
Directives for the Master Thesis

1. Legal basis (from Study regulations of the faculty 2021)

Art. 26

1. The Master thesis (MT) is a paper written individually that proves the student's ability to apply a suitable methodology to analyze and investigate a topic in clinical, biomedical, bioinformatic or leading up to humanistic fields.
2. The list of MT topics with indication of the corresponding thesis director is made available to students.
3. The thesis director is a member of the Faculty (full professor, assistant professor, associate professor, private lecturer, teacher researcher, MER, group leader of affiliated institutes) or a professor of a Faculty of (bio) medicine at another Swiss university or a third party with the prior approval of the board of professors.
4. The thesis director may be assisted by a co-director appointed by him/her.
5. The supervision of MT may be delegated to third parties, while the responsibility remains with the thesis director in these cases as well
6. The thesis director defines the content, the plan and the method of the MT in the structured form provided for and signed jointly with the student and provides, if necessary, for its submission and approval by the competent Ethics Committee.
7. The final version of the MT must be submitted by 31 May of the third year of the Master's.
8. The thesis director approves or rejects the MT.
9. In the latter case, the student submits a new MT on a new topic. A second failure leads to exclusion from medical studies at a Swiss university.
10. For further details, please refer to the "Directives for the Master's thesis".

2. General considerations

2.1. Scope

The Master thesis is a personal paper that demonstrates the student's ability to use a suitable methodological toolkit to **analyse** and **deepen** a topic related to the clinic, to biomedicine, to computational science and/or to human sciences.

2.2. Delivery

1. The Master thesis must be delivered by the end of May of the sixth semester of the Master, as a mandatory requirement to be able to register for the federal exams.
2. Students may submit their Master's thesis not before having obtained at least 60 credits in the Master of Medicine.
3. The Master thesis must be written in Italian, German, French or English, with the prior agreement of the thesis director.

2.3. Director and co-Director

1. In carrying out the data collection and the drafting of the thesis, the student will be guided by the Director, a *Privat Dozent*, a Professor of the Faculty or a Group Leader of an Institute that collaborates with the Faculty or of another university in Switzerland.
2. In this function, the Director may be assisted by a co-Director appointed by him. The co-Director must be competent on the subject and active in the Faculty, in an Institute or institution that collaborates with the Faculty or of another university, including universities abroad.
3. The Director and co-Director may be supported by an external expert with a university education degree.
4. The Director of the Master thesis is responsible for evaluating the need to obtain the authorisation of the Swiss ethical authorities (see <https://submissions.swissethics.ch/en/>).
5. The Director of a Master thesis can follow a maximum of 6 thesis, 2 per academic year.

2.4. List of possible topics

1. To facilitate the student's choice, the Faculty publishes a list of topics in the fields related to the clinic, to biomedicine, to computational science and to human sciences.
2. The choice of topics takes into account the educational potential, the relevance and the feasibility within the time limits provided for a Master thesis.
3. The student, in agreement with the thesis Director, may propose a topic not included in the list.
4. The Master thesis may later be extended into a research project that will be the subject of a thesis written in order to obtain the title of Dr. med.

2.5. Choice of topic

1. The topic of the Master thesis is chosen in agreement with the thesis Director, in one of his areas of specialisation.
2. The choice of the topic and the Director must be made by the 31 december of the first semester of the Master of medicine. The student administration has the right to extend the deadline of the deposit of the Master thesis' title in specific and justified cases.
3. With the agreement of the thesis Director, the student can replace the Master thesis with his own published article (already published or accepted for publication), in which he is first, second or last author.
4. If the student actively participated to a publication in which he is co-author but not first, second or last author, this publication (already published or accepted for publication) may be submitted together with a short paper (1000 words) presenting the results obtained. The paper has to be structured as a thesis (introduction, methods, etc.). and has to be accompanied by a letter written by the thesis Director describing the role of the student in the collaborative work and in the writing of the publication.
5. In exceptional cases, the Director of the Master thesis may agree to entrust a topic to two students. Contributions must be clearly distinguishable, and written work and work performance must be assessable separately.
6. The student, the Director and co-Director may refer to the scientific methodology skills consistent with the chosen topic, present in the Faculty, in other USI faculties and in the institutes that collaborate with USI.

