

DOCTORAL DEGREE PROGRAM OF MEDICAL SCIENCE

Curriculum

Medical University of Graz

Version 17

History of Decisions and Revisions

Version	Date decision ¹ of	Date approval ² of	Summary of revisions/date	Effective date
09	4.3.2008	12.3.2008	Implementation of the three-year doctoral program	01.10.2008
10	4.3.2009 17.6.2009	25.3.2009 24.6.2009	Editorial changes, submission of dissertation agreement/interim report	01.10.2009
11	11.5.2011	18.5.2011	Revision of the table of courses, dissertation agreement	01.10.2011
12	4.6.2014	25.6.2014	Implementation of English language in training activities and thesis, introduction of peer reviewed publication as requirement for acceptance of the thesis	01.10.2014
13	10.06.2015	24.06.2015	Curriculum, evaluation of thesis, final public comprehensive oral examination	01.10.2015
14	1.6.2016	22.6.2016	Editorial changes	01.10.2016
15	6.6.2018	20.6.2018	Editorial changes	01.10.2018
16	5.6.2019	26.6.2019	Editorial changes	01.10.2019
17	10.06.2020	24.06.2020	Changes in courses	01.10.2020

¹ A decision of the Curricular Commission for Doctoral Studies

² Approval of the Senate

Goals

§ 1. Goal and Purpose of the Doctoral Degree Program in Medical Science

The Doctoral Degree Program in Medical Science serves to equip students with the skills for conducting independent research so that they may contribute to the advancement of the medical sciences. It aims to bring about future generations of research scientists in the fields of medical and life sciences. Details of the educational goals and the qualification profile can be found in Appendix I.

Doctoral training, as the third cycle in the Bologna process, integrates education and productive research activity. Students are regarded as being researchers at the beginning of their careers within the scope of the “European Charter for Researchers”³.

Admission Requirements

§ 2. Admission to the Doctoral Degree Program in Medical Science

(1) Required for admission to the Doctoral Degree Program in Medical Science is either the completion of a degree program in Medicine or Dental Medicine, or of a life science or engineer diploma/ Master program.

(2) As outlined in paragraph 1, admission may also be granted if an equivalent degree program had been completed at a recognized Austrian or foreign tertiary educational institution. The equivalence shall be determined by the Vice Rector for Studies and Teaching during the admission process.

(3) Persons who meet the admission requirements according to § 2 (1) or (2) are eligible to apply for one of the advertised dissertation topics within the framework of the Doctoral Schools (§ 4). Should the work on the dissertation topic require the use of patient data, human resources, financial or material resources of the institute/clinical department, approval shall only be granted if the director of the relevant institute, division (Lehrstuhl), clinical division or clinical department (if there are no clinical divisions) has been informed of the proposed work in writing and has not declined it within one month due to a significant impairment of clinical, teaching and research operations. Furthermore, it must be ensured that patient data necessary for the dissertation shall be made available to the student in an appropriate format without violating data protection regulations.

(4) When applying for admission, the student shall propose a member of a doctoral school as her/his supervisor, as well as a dissertation topic. The dissertation topic must be from a field/sub-discipline that is represented at least at one institute, division (Lehrstuhl), clinical division or clinical department (if there are no clinical divisions) of the Medical University of Graz. The Dean of Doctoral Studies shall award the topic to the applicant based on the recommendation made by the faculty of the respective Doctoral School.

Duration of the Doctoral Program of Medical Science

³ OJ L 75/67 of March 22, 2005, Commission Recommendation of March 11, 2005 on the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers (2005/251/EC).

§ 3. Duration

The Doctoral Degree Program in Medical Science comprises 6 semesters full-time study, but may where required be completed extra-occupationally.

Doctoral Schools

§ 4. Doctoral Schools

- (1) The Doctoral Degree Program in Medical Science is structured in Doctoral Schools.
- (2) **Scope and name of a Doctoral School**
Doctoral Schools focus on clearly defined, but not too narrow, subject areas that are in line with a key research area of the Medical University of Graz.

