



Guidelines for the Preparation of a Dissertation

for Doctoral Degree Programs

at the Medical University of Graz

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Guidelines for the Preparation of a Dissertation

Preamble

In addition to the required formal lectures and the comprehensive oral examination, the dissertation (Latin for discourse, debate) is the most important performance criterion for the graduation process. In contrast to a diploma thesis or master's thesis, which should apply the current state of scientific research to the respective subject, the dissertation is an independent work demonstrating the appropriate scientific originality in the relevant subject. In writing a dissertation, the author should demonstrate that he or she is capable of independently examining a scientific problem of current scientific research using the appropriate methods. The results of the research, which should provide significant new insights in the respective subject area, should be discussed in the context of current scientific knowledge. Essential to this examination is the composition of a piece of written work containing a description of the problem and its classification within an overall interrelationship, as well as a presentation and discussion of the solution and the results. The dissertation must therefore represent an independent original work that the student has prepared and written on his or her own. This shall be confirmed by the student in a statutory declaration for the dissertation. The student must further confirm that the 'Standards of good scientific practice and of the Ombuds Committee at the Medical University of Graz' were observed during the work for the dissertation and the resulting publications.

Guidelines for the student:

- The student selects a topic. The dissertation topic is to be selected from one of the subject areas of the Medical University of Graz; for Dr. scient. med. and Dr. rer. cur. degree programs it is to be selected from the topic exchange (MUG-Thesis); for PhD degree programs it is to be selected from the projects announced in a call for tender.
- It is possible to carry out the work at another university or external institution in cooperation with a member of the Medical University of Graz.
- The dissertation is to be prepared in accordance with the requirements for structure, organization and linguistic formulations. The dissertation must be written in English. However, the abstract must be provided both in German and in English. The dissertation should be organized as a scientific work; references must be made in the Vancouver or Harvard style.
- The student is obligated to have all the original works that they have cited readily available in the form of a literature folder. Similarly, in accordance with the statutory provisions and the rules of 'Standards of good scientific practice and of the Ombuds

Committee at the Medical University of Graz', primary data must be retained for 10 years.

- The dissertation is to be presented in accordance with the requirements of the curriculum.
- The completed dissertation is to be submitted via the Dean to the Rector of Studies.

Guidelines for the supervisor:

- The principal supervisor for a dissertation must be a qualified university teacher who is a member of the Medical University of Graz. If it appears reasonable or beneficial, another member of the university or a qualified university teacher from another university may be appointed as a co-supervisor for the dissertation in accordance with § 45 paragraph 4 of the part of the statute on study law.
- The principal supervisor shall announce the topic in the topic exchange (MUG-Thesis), or for PhD degree programs in the call for tender. The scope is to be chosen such that it is possible and reasonable to conduct and complete the dissertation work within 6 semesters.
- During the time that the dissertation is being completed, the dissertation committee must be available for expert support, discussion and consultation.
- The principal supervisor is obliged to draw the student's attention to the rules of correct referencing, to copyright laws and to the issue of plagiarism. She/he is also expected to guarantee that the 'Standards of good scientific practice and of the Ombuds Committee at the Medical University of Graz' are upheld.

Guidelines for approbation:

- The approbation of the dissertation shall be carried out in accordance with the requirements of the respective curriculum.
- The Studies Rector shall appoint two reviewers. The review process is to be carried out within a period of maximum two months.
- The dissertation will be published on the Internet in PDF/A format. In justified instances (e.g. legal patent aspects, non-disclosure notices for cooperation) a request to postpone publication for a maximum of 5 years may be submitted to the Studies Rector.

Preparing a Dissertation

Dissertation Agreement

As part of the approval process, a dissertation agreement must be submitted. The corresponding forms in the current version are available on the website of the respective MUG degree programs and include:

- o Dissertation Title
- o Institute or Clinic
- o Doctoral School or PhD Program
- o Required resources
- o Requirement for approval by the Ethics Committee or the Animal Testing Commission
- o Members of the Dissertation Committee
- o Approval of the Director of the Institute or Clinic
- o Approval of the Head of the Doctoral School

Presentation of the Dissertation Topic before the Dissertation Committee

The presentation of the dissertation topic and the work plan as well as a written summary are to be submitted to the Dean during the first semester. These should include the following information:

- o Dissertation Title
- o Doctoral School or PhD Program
- o Background and Objective
 - What is the research question?*
 - Why is this research question important?*
 - What results are generally expected?*
 - What is the theoretical core of the work?*
- o Choice of Methods
 - What methods are available to answer the research question?*
 - Why exactly was this method chosen?*
- o Work Plan and Schedule
- o Collaborations
- o Milestones
- o Signatures of the Dissertation Committee

Two Interim Reports for the Dissertation

Organization according to the respective forms in the current version

Originality, Copyright and Plagiarism

Plagiarism is defined as using another person's texts, images, data or hypotheses, interpretations and theories, without citing the original source in a clearly identifiable manner. Texts and images, even with correct mention of source, can also be considered to be plagiarized, when for example a verbatim quotation is used without there being quotation marks around the quoted text, or when an image is used without explicit reference to it being a reproduction.

Ideally, the dissertation is solely the work of the candidate, both with regard to conception as well as implementation, produced under guidance of the supervisor. Any contributions originating from persons other than the candidate must be referenced at all instances mentioned in the manuscript and also in the acknowledgments. However, it has to be considered that such contributions from others may appear to be major citations and could therefore diminish the originality of the dissertation. Purely technical contributions, such as any routinely produced histological sections, or when protocols and reagents have been made available by other persons, must also be referenced. Any work carried out in laboratories of research institutions other than that of the supervisor, for example in connection with time spent abroad, has to be acknowledged as such.

