MEDICAL UNIVERSITY OF VIENNA

## Guidelines

### for writing theses at MedUni Vienna

Applicable to master's, undergraduate and doctoral theses for full-time degree programmes and continuing education programmes.





Markus Müller Rektor MedUni Vienna



Anita Rieder Vice Rector for Education MedUni Vienna

### Foreword

A degree or doctoral thesis is not only a calling card for the next stage of the author's career; it also sends a clear signal regarding the work of and support provided by the parent university. With this in mind, MedUni Vienna is committed to ensuring that its students accumulate in-depth knowledge, while cultivating a sound awareness of academic methods. The university believes it has a duty to train young scientists who have a strong sense of integrity and can think critically, with a view to maintaining public trust.

This begins with the teaching of content during degree programmes, extends to the supervisory and support obligations of thesis supervisors, and ends – not least – with the student's personal responsibility to observe the applicable regulations when writing academic papers.

These guidelines provide a set of instructions and are intended to raise MedUni Vienna students' and supervisors' awareness of the subject of plagiarism prevention, as well as helping to guard against scientific misconduct. At this point it bears mentioning that these requirements are binding for all academic papers written at the Medical University of Vienna – they apply to degree/doctoral theses, and to all (written) work, including coursework. These guidelines also represent an additional university requirement that flanks compliance with the international Good Scientific Practice guidelines and precedes the work carried out in this respect by MedUni Vienna's Plagiarism Review Office.

We hope that the topics covered here give a clear and transparent overview of the regulations at MedUni Vienna as well as the various deadlines in this regard, and that they not only provide instructions but also set out all of the relevant information in this particular area.





### **1** Introduction

These guidelines for the production of degree/doctoral theses<sup>1</sup> at MedUni Vienna are intended to provide guidance and support, as well as a general overview of the MedUni Vienna regulations applicable at the time of writing (January 2025)<sup>2</sup>.

The regulations for the various degree programmes and continuing education courses can be found in the latest versions of respective curriculums posted on the MedUni Vienna website.

### Last updated: January 2025

Written by: Plagiarism Working Group

[Vice Rector for Education, representatives of the curriculum directors' offices, Evaluation and Quality Management Unit, University Library, Studies and Examinations Department, and Legal Affairs and Compliance Department]

<sup>1</sup> At MedUni Vienna, "degree/doctoral theses" refers to undergraduate theses, master's theses and doctoral theses.

4

<sup>&</sup>lt;sup>2</sup> Further information can be found in the Hochschul-Qualitätssicherungsgesetz (Act on Quality Assurance in Higher Education), Federal Law Gazette I No. 74/2011, as amended; Austrian Universitätsgesetz (Universities Act) 2002, Federal Law Gazette I No. 120/2002, as amended, and in the Statutes of the Medical University of Vienna, University Gazette no. 22, vol. 9, 2003/04 academic year, as amended.

### Contents

<b>»</b>		Fore	word	3
<b>»</b>	1	Intro	duction	4
<b>»</b>	2	Gene	eral	6
		2.1	Characteristics of contents of academic papers	9
		2.2	Supplementary information on literature reviews (systematic reviews)	
			as part of undergraduate or master's theses	9
		2.3	Phases of writing an academic paper	10
		2.4	Copyright, obligation to publish and blocking request	11
		2.5	Publication in the repository	11
			NOTE: Cumulative degree/doctoral thesis	12
			Cumulative doctoral thesis	12
			Cumulative undergraduate or master's thesis	12
		2.6	Predatory publishers and journals	13
		2.7	Accessibility	13
<b>»</b>	3	Stru	cture and digital form of degree/doctoral theses	14
		3.1	Title page	17
		3.2	Affidavit	19
		3.3	Acknowledgements (optional)	21
		3.4	Foreword (optional)	21
		3.5	Summary/abstract in German and English	21
		3.6	Table of contents	21
		3.7	List of illustrations/tables/formulas	21
		3.8	List of abbreviations and symbols	21
		3.9	Bibliography and list of sources	21
		3.10	Table of tools used	21
		3.11	Main text	23
			3.11.1 Introduction	23
			3.11.2 Main text	23
			3.11.3 Findings – interpretation and discussion	23
		3.12	Appendix	23
<b>»</b>	4		irements for structuring the text of degree/doctoral theses	25
<b>»</b>		Citat		26
		5.1	Quotations – general information	26
		5.2	Referencing pictures and photographs	26
		5.3	Appropriate citation: basic rules	27
		5.4	Artificial intelligence	29
			5.4.1 How do AI tools work?	29
			5.4.2 Limitations	29
<b>»</b>	6	Plag	iarism review	31
		6.1	What is plagiarism?	31
		6.2	Consequences of plagiarism	33
<b>»</b>	7	Degr	ee/doctoral theses completed as part of research projects	34
<b>»</b>		-	protection	35
<b>»</b>			r requirements	36
<b>»</b>			ee/doctoral theses – quality checklist	40
<b>»</b>		-	eviations	44
<b>»</b>	12	Refe	rences	44
		12.1	List of illustrations	45
		12.2	List of tables	45

