

## **Guidelines for the Master Thesis 2024**

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- Goal:** The goal of the Master thesis is to learn scientific work and the implementation of a research project in a practical way. This includes research in the relevant specialist literature, formulating questions and hypotheses, planning and conducting laboratory experiments or studies, analysing and presenting the results, writing a report or publication, and an oral presentation of the work.
- Duration, timing:** The Master thesis lasts **6 months (26 weeks)**. It takes place in the time slot from the beginning of January to the beginning of August in the 1st year of the Master's programme (overall year 4). It must be started between January 1st and February 1st. The supervisor and the student agree on the exact starting date.
- Part-time: It is also possible to perform the Master thesis on a part-time basis of 80%, i.e. 4 working days per week, e.g. in the case of a part-time occupation or childcare duties. In this case, the Master thesis is extended by 5 weeks and lasts from the beginning of January to the beginning/middle of August. The approval of the responsible person (project leader) is required.
- Vacations:** An extension of the Master thesis for vacations during the Master thesis is not possible. Longer vacations should therefore be taken before or after the Master thesis. During the Master thesis, students are entitled to take **5 days off**. In agreement with the responsible person, these 5 days can be taken individually or consecutively.
- Elective courses:** During the spring semester, the students take 1-2 elective courses (at least 3 ECTS points). **Students must be given the time to attend the elective courses and to study for the exams.**
- Topics:** The Master thesis can cover any topic in the field of Life-Sciences within Natural Sciences, in Pharmaceutical Sciences, Biomedical Sciences, and Veterinary Sciences. Furthermore, the students have the possibility to perform their Master thesis in an external institution such as a pharmaceutical company or another University in Switzerland or abroad.
- Responsible person:** The Master thesis is supervised by a person from the Faculty of Medicine, the Faculty of Natural Sciences, or the Faculty of Veterinary Medicine (Vetsuisse) of the University of Bern who is entitled to do so according to Article 22, paragraph 1 of the study regulations for the Master curriculum in Pharmacy (RSL Pharm).

**Tasks of the responsible person (project leader):** To provide the workplace, equipment and required materials. For a good start, a good introduction of the students into the research project and the required working methods is essential. The main task is the supervision of the

students during their work and their integration into the team. The daily supervision can be delegated to an additional supervisor within the team.

**External Master thesis:** If the Master thesis is carried out externally, co-leadership by a competent person on site and a co-supervisor from the University of Bern (see above) is required.

**Compensation:** The students will not receive any compensation. The department/institute will receive a fix compensation of CHF 4'800 for each Master thesis to cover their time, effort and material costs. In case of separate leading and supervising persons, CHF 1'800 will be credited for the responsible person and CHF 3'000 for the supervising person. Please clarify with the head of your department how the credit will be passed on within your department. Compensation is unfortunately not possible for external master theses. (→ also see separate detailed information)

**Selection of topics:** A selection of topics will be published at the beginning of the autumn semester in September on the Pharmacy Website (ILIAS platform). Students can also suggest their own topic and supervisor (and if external, also a co-supervisor from the University of Bern) – in that case the topic and supervisor(s) must be approved by the Director of Studies (Studienleitung).

Students contact the responsible person of the topic of their choice. If more than one student apply for a topic the responsible person decides to whom he/she would like to assign the topic. Students and responsible persons/supervisors then fill out the **Master thesis agreement**, which is submitted by the students to the study coordination by **November 1st**.

**Execution:** The Master thesis is an individual work. Group work is not possible.

**Written thesis:** The Master thesis is a written report containing the following **chapters**: Title page (according to the template), summary, introduction, question and objectives, material and methods, results, discussion, bibliography (Vancouver style), appendix (raw data, data analysis, etc.), explanation (on last page, according to the template).

The written thesis should be **20-30 A4 pages** long (without title page, bibliography, appendix and explanation), font size 11, Arial or Times New Roman font, line spacing 1.5. If the thesis greatly (by more than 10%) exceeds 30 pages, the text should be shortened, and it can be considered to move some data into the appendix and present a summary in the main text. The thesis can be written in English, German or French, in agreement with the supervisor.

**Submission:** The written thesis must be submitted by the student by uploading it **into PlagScan**, at the latest 6 months after the start of the Master thesis. The instructions for PlagScan are available on the Ilias platform (topic: Masterarbeit). The responsible person will receive the thesis via PlagScan incl. the plagiarism test report. In case of more than 15% duplicate content, the thesis must be revised and resubmitted. The

thesis will be evaluated within 4 weeks by the responsible person/supervisor according to the criteria listed below and marked on the assessment form.

