

D UNIVERSITÄT BERN

## Regulations for the Study and Evaluations for the Specialized Master's Program in Artificial Intelligence in Medicine at the Faculty of Medicine (RSL AIM)

Dated January 20, 2021 (as of February 1, 2023)

The Faculty of Medicine,

based on Article 44 Paragraph 1 Letter c of the Law of September 5, 1996, on the University (UniG), Article 33 of the Regulation of September 12, 2012, on the University (UniV), and Article 43 of the Statute of the University of Bern dated June 7, 2011 (University Statute, UniSt), decides:

## I. General Provisions

**SCOPE** 

- **Art. 1** These regulations apply to all students studying Artificial Intelligence in Medicine (AIM) at the Faculty of Medicine (Faculty).
- <sup>2</sup> It also applies to students from other faculties of the University of Bern who take courses from the AIM Master's program as part of other degree programs.
- <sup>3</sup> Cooperation agreements and corresponding joint regulations as well as general agreements remain reserved.

STUDY OFFER

**Art. 2** The Faculty offers the following degree program: a. Master's program in Artificial Intelligence in Medicine (Mono 120 ECTS credits).

TITLE

- **Art. 3** The following title can be acquired:
  - a Master of Science in Artificial Intelligence in Medicine, University of Bern (M Sc AIM)

MEASUREMENT OF STUDY PERFORMANCE, EXPIRATION

- **Art. 4** <sup>1</sup> Study performance is measured according to the European Credit Transfer and Accumulation System (ECTS).
- <sup>2</sup> One ECTS point corresponds to a workload of 25 to 30 hours for students. A full-time academic year thus comprises 1500 to 1800 hours (60 ECTS credits).
- <sup>3</sup> ECTS credits are awarded based on controlled study performance
- <sup>4</sup> The number of ECTS credits that can be earned in a course is specified in the electronic course catalogue. All students who

successfully complete this course earn the same number of ECTS credits.

<sup>5</sup> ECTS credits can be credited to the study for a maximum of five years after acquisition. After more than five years, crediting is possible after individual case review, provided the competencies associated with the corresponding performance are still up to date.

#### **PERFORMANCE**

**Art. 5** <sup>1</sup> The program includes compulsory, elective, and optional courses, as well as a Master's thesis.

#### **MODULES**

#### **Art. 6** <sup>1</sup> Several course are combined into modules

- <sup>2</sup> A module is assigned the sum of the ECTS credits of the constituent courses.
- <sup>3</sup> A module can be examined through one or more evaluations. A module examined by a single performance assessment must not exceed 20 ECTS credits
- <sup>4</sup> If the grade of a module consists of several evaluations, it corresponds to the weighted average of the grades of the individual evaluations according to ECTS credits and is shown with two decimal places

#### STUDY PLAN

**Art. 7** <sup>1</sup> The Faculty Council issues a study plan approved by the University Management (Art. 39 Para. 1 Letter I UniG).

## **DIRECTORATE OF STUDIES**

**Art. 8** <sup>1</sup> The AIM directorate of studies is responsible for organizing the AIM Master's program, including evaluations.

#### STUDY COUNSELLING

**Art. 9** Students are entitled to regular study counselling, which is ensured by the directorate of studies.

### II. Studies

#### STUDY OBJECTIVE

**Art. 10** The study objectives are listed in the study plan.

## **ADMISSION AND ENROLMENT**

**Art. 11** <sup>1</sup> Admission is governed by the provisions of the university legislation and the enrolment procedure according to Articles 70 to 76 UniSt

<sup>2</sup> Students who have been excluded from a study program at a university due to failing evaluations, which is similar in orientation to the AIM Master's program, cannot be admitted.

# ADMISSION TO THE MASTER'S PROGRAM

**Art. 12** <sup>1</sup> Admission to the Master's program is governed by Article 29 Paragraph 4 UniG

<sup>&</sup>lt;sup>2</sup> Details are regulated in the study plan.

<sup>&</sup>lt;sup>2</sup> The study plan regulates the details of the program.

