

Curriculum for the PhD/Doctor of Philosophy doctoral programme

1 General preliminary remarks, educational objectives and academic degree

The minimum study duration for a PhD programme at the Medical University of Innsbruck is fixed at 6 semesters, equivalent to 180 ECTS points. The programme is a full-time degree course.

The PhD programme at the Medical University of Innsbruck qualifies students for independent scientific work. It comprises classical formats of university education (lectures, seminars, practical courses) to impart theoretical knowledge and practical skills as well as the independent realisation of a research project under supervision and with support from academically recognised and experienced university lecturers, who fulfil the legal requirements for supervision of PhD theses.

After graduating from the programme, graduates are qualified to conduct scientific research independently at the highest level in various medical disciplines and modern life sciences. The programme is designed to train highly-qualified young scientists for the field of biomedicine.

Graduates will be awarded the academic degree "Doctor of Philosophy/PhD".

2 Organisation and range of courses

The PhD programme is primarily organised in programme tracks. These tracks are interdisciplinary oriented to key research areas and fields as well as the study programmes (Medicine, Dentistry, Molecular Medicine) offered by the Medical University, as stated in the development guide.

A programme track includes research group leaders and principal investigators of research projects from different organisational units, whose research fields are related to a common subject or share a logical thematic context. Supervisors can be assigned to multiple PhD programme tracks. Every track is headed by a coordinator and an assistant coordinator, who takes over the responsibilities in case the coordinator is unable to perform his/her duties.

Individual programme tracks are established or closed jointly by all coordinators and the Vice-Rector of Teaching and Academic Affairs as part of a decision by the Vice-Rector of Teaching and Academic Affairs, after a statement of the curriculum committee.

3 Thesis committee

The PhD candidate is supported by a thesis committee for the entire duration of the programme. The committee is appointed by the Vice-Rector of Teaching and Academic Affairs at the proposal of the PhD student and the supervisor, and in agreement with the coordinator of the respective programme track. At the proposal of the PhD candidate and the supervisor, the composition of the thesis committee can be changed no earlier than after two semesters, and no later than three semesters. This has to be approved by the respective track coordinator and the Vice-Rector of Teaching and Academic Affairs.

The thesis committee comprises four persons. The thesis supervisor and the PhD candidate are mandatory members of the committee. At least one member of the thesis committee must be from a different organisational unit than the one the thesis work is performed at. For technical reasons, a fifth member can be added to the committee (e.g. in the event of specific methodological requirements); one member of the committee may be chosen from another university, or a recognised post-secondary institute of education. The thesis committee is chaired by the thesis supervisor who is responsible for ensuring that the committee meetings are held properly. The PhD candidate and every member of the thesis committee are entitled to call meetings of the committee at any time. Professors or academic assistants with post-doctoral qualifications ("Habilitation") are eligible to serve as members of the committee. The Vice-Rector of Teaching and Academic Affairs can also appoint persons without the post-doctoral qualification of the "Habilitation" to the thesis committee if they have comparable qualifications.

The thesis committee is responsible for technical advice and supervision of the thesis project as well as quality control. It is to counsel and mediate in case of conflicts between the supervisor and the PhD candidate. In addition, the committee is a point of contact for the PhD candidate in any important matters regarding the thesis.

At least once per academic year, the committee is to assess the progress of the research project and the completion of required courses. It is the responsibility of the PhD candidate to schedule committee meetings in consultation with the supervisor of the thesis. Written minutes of the meeting, signed by all members of the committee, must be sent to the coordinator of the programme track and the Vice-Rector of Teaching and Academic Affairs within a week of the meeting. If the supervisor fails to fulfil his/her obligation to hold the regular committee meetings, the PhD candidate must inform the coordinator, who in turn will inform the Vice-Rector of Teaching and Academic Affairs, if necessary. The Vice-Rector of Teaching and Academic Affairs will take further measures required to ensure that the meeting of the thesis committee is held properly.

Further provisions on the composition of the thesis committee are incorporated in the academic regulations of the statutes of the Medical University of Innsbruck.

4 Admission requirements

The general admission requirements for applicants to the PhD programme are as follows:

- Graduation from the undergraduate Medical or Dentistry degree programme or
- Graduation from a relevant or related master's or undergraduate degree programme or
- Graduation from a relevant or related degree programme at a recognised domestic or foreign post-secondary educational institution, equivalent in content and scope to an undergraduate or master's degree, and
- Submission of a signed study agreement.

Admission may be granted on a preliminary basis if theoretical knowledge and/or practical and methodological skills are required to master the content of the research project, in case the applicant has not yet obtained the knowledge/skills in his/her previous studies. It must be ensured that this knowledge can be obtained within two semesters of preliminary admission by successfully passing courses at the Medical University of Innsbruck.

