

MASTER'S THESIS REGULATIONS (JULY 17, 2023)

GENERAL INFORMATION

A master's thesis represents a supervised research project realized as a part of the study program. Accordingly, it cannot be the object of an employment contract or a specific financial compensation. A thesis must represent novel research work and must provide a challenging and educational project, which can be completed in six months full-time work with a reasonable effort.

DURATION

- In general, all work on the master's thesis – including submission of the written thesis and other items (see below) – has to be completed within six months.
- For the reason of part time working, the official duration can be extended up to nine months. Further extension is only possible if there are other reasons for an extension. These may be prolonged sickness, military service, unexpected difficulties in the course of the thesis which are not the student's responsibility, etc. The student has to submit a written request to the study coordination including proof (e.g., confirmation of the employer, medical certificate) 2 weeks before the end of those six months.

EXAMINERS AND SUPERVISORS

- Each master's thesis must have at least two examiners (primary academic responsibility) and a first supervisor (primary scientific responsibility). The first supervisor must be one of these examiners. One or two additional supervisors (second and third supervisor) may be assigned.
- One of the examiners of a master's thesis must be a lecturer of UniBE or BFH-TI within this BME master's program who holds a PhD degree or an equivalent scientific qualification.
- The other examiner must have at least a master's degree or an equivalent degree in biomedical engineering or in a related field.
- The first supervisor must be affiliated to UniBE or BFH-TI and have at least a master's degree or an equivalent degree in biomedical engineering or in a related field.
- As a special opportunity, it is possible for outstanding candidates to realize an externally supervised master's thesis in collaboration with a company or a university outside Switzerland. The student and the external first supervisor have to submit an application to the study coordination with the following documents: master's thesis proposal, registration form for master's thesis, letter of motivation and transcript of records from the student, letter of commitment and curriculum vitae from the first supervisor. All applications will be evaluated by the program management.

INTELLECTUAL PROPERTY RIGHTS AND CONFIDENTIALITY AGREEMENT

- Management of intellectual property (IP) rights lies within the responsibility of the first supervisor.
- The program management supplies standard contracts for regulation of IP rights and confidentiality, both for regular master's theses within research groups at the University of Bern (the Bern University of Applied Sciences supplies standard contracts of their own) and for master's theses supervised externally in collaboration with a company or a university outside Switzerland. Templates for these contracts can be found on Ilias (www.ilias.unibe.ch).

PROCEDURE

PROJECT PROPOSAL

- All master thesis project proposals are to be submitted by potential first supervisors to the study coordination for evaluation. Templates for proposals are provided on Ilias. The project description must include background information of the research, the goal of the project, the specific nature of the research work, and the required skills and experience of the student.
- All proposals will be evaluated by the program management to ensure that the project meets the required standards for scientific originality, organization, technical challenge, feasibility, and depth of supervision. A proposal may be approved, rejected or returned for revision prior to approval and publication on Ilias.

- In general, all approved proposals will be published on Ilias. If the project is of a confidential nature, the author of the proposal may request that the document is not published.

REGISTRATION

- According to the official regulations of the master's program (Reglement über das Studium und die Leistungskontrollen), a student must have collected all required ECTS credits from courses to start with the master's thesis. However, the program management has the possibility to make exceptions from this rule. Therefore, the following general exception was defined: the student must have acquired all ECTS credits from mandatory courses (with the exception of the course "Ethics in Biomedical Engineering", which is mandatory but treated like an elective course in this context). In addition, not more than 6 ECTS credits from elective courses can be missing. Further exceptions in case of minimal deviations from these conditions can be made on request. In this case, the student has to submit a letter of motivation including a list of all missing courses to the study coordination. It is advisable to submit this letter by email as soon as all required courses have been graded.
- Before registration, all courses in KSL have to be credited to the corresponding modules of the master's program.
- The student has to submit the following documents to the study coordination before the start of the master's thesis:
 - The project proposal
 - The official registration form with the signatures of the master student, the first examiner, the first supervisor and the additional examiner
 - If applicable: the above-mentioned letter of motivation if it was not handed in prior to the registration.
 - If the student plans to extend the thesis beyond six months: an employment confirmation for the duration of the master's project
- The registration form is evaluated by the study coordination in order to check if the student fulfills all requirements, followed by a final signature of the program management. The study coordination informs all people involved upon their decision on the registration.
- The master's project is not allowed to start before a positive decision has been sent.

THE USE OF AI TOOLS

According to the rules of the University of Bern, the supervisor decides whether Artificial Intelligence tools like ChatGPT or DeepL can be used to a certain extent (see also the [official guidelines](#)). However, it must be ensured that the main part of the work is the student's own contribution. In addition, the student must declare in the thesis where and to what extent AI tools are used. Moreover, the use of AI must be declared in the declaration of originality. Therefore, the University of Bern supplies two versions of the declaration of originality, depending on whether AI tools are used or not. Find the text of these declarations on the last page.

SUBMISSION

All required documents must be submitted to the study coordination office, to each of the first and second examiners and to all supervisors within the official deadline indicated on the student's registration form. Submission in due time is a requirement of project planning and organization and is therefore part of the thesis evaluation. As a consequence, submission delays may lead to deductions in the grading. If sent by registered mail, the post stamp is regarded as submission date. Submission of other project data may be requested by the supervisors.