<sup>&</sup>lt;sup>2</sup> Details are regulated in the study plan

- <sup>2</sup> Admission requirement for the program is a Bachelor's degree from a Swiss university with a minimum grade of 5.0 in one of the study or subject areas listed in the study plan
- <sup>3</sup> Also admitted to the program are those who: a. Have a Bachelor's degree from a Swiss university with an unrounded grade of at least 4.5 in one of the study or subject areas listed in the study plan and b. Have demonstrated their suitability for the program in a standardized interview
- <sup>4</sup> Foreign Bachelor's degrees are checked for equivalence by the Dean. Admission is granted if the necessary prerequisites for the successful completion of the program can be acquired with additional achievements of a maximum of 60 ECTS credits
- <sup>5</sup> The study plan may require proof of sufficient language skills in the language of instruction, English
- <sup>6</sup> If the Bachelor's degree was obtained more than five years ago, its content is reviewed against current requirements. Admission may be granted if the necessary prerequisites for successful completion of the program can be acquired with additional achievements of a maximum of 60 ECTS credits

ADDITIONAL ACHIEVEMENTS

- **Art. 13** <sup>1</sup> Knowledge and skills not acquired in the Bachelor's program may be required as additional achievements, provided they do not exceed 60 ECTS credits. If the extent is exceeded, admission is not possible. Additional achievements in the form of conditions or requirements are stipulated by the Dean at the request of the directorate of studies.
- <sup>2</sup> Conditions must be fulfilled before admission to the program. Requirements must be fulfilled during the program within a deadline set by the Dean.
- <sup>3</sup> If admission is granted with requirements, failure to meet the requirements leads to exclusion. Requirements can include individual courses or existing modules from a suitable Bachelor's program at the University of Bern. Failed requirements cannot be compensated by other achievements.
- <sup>4</sup> Additional achievements can be recognized as an important reason for extending the study period according to Article 14 Paragraph 3.
- <sup>5</sup> Additional achievements are listed separately in the Diploma Supplement.
- <sup>6</sup> Details regarding additional achievements are regulated in the study plan.

REGULAR STUDY PERIOD, EXTENSION POSSIBILITIES

- **Art. 14** <sup>1</sup> The regular study period is four semesters.
- <sup>2</sup> An application for an extension of the study period is necessary if six semesters are exceeded. The application must be submitted before the end of the last semester of this period.
- <sup>3</sup> The study period can be extended for future semesters for important reasons (Art. 35 UniV). The extension is granted for a

maximum of two semesters. After that, a new application for extension for a maximum of two semesters must be submitted.

- <sup>4</sup> The directorate of studies is responsible for handling extension applications. Negative decisions are issued in the form of an appealable decree by the Dean. In the event of an approved extension, an individual schedule can be set.
- <sup>5</sup> When repeating Master's theses, a corresponding extension of the study period is granted by the directorate of studies upon written request. Negative decisions are issued in the form of an appealable decree by the Dean.
- <sup>6</sup> The study fee is governed by Article 39 UniV. A decision on a possible hardship application according to Article 39 Paragraph 3 UniV is independent of the decision on the extension of the study period.

STUDY EXCLUSION

- **Art. 15** <sup>1</sup> Anyone who exceeds six semesters without an approved extension (Art. 14) is excluded from the program by the Dean.
- <sup>2</sup> Anyone who has not completed any evaluations for a year is excluded from further studies. Important reasons according to Article 35 UniV remain reserved. The decision lies with the Dean.
- <sup>3</sup> Anyone who can no longer meet the requirements of the study plan is excluded from the program.
- <sup>4</sup> If admission to the program is granted with requirements, failure to meet the requirements leads to exclusion.

STUDY START

**Art. 16** The AIM Master's program starts in the fall semester

## III. Recognition of other study achievements

**PRINCIPLE** 

- **Art. 17** <sup>1</sup> The Dean decides on the recognition and crediting of study achievements obtained at other universities. The study achievements and degrees are checked for equivalence with the corresponding program at the University of Bern.
- <sup>2</sup> A study achievement can only be credited once towards a degree.
- <sup>3</sup> Agreements with the respective university and international agreements on mutual recognition of equivalences in higher education remain reserved.