- (3) **Members of a Doctoral School (Faculty)**
Members of a Doctoral School (faculty) are qualified university teachers (with a *venia legendi* certification), who are scientifically active within the respective field, and who act as supervisors for dissertations. The Dean of Doctoral Studies appoints the members of a Doctoral School based on the recommendation of the spokesperson of the Doctoral School. University teachers from other universities may also become members of a Doctoral School. If the above criteria are no longer met, membership expires after three years.

In the following, 'Doctoral School' shall also be understood to include the faculty of a Doctoral School.

- (4) **Spokesperson of a Doctoral School**
The members of a Doctoral School elect a spokesperson and a deputy spokesperson. The spokesperson is responsible for the internal coordination of the Doctoral School, and represents the Doctoral School to the university and the public.
- (5) Each Doctoral School is responsible for providing high-quality training courses in accordance with this curriculum. This includes in particular the design of course content.
- (6) **Establishment of Doctoral Schools**
A proponent committee lodges a proposal for a Doctoral School with the Dean of Doctoral Studies. The Dean of Doctoral Studies evaluates the proposal.

Criteria for assessing the applications are:

- Scientific quality of the proposal
- Accordance with the strategy of the university
- Future potential of the Doctoral School
- International and national networks
- Existing potential (faculty, resources, previous achievements)
- Critical size of the faculty
- Proof of compliance with the prerequisites for supervision and integration of doctoral students in productive working groups

The Doctoral Schools shall be established by the Dean of Doctoral Studies upon submission of a scientific concept and a training program and after a statement has been obtained from the Curricular Commission for Doctoral Studies.

(7) Inter-university Doctoral Schools can also be established and existing Doctoral Schools can participate in, or propose, such inter-university Doctoral Schools. The distribution of teaching responsibilities in accordance with § 5 as well as any further aspects of the collaboration shall be settled in a cooperation agreement. The procedure is the same as set out in (6).

(8) The speakers of the Doctoral School submit annual reports to the Curricular Commission for Doctoral Studies and the Dean of Doctoral Studies.

Courses

§ 5. Courses

(1) During the doctoral program, the following courses are to be successfully completed (see Table 1):

Fundamentals of scientific research in doctoral studies

In this course in the extent of 2 semester-hours, students of all Doctoral Schools are made familiar with the course of their doctoral studies and all research-relevant ethical principles and rules. This will give them essential information about the quality criteria that apply to scientific research. The course will also show how the work on the dissertation project is supported by technological and organizational facilities at the Medical University of Graz.

Introduction to the research topic of the respective Doctoral School

In this course in the extent of 1 semester-hour, each Doctoral School introduces itself to its own candidates and provides information on its research field, the research topics pursued and the working methods used.

*Fundamentals of scientific research and general skills**

The students need to attend courses in the extent of 4 semester-hours in which they can choose among topics such as scientific theory, ethics, use of statistical methods, methods for planning, documentation, evaluation, and (meta) analysis of medical research studies and experiments, writing of scientific papers, presentation skills, university didactics, scientific English, management of scientific projects, etc.

*Dissertation seminar**

The students shall complete seminars and workshops (in the extent of 6 semester-hours) in the field of the dissertation topic or in a sub-discipline.

*Literature clubs and guest lectures**

These courses (seminars) and lectures in the extent of 4 semester-hours are intended to present and critically discuss relevant new findings in the field. Confirmation of completed literature clubs and guest lectures need be sent to the Dean of Doctoral Studies.

Project presentation

In the extent of 0,5 semester-hours, the students present reports of their current dissertation project to fellow students and faculty members of the respective Doctoral School for critical discussion. Confirmation of completed project presentations need be sent to the Dean of Doctoral Studies.

Elective

A total of 4 semester-hours (marked courses *) may be completed as electives, taking into consideration the thematic context of the doctoral thesis and the scientific depth appropriate to the doctoral degree program. Electives can be chosen from a list published on MEDonline at the Medical University of Graz or may be completed at any postsecondary educational institution and subject for approval by the Dean of study affairs in a recognition procedure after a positive statement has been obtained from the spokesperson of the Doctoral School.

Presentation of dissertation topic and work plan to the Dissertation Committee

The dissertation topic and the work plan shall be presented to the Dissertation Committee (total - 0,5 semester-hours) in the first semester. The doctoral candidate and the Dissertation Committee agree on the courses to be taken in accordance with the curriculum. The spokesperson of the Doctoral School will forward the presentation and a written assessment by the Dissertation Committee to the Dean of Doctoral Studies.