2.6. Temporal commitment of the thesis

1. The Master thesis counts for 15 ECTS (1 ECTS/25-30 hours) = 375-450 hours of work. The workload dedicated by the student to the Master thesis could then be equal to about 10 weeks working 40 hours/week, or 3 years working either for 11 hours/month or for 3 hours/week.
2. During the last semester (sixth semester of the Master) the study plan foresees 4 weeks time for the completion of the thesis.

2.7. Evaluation

1. The Master thesis is accepted by the thesis Director (if applicable supported by the co-Director and by the external expert). A defense of the Master thesis is not foreseen.
2. The evaluation will be expressed by the thesis Director with a score from 1 (minimum) to 10 (maximum), the pass mark being set at 6.
3. The student must submit the evaluation of the Master thesis to the student administration using the appropriate form signed by the Director (and, if applicable, by the co-Director) and by the student himself (Document "Master thesis evaluation").
4. The candidate whose thesis is not accepted can be authorised to present a new Master thesis, choosing a different topic.

3. Form and content of the master thesis

3.1. Form

The Faculty recommends between 3'000 and 12'000 words (abstracts, index, bibliography and appendices are excluded from the word count).

3.2. Structure of the thesis

The Master thesis includes the following mandatory sections: abstract, introduction, materials and methods, results, discussion or conclusion and recommendations. Other elements may be added to this structure in agreement with the Director.

3.3. Style sheet

Rigorous attention must be paid to the style of presentation, the bibliography and the bibliographical references. A style sheet is attached to this document (Annex 1).

4. Notification and delivery methods

4.1. Master thesis agreement

1. An agreement is drawn up between the student and the Director of the master thesis, which defines the topic, the extent of the expected in-depth study, the deadlines for the various stages and the language of the thesis (Document "Master thesis agreement").
2. A scan of the agreement, signed by the student, the Thesis Director and if applicable by the co-Director, has to be sent to the student administration.

4.2. Deposit of the thesis

The final version of the thesis in PDF format must be delivered to the student administration by the end of May of the sixth semester of the Master in Medicine, together with the "Declaration against plagiarism" and the evaluation form referred to in point 1.8.3. The student administration will deposit a copy of the thesis to the USI's library as a non-consultable text.

5. Unlawful acts

1. The student who delivers a Master thesis that has not been developed and written by himself, in which the student passes off as his own the results of third-parties or uses sources which are not permitted, commits plagiarism. Each part of the text taken from another source must be followed by the precise quotation of that source, in accordance with the procedures set out in the style sheet.
2. The student administration verifies the Master thesis through the electronic tool for the prevention of plagiarism.
3. Plagiarism makes the sanctions provided by the Faculty's Study Regulations applicable.

6. Evaluation and quality

1. Each year the Faculty carries out a general evaluation of the quality of the Master thesis based on the various parameters of relevance, educational potential and feasibility.

2. If necessary, amendments to these directives or to the organisational structure are suggested.

7. Effective date

This directive was approved by the Council of Professors on 09.09.2019 and comes into force immediately. The last emendments were approved by the Council of Professors on 11.12.2023, take effect immediately and apply to students with BioMed IDs from S-23 onwards.

Lugano, 12.12.2023

Annex 1: Style sheet

Annex 1

Style sheet

For the writing of the Master thesis

The following notes are intended as a brief, non-exhaustive guide to the preparation or compilation of the bibliography and bibliographical references in the text. The style of presentation of a bibliography varies from one publishing house to another, from one scientific journal to another. The proposed style is the result of a synthesis of some of the best known practices, and has the merit, we believe, of simplicity. Whether this style is adopted or modified, the principle of coherence remains valid: any mix of practices within a bibliographic list must be avoided.