LIMITS OF CREDITING OTHER STUDY ACHIEVEMENTS

**Art. 18** To receive a Master's degree from the Faculty, at least 30 ECTS credits must be earned at the University of Bern, and the Master's thesis must be written at the University of Bern.

SECOND STUDY

**Art. 19** <sup>1</sup> When starting the AIM Master's program as a second degree after completing a university Master's degree in a related field, an application for exemption from achievements can be made based on the first program.

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#### **CREDITING OF GRADES**

**Art. 20** <sup>1</sup> The Dean decides whether the crediting of study achievements is done with or without a grade.

<sup>2</sup> When achievements are exempted, the corresponding grades are not credited to the second degree.

## IV. Evaluations

## 1. General

#### TIME OF EVALUATIONS

**Art. 21** <sup>1</sup> Evaluations of the corresponding course take place before the start of lectures of the next semester. Excluded from this are evaluations of multi-part courses and module examinations.

## AUTHORIZED PERSONNEL FOR EVALUATIONS

**Art. 22** <sup>1</sup> The individuals authorized to conduct evaluations are the faculty lecturers as outlined in Article 49 letters a to g of the University Regulations (UniV).

#### **ORAL EXAMS**

**Art. 23** <sup>1</sup> Oral exams include, notably, oral course exams, oral module exams, and presentations.

## WRITTEN EXAMS

**Art. 24** <sup>1</sup> Written exams last between 60 and 180 minutes.

#### OTHER EVALUATIONS

**Art. 25** <sup>1</sup> Other evaluations arise particularly from internships and project work. Details are regulated by the study plan.

<sup>&</sup>lt;sup>2</sup> The exemption must not exceed 30 ECTS credits.

<sup>&</sup>lt;sup>3</sup> The Master's thesis cannot be exempted.

<sup>&</sup>lt;sup>2</sup> Mobility students have the opportunity to take parts of modules at the end of their stay.

<sup>&</sup>lt;sup>2</sup> Those authorized to supervise Master's theses are faculty lecturers as specified in Article 49 letters a to e1 and Article 50 paragraph 1 letter a of the UniV.

<sup>&</sup>lt;sup>3</sup> The Dean can authorize other faculty members and members of other faculties to supervise Master's theses and conduct evaluations.

<sup>&</sup>lt;sup>4</sup> Upon request from the study administration, the Dean can permit other individuals to conduct specific evaluations on a one-time basis.

<sup>&</sup>lt;sup>2</sup> If an oral exam is conducted by only one authorized person (Art. 22), a second person must be present.

<sup>&</sup>lt;sup>3</sup> A record is made of every oral exam, which includes the main questions, answers, and the course of the assessment.

<sup>&</sup>lt;sup>4</sup> Oral exams last between 15 and 60 minutes.

<sup>&</sup>lt;sup>2</sup> Those responsible for the exams must report the results of the written assessments to the appropriate office within one month.

<sup>&</sup>lt;sup>3</sup> After the results are announced, students have the right to review the assessment documents. The details of this process are governed by the study plan.

<sup>2</sup> The modalities are announced at the beginning of the course.

LANGUAGE

Art. 26 The language of the evaluations is english

### 2. Master's Thesis

MASTER'S THESIS

**Art. 27** <sup>1</sup> The Master's thesis consists of a written document and a public oral presentation, worth 30 ECTS credits.

<sup>2</sup> The study plan defines the duration and specifies when and under what conditions the Master's thesis can be started. The start date is documented in writing by the study coordination.

LANGUAGE

**Art. 28** The Master's thesis is written in English; exceptions may be granted upon request by the study coordination.

**SUPERVISION** 

**Art. 29** A Master's thesis is supervised by a person authorized according to Article 22, paragraphs 2 and 3. Co-supervision by a professionally competent person is possible.

**EXTENSION OF DEADLINES** 

**Art. 30** <sup>1</sup> The Master's thesis must be submitted to the supervisor within the specified deadline.

<sup>2</sup> If the Master's thesis cannot be completed on time due to important reasons (Art. 35 UniV), the duration can be extended by the supervisor(s) in consultation with the study coordination. Denial decisions are issued as appealable decrees by the Dean.

<sup>3</sup> If a candidate misses the submission deadline, the thesis will be graded with a mark of 1.