### 2 General

It is important to remember that your undergraduate, master's or doctoral thesis is not just part of your degree programme; it is your personal academic calling card.

Following approval, your thesis will be uploaded to the Medical University of Vienna repository MedUni Wien ePub and will be freely accessible online. This may be your first such publication and it can be cited by people around the world at any time. This means it is important to pay close attention to quality in terms of the content and format.

### When preparing a degree/doctoral thesis, you must comply with the following regulations:

- Good Scientific Practice Ethics in Science and Research guidelines: available at www.meduniwien. ac.at/web/en/rechtliches/good-scientific-practice
- The feasibility of writing an undergraduate, master's or doctoral thesis in a particular organisational unit must be confirmed by the head of the unit in question before work on the thesis begins. "In case that treatment of a topic requires the use of financial or material resources furnished by a university organisational unit, assignment of the topic is only permissible if notice of the intention to assign it is given to the head of that unit and they do not prohibit it within one month because of potential significant interference with the unit's teaching and research activities (section 81[3], second sentence, Universities Act).

- The topic of the degree/doctoral thesis must be related to one of the disciplines represented at the Medical University of Vienna or included on the curriculum (see section 59[1][5] Universities Act and sections 17a[4] and 17b[4] of Part II of the Statutes of the Medical University of Vienna).
- Students are permitted to work jointly on the selected topic, but it must be possible to separately assess the performance of each student (sections 81[3] and 83[2] Universities Act).
- The student must notify the curriculum director of the topic and the name of the degree/doctoral thesis supervisor in writing by submitting a detailed description of the planned research before starting work on the thesis (see sections 17a[7] and 17b[7] of Part II of the Statutes of the Medical University of Vienna).
- Once completed, the degree/doctoral thesis must be submitted to the curriculum director for assessment (sections 17a[11] and 17b[12] of Part II of the Statutes of the Medical University of Vienna).

### The following regulations apply to supervisors:

- Teaching guidelines regarding data protection and copyright
- The degree/doctoral thesis must be supervised by a member of MedUni Vienna or a recognised postsecondary institution in Austria or abroad; detailed information on the individuals who may act as supervisors is provided in the MedUni Vienna statutes.<sup>3</sup>
- > Undergraduate and master's theses: Pursuant to section 81(2) Universities Act, the scope must be defined in such a way that completion of the thesis is possible and reasonable within six months.
- The supervisor must provide the student with specialist support and advice, and be available for discussions while the student is writing the thesis, to the extent agreed in the project study and thesis proposal.
- The thesis must be assessed within the period specified by law.
- The supervisor must review and assess the undergraduate/master's thesis within six weeks of the date of submission. If the undergraduate/master's thesis is not reviewed and assessed within this period, at the student's request the curriculum director must assign another member of the university to carry out the review and assessment in accordance with section 17a(2) or (3) of Part II of the Statutes of the Medical University of Vienna (see section 17a[11] of Part II of the statutes).

- The reviewer assigned by the curriculum director must review and assess the doctoral thesis within four months of submission (see section 17b[12] of Part II of the Statutes of the Medical University of Vienna).
- If deficiencies that significantly impede assessment are identified in the course of the plagiarism review and/or during the assessment of the undergraduate, master's or doctoral thesis, the student must be given the opportunity to rectify these deficiencies and resubmit the revised thesis (see section 17a[11a] and [11b], and section 17b[13] of Part II of the Statutes of the Medical University of Vienna).
- The supervisor may not be assigned as the reviewer (see section 17b[12] of Part II of the Statutes of the Medical University of Vienna).
- If the student is participating in a project, the supervisor must contact the Legal Affairs and Compliance Department at MedUni Vienna regarding the Agreement on Participation in Projects by Students.