Interim report to the Dissertation Committee

In the third and fifth semester, written interim reports shall be prepared and presented to the Dissertation Committee (total - 0,5 semester-hours each). The spokesperson of the Doctoral School will forward the interim report and a written assessment by the Dissertation Committee to the Dean of Doctoral Studies.

Public presentation (e.g. Doctoral Day)

During the course, 2 public presentations, each worth 0,5 semester-hours, must be prepared and presented at the Doctoral Day of the Medical University of Graz or at a scientific congress. Active participation in at least one Doctoral Day during the doctoral program is mandatory.

Table 1

Suggested semester schedule	Semester-hours
Semester 1	
Fundamentals of scientific research in doctoral studies	2
Introduction to the research topic of the respective Doctoral School	1
Presentation of dissertation topic and work plan to the Dissertation Committee	0,5
Semester 2	

Fundamentals of scientific research and general skills*	2
Dissertation seminar*	2
Semester 3	
Fundamentals of scientific research and general skills*	2
Literature clubs and guest lectures*	2
First interim report to the Dissertation Committee	0,5
Semester 4	
Project presentation	0,5
Dissertation seminar*	2
Literature clubs and guest lectures*	2
Public presentation (scientific congress or Doctoral Day)**	0,5
Semester 5	
Dissertation seminar*	2
Second interim report to the Dissertation Committee	0,5
Semester 6	
Public presentation (scientific congress or Doctoral Day)**	0,5
Total	20

* Courses may be completed as electives to a total extent of 4 semester-hours.

** Active participation in at least one Doctoral Day is mandatory.

(2) All courses will be held in English. Exempt are courses with a thematic focus that requires German as scientific language.

(3) The courses are proposed by the Doctoral Schools and are approved by the Dean of Doctoral Studies.

(4) At least 50% of the courses shall be completed at the Medical University of Graz. The presentation of the dissertation project and the interim reports must be filed at the Medical University of Graz.

(5) Successful attendance of all courses, positive evaluations of the research plan and the interim reports, and records on the public presentations are prerequisites for registering for the final oral comprehensive examination (defensio viva voce).

(6) Transitional provisions: The new courses in the first semester ("Fundamentals of scientific research in doctoral studies", "Introduction to the research topic of the respective Doctoral School") will replace the previous course ("Fundamentals for graduates in medicine/ dental medicine or science and engineering") from winter semester 2020/21 onwards. If this course has already been successfully completed, it will be credited instead of the two new courses. The completion of all courses according to Curriculum version 16 will be also recognized as one requirement to register for the final public comprehensive oral examination.

For students who have not yet completed all courses, the following rules apply to the course "Literature clubs, project presentations and guest lectures". If both courses "Literature clubs, project presentations and guest lectures" in the extent of 4 semester-hours have been completed, no proof of a separate "Project presentation" is required, but proof of 2 "Public presentations (scientific congress or Doctoral Day)" is required.

If only one course "Literature clubs, project presentations and guest lectures" in the extent of 2 semester-hours has been completed, the completion of one course "Literature clubs and guest

lectures" (2 semester-hours), one "Project presentation" (0,5 semester-hour) and 2 "Public presentations" (scientific congress or Doctoral Day, amounting to 1 semester-hour) must be proven.

Dissertation

§ 6. Dissertation

(1) With the dissertation, the student provides evidence of having acquired the knowledge and ability to successfully conduct scientific research on current issues in an autonomous manner. Therefore, the dissertation must be wholly made up of independent original work that the student has produced and written up on her/his own. The latter shall be confirmed by the student in a preamble to the dissertation. The student shall further confirm that the rules of good scientific practice, as set out by the Medical University of Graz, were observed during work for the dissertation and the related publications.

The rules and form of the doctoral thesis to be written are stated in detail in the "Guidelines for the Preparation of a Dissertation" and the "Checklist for Students and Supervisors". The submission of a cumulative dissertation is permissible in particular and justified cases, but only after consultation with the Dean of Doctoral Studies and in compliance with the "Guidelines for the Preparation of a Dissertation".