**DECLARATION** 

Art. 31 The Master's thesis must include the following dated and handwritten declaration at the end: "I hereby declare that I have written this thesis independently and have not used any sources other than those stated. All passages that are quoted or paraphrased from sources are marked as such. I am aware that otherwise the Senate is entitled to revoke the title awarded based on this work in accordance with Article 36, paragraph 1, letter r of the University Law of September 5, 1996.

For the purposes of assessment and verification of compliance with the declaration of independence and plagiarism regulations, I grant the University of Bern the right to process the necessary personal data and to take the required actions, particularly to reproduce and permanently store the written work in a database and to use it or make it available for checking third-party works."

ASSESSMENT OF THE MASTER'S THESIS

**Art. 32** <sup>1</sup> The written thesis is graded by the supervisor(s) within four weeks of submission, with the supervisors agreeing on a single grade.

<sup>2</sup> If the written thesis is graded as insufficient, it can be repeated once with a different topic and possibly a different supervisor(s).

<sup>3</sup> Every written thesis graded as sufficient must be presented orally.

- <sup>4</sup> The public oral presentation is graded by the supervisor(s), who must agree on a single grade.
- <sup>5</sup> If the oral presentation receives an insufficient initial grade, a second presentation must take place within a month with an additional, independent expert, with the examiners agreeing on a single grade.
- <sup>6</sup> The Master's thesis is considered passed if both the written thesis and the oral presentation are graded as sufficient individually. There is no possibility of compensation between the two parts.
- <sup>7</sup> The grade of the Master's thesis is composed of two-thirds from the written thesis and one-third from the oral presentation.

**COPYRIGHT** 

**Art. 33** The author of a Master's thesis is considered the author or co-author according to copyright legislation.

## 3. Conducting evaluations

**GENERAL PROVISIONS** 

**Art. 34** Evaluations are conducted according to the study plan.

REGISTRATION FOR EVALUATIONS

**Art. 35** Students register for the courses and are automatically registered for the corresponding evaluations.

INABILITY TO PARTICIPATE IN EVALUATIONS

- **Art. 36** <sup>1</sup> Anyone who, without a valid reason such as illness or accident, fails to attend or withdraws from an evaluation will receive a grade of 1 or the assessment will be marked as "not passed.".
- <sup>2</sup> The candidate must immediately inform the person responsible for the evaluation about their inability to attend or the withdrawal. In case of illness or accident, a medical certificate must be provided.
- <sup>3</sup> The study coordination decides whether valid reasons exist. Negative decisions are issued as a decree by the Dean.
- <sup>4</sup> The study coordination determines when the candidate must make up for the evaluation.
- <sup>5</sup> Anyone who appears for an evaluation is considered capable of taking the exam.

PREREQUISITES FOR PARTICI-PATION IN EVALUATIONS **Art. 37** The study plan may specify prerequisites for participation in evaluations.

EVALUATIONS AND GRADING SCALE

- **Art. 38** <sup>1</sup> Evaluations are generally graded on a scale from 1 to 6.
- <sup>2</sup> Non-graded evaluations are marked as "passed" for satisfactory or "not passed" for unsatisfactory performance. No more than one-quarter of the total ECTS credits in the program may be earned through non-graded evaluations.
- <sup>3</sup> Satisfactory performances are graded as follows:
  - 6: Excellent

5.5: Very good

5: Good

4.5: Satisfactory

4: Sufficient

<sup>&</sup>lt;sup>5</sup> Grades for evaluations that result from a weighted average follow the rounding rule:

Grade to be rounded in the range			Rounded grade
5.75		6	6
5.25		< 5.75	5.5
4.75		< 5.25	5
4.25		< 4.75	4.5
4		< 4.25	4
3.25		< 4	3.5
2.75		< 3.25	3
2.25		< 2.75	2.5
1.75		< 2.25	2
1.25		< 1.75	1.5
1		< 1.25	1

<sup>&</sup>lt;sup>6</sup> ECTS credits are only awarded for satisfactory evaluations.