The copyright of third persons must be respected even when the source has been cited correctly. For example, the use of images from other sources is only allowed after prior permission by the copyright owner (usually the publisher). That this permission has been granted must be mentioned in the source reference. That also applies when the image has been modified. In this case it must also be mentioned that the original has been modified, and the author's permission for the modification must have been obtained. Here too, it is worth considering whether such major citations are useful for the dissertation as they might put the originality of the dissertation into question.

The copyright of publishers and co-authors must be regarded, even when results or sections of texts or images from one's own publications are re-used in the dissertation. Here too, permission must be sought from the copyright holder. It must be remembered that even in a so-called open-access article copyright lies with the journal and has to be requested separately. To prevent being accused of auto-plagiarism it should be mentioned in the publication that the results will be part of a dissertation, just as the publication must be cited in the dissertation. If applicable, it should be mentioned in the dissertation that all or parts of the published work is being reproduced identically. Inclusion of the publication in the dissertation, perhaps as PDF in the Appendix, may make good sense, but must only occur with express permission of the publisher. Co-authors of these publications have to agree in particular with the reproduction of data and images in the dissertation the details of which they have explicit copyright, and their contributions must be identified accordingly. Sections

of text and images, which came about through collaboration of several authors, should not be used in the dissertation, but should be newly developed by the candidate.

Evaluation Criteria for the Dissertation

The scientific nature of the work is essential for the positive assessment of a dissertation. In other words, it is mandatory to adhere to the usual criteria such as traceability, reproducibility of results, scientific proof of questions/hypotheses, and the citing of sources used.

In addition to these criteria, the following is also assessed:

- o Originality of the research question and the findings
- o Justification of the research question, method and objective
- o Adherence to formal conventions (e.g. citation)
- o Methodological correctness
- o Accuracy of the analyses of the research data
- o Clarity of logic, reasoning and use of language
- o Consideration of current international literature, correctness of the sources cited.

Format and Organization Guidelines for the Dissertation

The following guidelines are intended to help students organize their dissertation appropriately. It is permitted with the approval of the supervisor to deviate from these guidelines if it is necessary or if it makes sense for the special nature of the dissertation.

Format of the Dissertation

- o Portrait layout, DIN A4
- o Printed on one side only
- o Margins: left 3 cm, right 2.5 cm, top and bottom 2.5 cm
- o The text should be written with a line spacing of 1.5 in a standard font, e.g. Times New Roman, Arial etc., with a font size of 12 pt for standard text and 14 pt or 16 pt for headings
- o Language: English
- o Abstract and Title in German and English
- o Number of pages: As a rule approximately 100 pages (not including the Foreword, Table of Contents or Appendix)
- o Citation style: Vancouver or Harvard style
- o An electronic version of the dissertation in PDF/A format must be submitted for evaluation and publication on the Internet.

Title Page

In accordance with ÖNORM A262, the title page should include the following information (examples in German and English can be found in the appendix):

- o Title of the Dissertation
- o Name of the author (with emphasis of the surname)
- o Name of institute/clinic
- o Type of text ("Dissertation submitted for the Degree of Doctor of Medical Science / Nursing Science / Philosophy (Dr. scient. med. / Dr. rer. cur. / PhD) at the Medical University of Graz")
- o Name of the supervisor(s)
- o Year of submission

Statutory Declaration

The statutory declaration serves as proof of the independent work and scientific integrity of the PhD student regarding the rights of authors and copyright law. Example:

“Declaration

I hereby declare that this thesis is my own original work and that I have fully acknowledged by name all of those individuals and organisations that have contributed to the research for this thesis. Due acknowledgement has been made in the text to all other material used. Throughout this thesis and in all related publications I followed the “Standards of Good Scientific Practice and Ombuds Committee at the Medical University of Graz“.

Date....”.

Organization of the Dissertation

1. The organization of the dissertation should essentially follow the Vancouver or Harvard Convention for the preparation of scientific papers:
2. Title page (see sample)
3. Statutory Declaration
4. Foreword (optional)
5. Acknowledgements (optional)
6. Table of Contents
7. Abbreviations and Definitions
8. List of Figures (optional)
9. List of Tables (optional)
10. Abstract in German
11. Abstract in English
12. Introduction (explanation of the research question, objectives of the dissertation and constraints of the research question)
13. Material and Methods

14. Results - Findings
15. Discussion (answers to research questions, presentation of novelty value and comparative explanations, conclusions, critical reflection on the content and method, implications for theory and practice, outlook and suggestions for further work)
16. Bibliography
17. Appendix (technical documentation of the methods and techniques important for the implementation of the dissertation, e.g. list of reagents and equipment, questionnaires, curriculum, measurement protocols, case report forms, medical history forms, publications resulting from the dissertation, etc.)

Effective Date

With the publication of this document, all previously published guidelines for the preparation of a dissertation are no longer valid.

Appendix

Dissertation

{ TITLE }

submitted by

{Dr.med.univ./dent. /Mag.rer.nat. ...}

{Forename SURNAME}

for the Academic Degree of

Doctor of Medical Science / Nursing Science / Philosophy

(Dr. scient. med. / Dr. rer. cur. / PhD)

at the

Medical University of Graz

Institute / Department of ...

under the Supervision of

{Prof. Dr. Forename SURNAME}

{Year of Submission}