it includes the candidate's supervisor plus at least two additional teachers satisfying the condition expressed in Article 2, and that are faculty members of one of the UNICAM schools. At least one member of the commission should belong to the computer science division. The Coordinator of the Master degree appoints also a president for the committee that act as coordinator.
2. The Coordinator of the Master of Science in Computer Science establishes the place, date and time for the intermediate defence session. Information concerning the intermediate defence session is distributed with a message to the official mailing list of the computer science

division, and to each member of the committee. Committee members can unanimously agree on changing the date or place of the intermediate defence session. In such a case the committee president will inform the members of computer science division sending a message to the mailing list of the division. It is a precise duty of the supervisor to inform the candidate in reference to the place and date of the intermediate defence session.

3. The intermediate evaluation committee provides an evaluation on the maturity of the work developed by the candidate (the group) until that point, and decides if it is reasonable that the work can evolve into an acceptable work by the date of the selected final exam session. In case of a positive evaluation the candidate (the group) will have the possibility to take part to the defence during the selected final exam session. In case the committee judges the work non-satisfactory the candidate (the group) will not have the possibility of defend the thesis in the selected final exam session. The committee will assign a mark to the presented work in the range [1-3], as established in Article 9. The mark will concur to the computation of the final mark, as defined in Article 9.
4. In case the student (the group) positively passes the intermediate evaluation but he/she will not be able to finish the thesis work in time for the defence, he/she will be automatically admitted to the successive final exam session without the need of being evaluated another time by an intermediate evaluation committee. The mark delivered by the intermediate evaluation committee will be kept until the student (group) takes part to a defence. It is possible for the student's (group) supervisor to contravene to such rule asking for a further intermediate evaluation. Such a request has to be carefully motivated, and in general should refer to a change to the original thesis objectives.
5. The Coordinator of the Master of Science in Computer Science delivers a set of guidelines to which the committees should conform in relation to the definition of the mark to be assigned to the presented work. The guidelines, in particular, establish the weight of the different aspects concurring to the final mark.

Article 8 - Defence committee

1. The defence committee is appointed by the the Coordinator of the Master of Science in Computer Science and it is composed by the student's (group) supervisor plus at least two additional teachers satisfying the condition expressed in Article 2, and that are faculty members of one of the UNICAM's school. At least one member of the commission should belong to the computer science division. The Coordinator of the Master degree appoint also a president for the committee that act as coordinator.
2. The Coordinator of the Master of Science in Computer Science establishes the place, date and time for the defence session. Information concerning the defence session is distributed with a message to the official mailing list of the computer science division, and to each member of the committee. Committee members can unanimously agree on changing the date or place of the defence session. In such case the committee president will inform the members of computer science division sending a message to the mailing list of the division. It is a precise duty of the supervisor to inform the candidate in reference to the place and date of the intermediate defence session.
3. The defence committee assigns a mark to the presented work in the range [1 – 30]. No honour can be assigned. The mark concurs to the definition of the final mark as defined in Article 9.
4. The Coordinator of the Master of Science in Computer Science delivers a set of guidelines to which the committees should conform in relation to the definition of the mark to be assigned to

a thesis work. The guidelines in particular establish the weight of the different aspects concurring to the final mark.

Article 9 – Computation of the final degree mark

The final degree mark is calculated using the following formula:

$$\text{Degree mark} = \text{WM} \times 83/30 + \text{IEM} + \text{DM} + (\text{L} + \text{DD}) \times 5/100$$

where:

- WM represents the arithmetic mean of the marks of the exams in the last approved student study plan, weighted by the number of credits
- IEM represents the intermediate evaluation mark
- DM represents the defence mark, i.e. the mark got by the student at the defence (*pre-laurea*)
- L represents the total number of credits corresponding to the exams passed with honours (*cum laude*)
- DD represents the number of credits in the student study plan acquired in foreign universities participating to a Double Degree program with UNICAM.