## ANNOUNCEMENT OF THE RE-SULT OF EVALUATIONS

**Art. 39** <sup>1</sup> The result of each evaluation is communicated to the students through the electronic examination management system (KSL/CTS).

ACCESS TO FILES, ARCHIVING, AND DESTRUCTION OF DATA

**Art. 40** The guidelines of the university administration apply to access to files, archiving, and destruction of data

REPEATING EXAMS

**Art. 41** <sup>1</sup> Only unsatisfactory exams can be repeated once. Satisfactory exams are excluded from repetition.

USE OF UNAUTHORISED AIDS IN EXAMS

**Art. 42** <sup>1</sup> Anyone who tries to influence a grade to their own or someone else's advantage through deception, particularly through the use of unauthorized aids, will receive a grade of 1.

<sup>&</sup>lt;sup>4</sup> For insufficient performance, the following grades are used: 1, 1.5, 2, 2.5, 3, or 3.5.

<sup>&</sup>lt;sup>2</sup> Students are informed that an appealable decision can be requested from the Dean's Office. Additionally, students receive an annual statement once a year, which contains all grades not yet issued by that time.

<sup>&</sup>lt;sup>2</sup> The study plan regulates the modalities for repeating unsatisfactory exams.

<sup>&</sup>lt;sup>3</sup> When repeating unsatisfactory oral exams, the candidate can request to be examined by different examiners.

<sup>&</sup>lt;sup>4</sup> In the case of repetition, the evaluation of the most recently taken exam counts.

FEES FOR EXAMS

**Art. 43** <sup>1</sup> The fees for taking all exams in the study program amount to a total of 300 francs (Art. 43 para. 1 UniV).

<sup>2</sup> The entire fee is collected before the Master's diploma is issued.

## V. Graduation

#### **COMPLETION OF STUDIES**

**Art. 44** To initiate the graduation process, students must contact the study coordination. The study administration will verify whether all academic requirements have been met. The Dean's Office will issue the relevant documents (diploma, diploma supplement) and will provide these after receiving the fees (Art. 43).

#### PASSING CRITERIA AND GRADE

- **Art. 45** <sup>1</sup> The study program is considered passed if:
  - a all required evaluations according to the study plan have been completed,
  - b no grade is below 4.0,
  - c any required conditions have been met, and
  - d the master's thesis is graded at least 4.0.

TITLE AND DISTINCTION

**Art. 46** Upon successful completion of the study program, the faculty awards the title according to Article 3, letter a, with an overall distinction as follows:

Final grade			Title
5.75		6	summa cum laude
5.25		< 5.75	insigni cum laude
4.75		< 5.25	magna cum laude
4.25		< 4.75	cum laude
4		< 4.25	rite

## VI. Legal Proceedings

**PROCEDURE** 

**Art. 47** For procedural matters, the law of September 5, 1996, on the University (UniG) and the law of May 23, 1989, on Administrative Legal Remedies (VRPG) apply.

<sup>&</sup>lt;sup>2</sup> Carrying unauthorized aids or, in the case of a corresponding suspicion, refusing to cooperate in clarifying the matter with the supervisor is already considered deception.

<sup>&</sup>lt;sup>3</sup> In written exams and proof of performance, the supervisor records the incident in writing and reports it to the examining lecturer.

<sup>&</sup>lt;sup>4</sup> Disciplinary measures under university legislation and criminal prosecution remain reserved.

<sup>&</sup>lt;sup>2</sup> The final Master's grade corresponds to the weighted and unrounded average of the grades of the individual evaluations of the study program, based on ECTS credits. It is reported with two decimal places.

APPEAL PROCEDURE Art. 48 <sup>1</sup> Appeals against decisions made by the faculty organs

can be lodged with the Appeals Commission within 30 days.

<sup>2</sup> In cases of appeals against results of evaluations, complaints

regarding the appropriateness are inadmissible.

VII. Final Provisions

COMMENCEMENT Art. 49 This regulation comes into effect on August 1, 2021

Bern, On Behalf of the Faculty of Medicine,

The Dean:

Approved by the university management:

Bern, The rector:

## **Amendments**

Came into effect

Amendment of 14 December 2022, in force on 1 February 2023 Amendment of 23 October 2024, in force on 1 January 2025