5 Credits for previous achievements

Significant work in research and relevant education prior to admission to the PhD programme can be credited towards the programme if such work has not already been allowed for a different academic degree. The governing body decides on the credibility of such prior work.

6 Study agreement

The study agreement is concluded between the applicant and the supervisor. Written approval from the members of the thesis committee, the respective programme coordinator and the Vice-Rector of Teaching and Academic Affairs is required.

In particular, the study agreement must contain the following:

- The prospective subject of the PhD thesis.
- A description of the objectives of the PhD thesis or research project.
- An appraisal of the feasibility of the PhD thesis in the statutory minimum duration of six semesters by the supervisor and the thesis committee.
- Confirmation by the supervisor and the thesis committee that the methods and technical facilities required to successfully complete the project have been established or are available to the PhD candidate at the Medical University, where this can be foreseen at the start of the thesis project and the development/establishment of the method is not part of the PhD project.
- Confirmation by the thesis committee that the PhD candidate will be able to acquire experimental methods and/or use technical facilities at another research institution if said methods/facilities are not available at the Medical University of Innsbruck. Note that the effort required for the PhD candidate to do so must be appropriate and reasonable.
- A description of the supervisor's research project, under which the thesis project is to be completed, stating the funding body/bodies supporting the project and a list of publications from the supervisor's laboratory reaching back three years.
- The supervisor must confirm that the funds (for personnel/equipment) required to complete the thesis project are available.
- The supervisor's declaration of commitment to hold regular research group seminars where the PhD candidate discusses aspects of the thesis or research project in detail with a focus on his/her results.
- An indication of additional approvals required (e.g. animal testing approvals, approval from the Ethics Committee, approvals under the Austrian Genetic Engineering Act [GVO]).
- Information on additional specific requirements of the thesis project (e.g. specific confidentiality obligations, possible patent processes)
- A declaration of compliance with the principles of good scientific practice.
- A declaration of commitment to incorporate gender-specific aspects in the evaluation of the results.
- A list of the courses the applicant must successfully pass before full admission can be granted, including a deadline by which the candidate must provide evidence of successful completion of these courses. The courses required must be offered at the Medical University within two semesters of preliminary admission.

7 Curricular courses

Course types

- **Lectures (L)** offer an introduction to the theoretical fundamentals of a subject, provide an overview of the subject and teach specialist state-of-the-art knowledge including the latest research results. Lecture series are a special form of lectures in which multiple lecturers teach courses on their specialist subjects under a superordinate theme.
- **Lecture-practical courses (LP)** teach, in addition to the characteristics of a lecture, hands-on skills. These courses require examinations or examination equivalents for successful completion.
- **Practical courses/practical training courses (PC/PTC)** teach simple skills and applied methods, while also training previously learned methods and skills by applying them in complex research approaches and settings. Practical courses/practical training courses are generally full-day courses held in blocks and culminate in exams.
- **Seminars (SE)** promote the initiative as well as the rhetorical routine of the PhD candidates by demanding personal contributions in the form of seminar presentations. For successful completion, seminars require a seminar presentation and, in some cases, a written seminar paper. These courses require examinations or examination equivalents in order to successfully pass them.

Course breakdown

Curricular courses correspond to a total of 20 ECTS points (workload of 500 hours).

Of those,

4 - 6 ECTS points are allocated to general subjects

8 - 10 ECTS are allocated to core subjects specific to programme tracks

6 ECTS points are allocated to journal clubs/thematic seminars

General subjects

General subjects, totalling 4 - 6 ECTS points, must be passed by all PhD candidates, regardless of the programme track. These non-track-specific courses prepare students for a wide range of subsequent professions.

The courses in the general subjects are offered at least once per academic year.

Core subjects specific to programme tracks

For the core subjects, courses to the amount of 8 -10 ECTS points must be passed successfully; they impart specialist knowledge or specific, practical skills, directly related to the superordinate subject of a programme track. These courses are proposed as requirements to the Vice-Rector of Teaching and Academic Affairs jointly by all track coordinators, in agreement with the supervisors. Every academic year, the Vice-Rector of Teaching and Academic Affairs publishes a list of these core subjects.

The courses in the core subjects are generally offered at least once each academic year.

In agreement with the programme track coordinators, the thesis committee can also stipulate courses from other programme tracks, totalling up to 4 ECTS points, as core subjects.