Joint work on a topic by several students shall be permissible, whereby the doctoral student's own contribution shall be clearly defined and every participating doctoral student shall write her/his own doctoral thesis.

The dissertation must be written in English. Exempt from this regulation are dissertations with a thematic focus that requires German as scientific language. An abstract of the dissertation must be submitted in English and German.

(2) At the time of admission to a doctoral program, a dissertation agreement is made which governs the rights and obligations of the supervisor and the student.

(3) During the doctoral training program the student will be supported and guided by a supervisor. For interdisciplinary research projects, a second supervisor can be appointed who must have a thorough understanding of the topic of the dissertation. The supervisors's duty is to guide and support the doctoral student in her/his independent scientific work. This includes promoting independent scientific publishing activities. The responsibility of the supervisor towards the student ends upon completion of the final oral examination, and at maximum after four years. If circumstances so require, the Dean of Doctoral Studies may extend the duration of supervision at the request of the student and with the supervisor's consent.

(4) Eligible as supervisors are qualified university teachers (with *venia legendi* certification) in accordance with § 103 paragraph 1, Universities Act 2002) or university professors emeriti at the Medical University of Graz, provided that they are authorized to teach in the field/sub-discipline of the dissertation topic. If in the interest of a particular doctoral thesis the Dissertation Committee should include an expert member of a different university or a non-academic member with *venia legendi*, this person may be entrusted with being an additional external supervisor.

(5) For each dissertation, the Dean of Doctoral Studies will assign a Dissertation Committee consisting of at least three persons, which will be headed by the supervisor. One member must be from outside the institute, division (Lehrstuhl), clinical division or clinical department (if there are no clinical divisions) where the work will be performed. Two members of the committee shall have

a *venia legendi*; it shall be sufficient for the other members to hold a doctoral degree. The Dissertation Committee supports and advises the student in the subject area at least once a year in a formal meeting. The doctoral candidate must present her/his interim report at this meeting, and the Dissertation Committee will provide written comments on the progress of the work. An extraordinary meeting of the Dissertation Committee may be requested by the supervisor, a Dissertation Committee member, the student, or the Dean of Doctoral Studies.

(6) It is possible to change supervisors with due reason at any time before the dissertation is submitted. This requires approval by the Dean of Doctoral Studies.

(7) The completed dissertation is to be submitted to the Dean of study affairs via the Dean of Doctoral Studies who conducts a formal examination of the dissertation according to the “Guidelines for the Preparation of a Dissertation” and the “Checklist for Students and Supervisors”. The Dean of study affairs will nominate two reviewers. Before the dissertation can be rendered for evaluation by the reviewers, it is required that at least one paper arising from the research has been published, or been accepted for publication, in an SCI-listed journal with the candidate as first author.

Eligible as reviewers are scientists who hold a teaching qualification (*venia legendi*) or a comparable qualification within the field of the dissertation, and if they are not subject to any kind of conflict of interest. The supervisor and members of the Dissertation Committee must not serve as reviewers of the dissertation.

The assessment of the dissertation must be completed by Dean of study affairs within two months and the thesis be graded as "successfully completed" or "unsuccessfully completed".

(8) The written opinions of the reviewers and the grading of the thesis will be made accessible to the student and the Dissertation Committee.

(9) The student must publish the positively assessed dissertation before being awarded the academic degree in accordance with the regulations of § 86 University Act 2002.

Examination Regulations

§ 7. Examination Regulations

(1) Continual performance assessment applies to all courses. Attendance of at least 80 % is required.

(2) The doctoral program is completed with the final public comprehensive oral examination before a committee (*defensio viva voce*).

(3) The student is entitled to register with the Dean of study affairs for the final comprehensive oral examination, if the following conditions are met:

- a) Completion of all course examinations and courses with continual performance assessment.
- b) Approval of the thesis.

(4) The final comprehensive oral examination includes the defense of the dissertation, and an examination of the field or sub-discipline, from which the dissertation had originated.

(5) The Dean of study affairs will appoint a board of three examiners to conduct the final comprehensive oral examination. One of the members shall be designated as the chairperson of the Examination Board.