1. General settings

1. The choice of font is left to the author, as far as it is reasonable. The most commonly used characters are: Times New Roman, Garamond, Helvetica, Bookman Old Style and Arial.
2. Recommended font size: 11 pt. Line spacing: 1.5, 2 cm margins (above, below, left and right).
3. Each new chapter starts on a new page.
4. The basic sections of the text are the following:
 - The abstract, with a length of about one or two pages, summarises the content of the Master thesis.
 - The index lists the elements that make up the thesis: parts, chapters and sections, numbered consecutively.
 - In the preliminary part, the following can be inserted: a dedication, thanks, a premise and a list of abbreviations or acronyms used in the text.
 - Graphs, tables and images each bear an individual title and an indication of the source, and must be numbered consecutively (and presented at the end of the work).
 - The introduction usually consists of the objectives of the thesis, the description of the topic addressed, the methodology used and the plan of the thesis.
 - The final chapter generally includes the results of the research, the personal re-evaluation of the applied methodology and the author's suggestions for possible developments in future research.
5. L'ordine delle varie parti componenti la tesi di Master è il seguente:
 - Frontispiece
 - Abstract
 - Index
 - Dedication (eventual)
 - Thanks (eventual)
 - List of abbreviations (eventual)
 - List of Charts and Tables
 - Foreword (eventual)
 - Introduction
 - Chapter 1

- Chapter 2, etc.
- Conclusions
- Bibliographic references

2. References

1. Any quotation or reference to an author or work within the text must be indicated immediately, in the text itself, with a number in brackets.

3. Bibliographic sources

1. For each book, article, report, author cited, it is necessary to provide the precise and complete source in the Bibliography.
2. Quote only scientific journals and not books (excluding also UpToDate).
3. All authors of the article must be quoted.
4. The title of the journal should be shortened in line with international recommendations.
5. The title of the article must be in the original language (and not translated into English; see nr. 7. example c).
6. The number of references should be no less than 20 and no more than 50 (except for systematic reviews).
7. Example of quotes:
 - a. You CH, Lee KY, Chey RY, Menguy R, Rossi A, Bianchi AGL. Electrogastrographic study of patients with unexplained nausea, bloating and vomiting. *Gastroenterology* 1980 ; 79:311-4.
 - b. Jacquemont S, Reymond A, Zufferey F, Harewood L, Walters RG, Kutalik Z, Martinet D, Shen Y, Valsesia A, Beckmann ND, Thorleifsson G, Belfiore M, Bouquillon S, Campion D, de Leeuw N, de Vries BB, Esko T, Fernandez BA, Fernández-Aranda F, Fernández-Real JM, Gratacòs M, Guilmatre A, Hoyer J, Jarvelin MR, Kooy RF, Kurg A, Le Caignec C, Männik K, Platt OS, Sanlaville D, Van Haelst MM, Villatoro Gomez S, Walha F, Wu BL, Yu Y, Aboura A, Addor MC, Alembik Y, Antonarakis SE, Arveiler B, Barth M, Bednarek N, Béna F, Bergmann S, Beri M, Bernardini L, Blaumeiser B, Bonneau D, Bottani A, Boute O, Brunner HG, Cailley D, Callier P, Chiesa J, Chrast J, Coin L, Coutton C, Cuisset JM, Cuvellier JC, David A, de Freminville B, Delobel B, Delrue MA, Demeer B, Descamps D, Didelot G, Dieterich K, Disciglio V, DoCo-Fenzy M, Drunat S, Duban-Bedu B, Dubourg C, El-Sayed Moustafa JS, Elliott P, Faas BH, Faivre L, Faudet A, Fellmann F, Ferrarini A, Fisher R, Flori E, Forer L, Gaillard D, Gerard M, Gieger C, Gimelli S, Gimelli G, Grabe HJ, Guichet A, Guillin O, Hartikainen AL, Heron D, Hippolyte L, Holder M, Homuth G, Isidor B, Jaillard S, Jaros Z, Jiménez-Murcia S, Helas GJ, Jonveaux P, Mirror extreme BMI phenotypes associated with gene dosage at the chromosome 16p11.2 locus. *Nature*. 2011;478:97-102.
 - c. Massone L, Borghi S, Pestarino A, Piccini R, Gambini C. Localisations palmaires purpuriques de la dermatite herpétiforme. *Ann Dermatol Vénereol* 1987;114:1545-1547.