Journal clubs/thematic seminars

These courses are seminars in which the PhD candidates regularly produce seminar presentations not exclusively related to their specific research topic, but fitting into a broader range of subjects within a given programme track. Once a year, the PhD candidate presents the results of his/her thesis project in a "progress report". Journal clubs/thematic seminars can also be held jointly by multiple programme tracks. Students must earn 6 ECTS points in this area as part of the PhD programme.

8 Internationality

The PhD programme is structured according to international standards. In particular, the programme complies with the "Salzburg Principles" for PhD programmes

http://www.eua.be/eua/jsp/en/upload/Salzburg_Report_final.1129817011146.pdf.

Use of the ECTS system guarantees international comparability and transferability of credits for course work. Courses are taught in English and the PhD thesis must be written in English.

Subject to approval by the thesis committee and the Vice-Rector of Teaching and Academic Affairs, parts of the PhD programme (courses, project work for experiments) can also be completed at other universities and research institutions in Austria or other countries, and, if appropriate for the subject matter, in industrial companies or municipal care facilities.

9 PhD Thesis

The thesis is a detailed, written presentation of the PhD candidate's work on his/her research project. The PhD candidate must provide verifiable evidence of his/her ability to work on a scientific problem independently and with scientific rigor. The thesis must be written in English.

If a subject is covered by a team of PhD candidates, the intellectual and experimental contribution of each candidate must be clearly evident and it must be possible to evaluate each candidate's contribution separately.

The completed, positively assessed thesis will be weighted with 160 ECTS points.

At the time of submission for evaluation, at least one paper should have been published or accepted for publication in an international, peer-reviewed scientific journal with the PhD candidate as a first-named author or co-first-named author. If this is not the case, the PhD candidate and the thesis committee must explain in writing why the submission of the thesis is justified at that time; the Vice-Rector of Teaching and Academic Affairs must enclose this justification with the thesis when it is submitted to the reviewers.

Review

The Vice-Rector of Teaching and Academic Affairs appoints two reviewers to evaluate and assess the thesis whereby the thesis committee submits a nomination proposal to the Vice-Rector of Teaching and Academic Affairs. The proposal must in particular take into consideration that the reviewers are internationally recognised experts in their area of expertise who are distinguished by publications in high-impact, international scientific journals during the past five years. It has to be ensured that there are no evident conflicts of interest. In any case, the following are to be considered conflicts of interest: The PhD candidate has published together with a reviewer, and/or the supervisor and a reviewer appear as first-named authors, co-first-named authors, corresponding authors or co-corresponding authors on a paper published within the past five years at the time of the review.

It is mandatory for the proposal to include one external reviewer, preferably from another country. The supervisor cannot be named as a reviewer.

Both reviewers grade the thesis and assess it in a written report. The average of all grades is calculated for a single, overall grade.

If one evaluation is negative, the Vice-Rector of Teaching and Academic Affairs shall obtain another evaluation. This is to be done in consultation with the thesis committee. In the event of a negative evaluation, the PhD candidate is entitled to revise the thesis before it is re-evaluated. In case the third evaluation is also negative (grade: Unsatisfactory), the thesis is to be rejected.

10 Thesis defense as the final examination

The final examination takes the form of a public defense of the PhD thesis before an examination board. The board comprises four persons. Members of the thesis committee and the reviewers can serve as members of the examination board. It would be preferable for the external reviewer to be part of the examination board. At the discretion of the Vice-Rector of Teaching and Academic Affairs, in coordination with the professors and members of the thesis committee with post-doctoral qualification ("Habilitation"), an additional examiner can be appointed to the examination board.

One member of the examination board is nominated by the Vice-Rector of Teaching and Academic Affairs as the chairperson to host and head the examination.

The requirements for admission to the thesis defense are:

- Successful passing of all required courses
- Successful completion of the thesis

The thesis defense consists of two parts:

- 1.) The presentation of the thesis' content by the PhD candidate
- 2.) The discussion of the thesis' content, in which the PhD candidate not only must show that he/she is able to competently answer questions on the direct results of the thesis, but must also convincingly prove that he/she can identify the position of his/her own results in a higher-order "state-of-the-art" thematic context. In this part, possible criticisms by the reviewers of the thesis must be addressed.

The thesis defense must be assessed in terms of scientific competence and relevant expertise in the broader area of research. This final examination is using the following grading system: "Very good" (1), "Good" (2), "Satisfactory" (3), "Sufficient" (4) or "Unsatisfactory" (5).

If a PhD candidate achieves a "Very good" grade for the thesis defense and in both reviews of the thesis, the PhD certificate must include the supplement "With distinction".

For the senate of the Medical University of Innsbruck:

Univ.-Prof. Dr. Gert Mayer
Chairman