The following items must be submitted by the closing date:

- **The thesis document**
 - The form of the written thesis is to be set in consultation and agreement with the first supervisor and should fulfill the general requirements of an academic thesis. Thesis templates are available on Ilias; the contents of the front page and the structure of the template must be used, the logos on the front page must not be removed or replaced.
 - The master's thesis must contain a declaration of originality (see below), which is signed by the master student. This declaration of originality has to be printed separately, signed and submitted to the study coordination. The original document can be sent by post or dropped off at the office.
 - One printed and one PDF copy of the thesis document must be submitted to both examiners, unless explicitly declined by an examiner. Simultaneously, a PDF copy has to be sent to the study coordination and all supervisors. We request that all printed copies are bound properly.

- **The one-page summary**
 - The template and style sheet available on Ilias must be used. Please submit the document in both Word and PDF format.
 - Since the one-page summary will be published in various forms, its content must be suitable for publication even if the thesis itself contains confidential information. It has to be written in English and be approved by all supervisors before submission.
- **The signed declaration of consent on the publication of the thesis document**
 - This declaration available on Ilias states whether the student agrees or does not agree with publication of his/her thesis document.

PRESENTATION AND DEFENSE

- The presentation and defense must take place at UniBe or BFH-TI no earlier than 2 weeks and within 4 weeks after complete and correct submission of all required documents. Date, location and name of the second examiner with contact information have to be organized by the student with the preliminary approval of the participants and communicated to the study coordination office at least 2 weeks in advance.
- The presentation of the master's thesis lasts 20 to 30 minutes with subsequent defense. In general, the presentation is open to the public and immediately followed by the master's thesis defense. If the student does not agree with publication of the thesis, the defense will be closed to the public. Both the first examiner and the second examiner must imperatively be present for both presentation and defense. The supervisor(s) should be present if feasible.
- An electronic version of the final presentation (in PDF format) must be submitted to the study coordination within two weeks after the presentation.

FINAL EVALUATION

- The final evaluation must be completed at the thesis defense. The mark for the project and the written document counts for 85%, the mark for the defense counts for 15% of the total mark for the master's thesis.
- The first and second examiner should agree on the marks. In case of disagreement, the mean of the proposed marks will be used. The opinion(s) of the supervisor(s) shall be heard. Both marks have to be transmitted to the study coordination using the standard final evaluation sheet, which is sent to the first examiner by the study coordination.

GRADUATION

- To be granted the master's title, the following requirements must be fulfilled:
 - The registration form for granting the diploma has been handed in to the study coordination.
 - The PDF version of the thesis presentation has been submitted.
 - The remaining exam fees of 150 CHF have been paid.
 - All badges and keys have been returned.
 - All ECTS credits required for graduation have been entered into the study profile in KSL.
 - The official rules for registration at the University of Bern have to be observed (see [Graduation](#)).
- The day when the last mark of the master's program has been submitted to the study coordination defines the graduation date. In most cases, this is the day that is associated with the mark for the master's thesis.

Bern, July 17, 2023

1. The wording if the use of AI tools is not permitted:

„Ich erkläre hiermit, dass ich diese Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen benutzt habe. Alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche gekennzeichnet. Ich erkläre weiter, dass ich keine unerlaubten Hilfsmittel verwendet habe, namentlich keine weiteren Personen mir beim Verfassen der Arbeit geholfen haben und ich keine Technologien der Künstlichen Intelligenz eingesetzt habe. Mir ist bekannt, dass andernfalls die Arbeit mit der Note 1 bewertet wird bzw. der Senat gemäss Artikel 36 Absatz 1 Buchstabe r des Gesetzes vom 5. September 1996 über die Universität zum Entzug des auf Grund dieser Arbeit verliehenen Titels berechtigt ist.

Für die Zwecke der Begutachtung und der Überprüfung der Einhaltung der Selbständigkeitserklärung bzw. der Reglemente betreffend Plagiate erteile ich der Universität Bern das Recht, die dazu erforderlichen Personendaten zu bearbeiten und Nutzungshandlungen vorzunehmen, insbesondere die schriftliche Arbeit zu vervielfältigen und dauerhaft in einer Datenbank zu speichern sowie diese zur Überprüfung von Arbeiten Dritter zu verwenden oder hierzu zur Verfügung zu stellen.“

2. The wording if the use of AI tools is permitted:

„Ich erkläre hiermit, dass ich diese Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen benutzt habe. Alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche gekennzeichnet. Als Hilfsmittel habe ich Künstliche Intelligenz verwendet. Sämtliche Elemente, die ich von einer Künstlichen Intelligenz übernommen habe, werden als solche deklariert und es finden sich die genaue Bezeichnung der verwendeten Technologie sowie die Angabe der «Prompts», die ich dafür eingesetzt habe. Mir ist bekannt, dass andernfalls die Arbeit mit der Note 1 bewertet wird bzw. der Senat gemäss Artikel 36 Absatz 1 Buchstabe r des Gesetzes vom 5. September 1996 über die Universität zum Entzug des auf Grund dieser Arbeit verliehenen Titels berechtigt ist.

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So far, the University of Bern has not supplied an English translation of this text. Therefore, the respective German text must be used in the thesis.