Article 10 – Double Degree Students

1. In case of students originally enrolled at UNICAM and that have then participated to a Double Degree mobility program towards a partner university, the computation of the final degree mark will be done by means of the same formula defined in the Article 9 where:

a. WM is calculated according to the activities performed at UNICAM and the activities performed at the partner university recognized by UNICAM according to the rules specified in the Double Degree agreement.

2. In case of students originally enrolled at a partner university and that have then participated to a Double Degree mobility program towards UNICAM, the computation of the final degree mark will be done by means of the same formula defined in the Article 9 where:

a. WM is calculated according to the activities performed at UNICAM and the activities performed at the partner university recognized by UNICAM according to the rules specified in the Double Degree agreement, while DD corresponds to the number of credits acquired at UNICAM.

Article 11 - Writing of the manuscript

1. The thesis must be composed of at least the following parts and must comply with the following rules:

Frontispiece: The title page must include the logo and the heading of the University of Camerino, the words “School of Science and Technology”, the name of the degree course and, in the centre, in large characters, the title of the thesis. On the title page the supervisors, all co-supervisors, including any

company tutor, are shown in the lower right corner. The name of the candidate must instead be placed in the lower left one. Examples of compliant formats will be made available on the teaching website of the Master Degree in Computer Science.

Introduction: The introduction should clearly highlight the following aspects:

- The motivations and the context in which the thesis is placed. This description must highlight clearly what is the problem that the thesis wants to deal with. If the work done is related to the development of a particular software module, it will be necessary to highlight the deficit that this software module is going to fill.
- The objectives of the thesis, related to the thesis context.
- A list of the most important contributions of the thesis. For example, for a thesis focused on a software project, this may be the list of the most useful and original implemented features.
- A list of the technical problems that had to be solved. A brief description of the organization of the manuscript and the chapters contained therein.

Conclusions: The conclusions summarize the main results of the thesis work and indicate possible directions in which the work could continue.

Bibliography: The bibliography is a list of references to information sources that were consulted during the writing of the thesis work. Normally every bibliographic reference is associated with a number or a label that can be referenced in the body of the text. References should be used as much as possible in the body of the text, in such a way that it is easy for the reader to reconstruct the source of the proposed statements.

Methods, tools and contributions: This chapter must be mandatory in the case of group thesis and will describe the methodologies and tools adopted in order to organize the collaborative work. The chapter will also have to break the role played by each of the group members and in particular report which activities have been carried out by each of them.

2. On the teaching website of the course, guidelines for the layout of the manuscript are made available, as well as for the presentation of the graduation and pre-degree sessions.

Transitional provision - Application of the rules

1. This regulation will hold after its approval by the School of Science and Technology, except Article 9 and those ones dependent on it. These articles will instead be applied to students enrolled in the first year of the Master of Science in Computer Science starting from the academic year 2016/2017, and also to those who come from courses of study and who have been (or will be) aggregated to the same cohort. The Coordinator of the Master program draws up a copy of this regulation in English, which guarantees to be compliant to the original one
2. Table 2 shows a possible configuration of deadline dates to be considered for the four graduation sessions related to the 2016/2017 Academic Year.

Graduation Session	Registration deadline	Intermediate Evaluation
Wed, 26 Jul 2017	Fri, 24 Feb 2017	29 May - 1 Jun 2017
Thu, 26 Oct 2017	Fri, 28 Apr 2017	24 - 28 Jul 2017
Thu, 25 Jan 2018	Fri, 28 Jul 2017	27 Nov - 1 Dec 2017
Wed, 11 Apr 2018	Fri, 10 Nov 2017	26 Feb - 2 Mar 2018

Table 2: Example of deadline configuration.

Camerino, 22nd March 2017

The Coordinator of the Master of Science in Computer Science (LM-18) Prof. Andrea Polini

The Director of the School of Science and Technology Prof. David Vitali