Eligible as examiners are scientists who hold a teaching qualification (*venia legendi*) or a comparable qualification in the field of the dissertation, and who do not have any kind of conflict of interest. The supervisor and members of the Dissertation Committee must not serve as examiners.

(6) The student will be informed of the composition of the Examination Board at least four weeks prior to the examination. The time and place of the final examination will be published on the website of the Medical University of Graz at least a week before the exam.

(7) The final comprehensive examination will be conducted as a public oral examination by the entire Examination Board and shall last no longer than 90 minutes. The examination language is English. The candidate is to begin with a brief presentation of the dissertation, including a defense of the results obtained in the research (*defensio dissertationis*).

(8) During the final comprehensive oral examination, the candidate must provide evidence of her/his scientific aptitude and skill, and a thorough understanding of the main scientific problems in the field examined.

(9) The chairperson of the Examination Board will ensure that the final comprehensive oral examination is conducted in an orderly manner and keep records of the examination. These records will include the name of the student, the subject(s) of the examination, the place and time thereof, the names of the Examination Board members, the questions asked, the grades given, any reasons for a negative assessment, and any unusual occurrences.

(10) The discussion and vote by the Examination Board on the result of the final comprehensive oral examination of all examination subjects shall be held in a closed session. The decisions of the Examination Board will be determined by a majority vote, whereby the chairperson, who exercises the same voting rights as the other members, shall vote last. When casting her/his vote, each member of the Examination Board will consider the results of the individual examination subjects as well as the overall impression of the final comprehensive oral examination.

(11) If the Examination Board is unable to reach a decision on a grade, the proposed grades of the members shall be added, the sum divided by the number of members, and the result then be rounded mathematically to give a whole number for the final grade. The final comprehensive oral examination will only be deemed successfully completed if each examination subject pursuant to paragraph 4 has been awarded a grade of at least “satisfactory”. If a grade of “unsatisfactory” is given for more than one examination subject, the final comprehensive oral examination must be repeated in its entirety. Otherwise the repeat examination will be on the examination subject that has not been passed previously.

Doctoral Title and Conferral of the Doctorate

§ 8. Doctoral Title and Conferral of the Doctorate

The Dean of study affairs shall officially award graduates of the Doctoral Degree Program in Medical Science the title “Doctor of Medical Science” (Latin: “*Doctor scientiae medicae*”), abbreviated “*Dr. scient. med.*”, promptly by written notification, notwithstanding the holding of

academic ceremonies in celebration of the conferral of the doctorate, and no later than one month after successful completion of the final comprehensive oral examination.

The “PhD equivalent” shall be entered in the Diploma Supplement.

Joint and Double-Degree Programs

§ 9. Joint and Double-Degree Programs

The Doctoral Degree Program in Medical Science may also be completed as part of a joint or a double degree program. In this case, the student shall spend at least one year working on her/his doctoral thesis at the respective partner university. The student shall submit an agreement regulating the joint or double degree program between the participating universities and defining the award of the university degree as a joint or double degree to the Dean of Doctoral Studies for approval. Within the agreement, all work done and exams passed at the partner university are recognized automatically.

Jurisdiction and Rules of Procedure

§ 10. Jurisdiction and Rules of Procedure

(1) Appeals against decisions of the Dean of study affairs may be made to the Federal Administrative Court (Art. 130 Abs. 1 Z 1 B-VG iVm § 46 Abs. 2).

(2) The Dean of Doctoral Studies shall decide in the name of the Dean of study affairs about any study matters to the extent stipulated in the curriculum. Any requested written decision will be issued by the Dean of study affairs

(3) The General Administrative Procedure Act 1991, Austrian Federal Law Gazette No. 51/1991 as amended, shall apply for official proceedings on the basis of this curriculum.

Effective Date of the Curriculum

§ 12. Effective Date of the Curriculum

This curriculum shall enter into effect on October 1, 2020.

Annex I

Educational goals/qualification profile of the doctoral degree program in medical science

The graduates are qualified

- to independently conduct research at an international level
- to publish the results of their research in internationally recognized journals
- to present and discuss the results of their research at international conferences
- to present the results of their research in an understandable manner to the public
- to conduct subject-related discussions with other scientists in English language

The graduates will understand and observe the ethical guidelines for research (good scientific practice).