**Oral presentation:** The oral presentation takes place around the end of the six-months Master thesis period in an internal seminar at the institute in front of an internal and if possible also external audience. It lasts **30-45 minutes**. Half of the time should consist of the presentation and the other half of a questioning/discussion on the Master thesis and related areas. The oral presentation will be evaluated by the responsible person/ supervisor according to the criteria listed below and marked on the assessment form.

**Assessment:** The Master thesis and oral presentation will be marked by the supervisor(s) according to the criteria listed below on the assessment form. The grade for the thesis consists half of the grade for the written report and half of the grade for the working method (average must be a pass i.e. grade 4 or above, with compensation possible). The grade for the oral presentation must also be a pass. The Master thesis and presentation can each be repeated once. The final grade consists of the grades for the practical work, the written report, and the oral presentation, 1/3 each, rounded to half grades.

The responsible person gives the **assessment form** to the student and sends an electronic copy to the study coordination by 31<sup>st</sup> August at the latest.

**Criteria:** Practical work

- Understanding of the open questions/problems, independence in planning and implementation
- Commitment and motivation
- Quality of project work/laboratory work: planning, organisation, accurate and reliable work
- Laboratory journal/documentation: presentation, reproducibility
- Independence in interpretation and evaluation of the results
- Independence in writing the report

Written report

- General structure
- Introduction: Current literature correctly reproduced, open questions and hypotheses formulated, aim of the project is clear
- Material and methods: Complete and clearly described so that the experiments/study/data collection can be followed
- Display of the results: Objectively described and illustrated with the help of meaningful tables and graphs
- Discussion: interpretation of the results, limitations, scientific argumentation
- References: Correctly cited
- Language: clarity, comprehensibility
- Annex appropriate and complete

- Plagiarism examination: The written report is subjected to a plagiarism examination

#### Oral presentation

##### 1. Talk:

- General structure of the talk (introduction, main part, conclusion)
- Quality of the slides (readability, use of font, graphics and colour, structure)
- Presentation (speech flow, eye contact, gestures, authenticity)
- Linguistic accuracy
- Relevance of the contents (the most important results of the Master thesis were presented and discussed)

##### 2. Discussion:

- Answering questions (of knowledge)
- Formulating and substantiating hypotheses
- "Depth" of the scientific discussion

## Summary of the time schedule

The tasks of the **students** and **responsible persons** are highlighted in colour.

| When  | Who                 | What  |
|---|---------------------|---|
| May 2023  | Director of Studies | Invitation to research group leaders at the Faculties of Medicine, Natural Sciences, and Veterinary Medicine to submit topics for Master theses                                     |
| By 20.08.2023   | Responsible persons | Submission of topics for master theses, using the template, to the Director of Studies and Study coordination   |
| Start of autumn semester<br>18.09.2023                      | Study coordination  | Publication of all submitted topics on the Pharmacy Website (ILIAS platform)  |
| 18.09.2023 until end of October 2023                        | Students            | Students contact the responsible person of the topic of their choice, agree with him/her on the start of the Master thesis and together fill in the Master thesis agreement         |
| By 01.11.2023   | Students            | Submission of the Master thesis agreement (electronic copy) to the study coordination   |
| Between 01.01. und 01.02.2024                               | Students            | Start of the Master thesis  |
| Spring semester 2024  | Students            | Attendance of the mandatory elective courses (at least 3 ECTS)  |
| 6 months after start  | Students            | Submission of the written thesis to PlagScan 6 months after the start (i.e. who started on the 3 <sup>rd</sup> January, has to submit by 3 <sup>rd</sup> July at the latest)        |
| Approx. 6 months after start (flexibility of +/- 2-3 weeks) | Students            | Oral presentation of the work in an internal seminar  |
| Within 4 weeks after submission (until 31.08.2024)          | Responsible persons | Evaluation of the practical work, written thesis and oral presentation. Handing over the assessment form to the student and submission (electronic copy) to the study coordination. |
| After receiving the assessment form                         | Study coordination  | Enter the results into the KSL  |

If you have any questions, please contact Prof. Dr. phil. Verena Schröder (Director of Studies for the Master in Pharmacy, E-mail: [verena.schroeder@unibe.ch](mailto:verena.schroeder@unibe.ch)) or Mrs. Barbara Rechsteiner (Study coordination, E-mail: [barbara.rechsteiner@unibe.ch](mailto:barbara.rechsteiner@unibe.ch)).