UNIVERSITY OF BERN MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE IN MEDICINE MASTER'S THESIS GUIDELINES

GENERAL INFORMATION

A master's thesis represents a supervised research project realized as one 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) must be completed within six months.
- In case of part-time work, the official duration can be extended up to nine months at the maximum. Other reasons for an extension may be prolonged sickness, military service or unexpected difficulties which are not the student's responsibility etc. (compare article 35 UniV) The student has to submit a written request to the study coordination including proof (e.g. confirmation of the employer, medical certificate etc.) two weeks before the end of those six months.

SUPERVISORS

- Each master's thesis must have one eligible supervisor from the Faculty of Medicine (compare articles 49 and 50 UniV / RSL AIM article 22). This supervisor has primary academic responsibility.
- A co-supervisor can be appointed by the Dean of the Faculty of Medicine for one specific master's thesis. He or she must be
 an eligible member of the University of Bern or an external expert with special qualifications in the respective research area.
 (compare articles 49 and 50 UniV / RSL AIM articles 22 and 29).
- It is possible to realize a master's thesis in collaboration with a company or a university outside Switzerland. The student, the supervisor and the co-supervisor have to submit an application to the study coordination with the following documents:
 - master's thesis proposal
 - o registration form for master's thesis
 - $\circ \quad \text{ letter of motivation }$
 - o transcript of records from the student
 - o letter of commitment and curriculum vitae from the co-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 UniBE, 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's thesis project proposals are to be submitted by potential supervisors to the study coordination for evaluation.
 Templates for proposals are provided on Ilias. The project description must include background information on 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 should not be published.

REGISTRATION





- According to the official regulations of the master's program, a student must have collected 80 ECTS credits from courses
 and have fulfilled all additional requirements (if applicable) to start with the master's thesis (SP AIM article 14 paragraph 5).
- 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:
 - project proposal
 - o official registration form with signatures (master student, supervisor(s))
 - o If applicable: the above-mentioned letter of motivation if not handed in prior to registration
 - o If the student plans to extend the thesis beyond six months: employment confirmation for duration of master's
- 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.

SUBMISSION

All required documents must be submitted to the study coordination office and to the supervisor(s) 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. If sent by registered mail, the post stamp is regarded as submission date. Submission of other project data may be requested by the supervisor(s).

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 supervisor(s) and should fulfill the general requirements of an academic thesis. The templates available on Ilias must be used, the logos on the front page must not be removed or replaced.
 - The written thesis must be in English.
 - The master's thesis must contain the following declaration of originality (version 1 or 2), which is dated and signed by the master's student:
 - Version 1 (without the use of AI): "Ich erkläre hiermit, dass ich diese Arbeit selbständig verfasst und keine anderen als die angegebenen Hilfsmittel benutzt habe. Alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche kenntlich gemacht. Mir ist bekannt, dass andernfalls der Senat gemäss dem Gesetz 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." (RSL article 31)
 - The legally not-binding translation of this statement (Version 1) is:
 - "I declare herewith that this thesis is my own work and that I have not used any sources other than those stated. I have indicated the adoption of quotations as well as thoughts taken from other authors as such in the thesis. I am aware that the Senate pursuant to Article 36 paragraph 1 literar of the University Act of September 5th, 1996 is authorized to revoke the title awarded on the basis of this thesis.
 - For the purposes of evaluation and verification of compliance with the declaration of originality and the regulations governing plagiarism, I hereby grant the University of Bern the right to process my personal data and to perform the acts of use this requires, in particular, to reproduce the written thesis and to store it permanently in a database, and to use said database, or to make said database available, to enable comparison with theses submitted by others."
 - Version 2 (with use of AI): ,, 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.

Für die Zwecke der Begutachtung und der .berprüfung 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 .berprüfung von Arbeiten Dritter zu verwenden oder hierzu zur Verfügung zu stellen."

- The legally not-binding translation of this statement (Version 2) has not been provided by the University of Bern (31.8.23)
- 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 the supervisor(s), unless explicitly declined by a supervisor. Simultaneously, a PDF copy must be sent to the study coordination and the supervisor(s).
 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 must be written in English and be approved by the
 supervisor(s) before submission.

PRESENTATION AND DEFENSE

- The presentation and defense must take place at UniBe no earlier than two weeks and within four weeks after complete and correct submission of all required documents. Date, location and name of the supervisor(s) 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 two 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. The supervisor(s) must imperatively be present for both presentation and defense.
- 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 overall grade for the thesis is calculated with a weighting of two-thirds for the written thesis and one-third for the oral master's thesis presentation.
- The thesis is assessed and graded by the supervisor or supervisors within four weeks of being submitted. If there is more than one supervisor, then the supervisors need to agree on a grade for the thesis.
- The final grade has to be transmitted to the study coordination using the standard final evaluation sheet, which is sent to the supervisor(s) by the study coordination. It can also be downloaded from Ilias.

GRADUATION

- To be granted the master's title, the following requirements must be fulfilled:
 - o 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.
 - o The remaining exam fees of 300 CHF have been paid (Art. 43 Abs. 1 UniV).
 - o All badges and keys have been returned.
 - All ECTS credits required for graduation have been entered into the study profile in KSL.
- The day when the last grade within 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 grade for the master's thesis.

Bern, December 5, 2022