<sup>&</sup>lt;sup>3</sup> The requirements for supervisors are specified in sections 17a and 17b of Part II of the Statutes of the Medical University of Vienna. Please note the differences between undergraduate, master's and doctoral theses in this regard.



### 2.1 Characteristics of contents of academic papers

In general, there are three types of degree/doctoral thesis. This depends on the topic addressed, which can be examined from a quantitative or qualitative viewpoint:

### » Exclusively theoretical papers: e.g.

- Literature research with summary and conclusion
- Literature review or systematic review
- Historical study
- Empirical papers using qualitative methodology (extrapolating results from individual cases to the general public)
  - Case study/case report: academic presentation of particular cases from clinical practice that are suitable for publication
  - Studies using qualitative data collection tools, e.g. expert interviews, observation of patients, etc.
- Empirical papers using quantitative methodology (applying findings for the general public to individual cases)
  - Study including an analytical or experiment-based section, taking into account e.g. aspects of laboratory medicine
  - Retrospective study based on evaluation of patient data or sample material using appropriate statistical analysis
  - Involvement in a clinical trial, provided that an aspect of the topic can be meaningfully addressed in an independent degree/doctoral thesis

## 2.2 Supplementary information on literature reviews (systematic reviews) as part of undergraduate or master's theses

In principle, the content of a degree/doctoral thesis can take the form of a systematic review of clinical studies. However, clear fulfilment of the following compulsory quality criteria must be demonstrated and described in detail in the methodology section of the paper:

- 1. The degree/doctoral thesis must be based on a clearly formulated hypothesis that can either be proven or disproven by means of literature research.
- 2. The degree/doctoral thesis must contribute to extending the level of knowledge in the respective research field.
- 3. The quality of the papers reviewed in the literature research, and the systematic strategy used when searching for literature in databases must be defined in detail.
- **4.** The following types of study can be used to test hypotheses related to questions on
  - medical interventions: randomised control trials only
  - medical diagnostics: only studies including an objectively defined, diagnostic "gold standard" using blind data analysis
  - the aetiology of diseases: only comparative, controlled trials using blind data analysis

#### 2.3 Phases of writing an academic paper



Figure 1: Completing a degree/doctoral thesis

### Before completing the writing phase, it is important to complete the following tasks as quickly as possible:

Structural and digital form of degree/doctoral thesis See overview of PDF/A-1a and PDF/A-1b specifications on page 15 as well as the notes on creating a PDF/A document: ub.meduniwien.ac.at/en/services/ plagiarism-review/guidelines

### After the writing phase, it is important to complete the following tasks as quickly as possible:

- » Enter name(s) of supervisor(s) in MedCampus
- Submit degree/doctoral thesis in MedCampus in PDF/a format
  - See information on creating a PDF/A document: ub.meduniwien.ac.at/en/services/plagiarismreview/guidelines
  - Checking content
    - Always remember to check the content of the PDF/A file generated after exporting. If you identify any errors in the appearance of the paper or any missing elements, go back through the relevant sections of the original file and review them with respect to the restrictions outlined in section 1 or check the various PDF/A specifications.

Please also note that the exported text might not match the set text exactly.

### 2.4 Copyright, obligation to publish and blocking request

Section 86(1) Universities Act states that a graduate must publish an academic thesis that has received a positive assessment before they can be awarded their degree. At MedUni Vienna, students fulfil this obligation by uploading the final electronic version of their thesis to the repository at the University Library.

When submitting an academic paper in this way, the author is entitled to request that access to the uploaded paper is withheld for a maximum of five years from the date of submission. Under section 86(4) Universities Act, the request must be approved if the student demonstrates that publication would jeopardise material legal or economic interests. This means that not every possible hindrance to the student's interests is sufficient to allow the request; it must be a material impairment of their interests.

The provisions of the Austrian Urheberrechtsgesetz (Copyright Act), Federal Law Gazette No. 111/1936, as amended must be considered in the course of working on the topic and supervising the student.

Note: Under the Austrian Copyright Act, publication of a full-text version of the thesis satisfies the requirements for (initial) publication.

### **Important:** Blocking request

- Blocking requests must be entered in MedCampus before submission of the thesis
- The blocking request cannot be changed once the publication has been submitted!

### 2.5 Publication in the repository

After assessment, the degree/doctoral thesis will be published in electronic form in the institutional repository of the university library MedUni Vienna ePub. The information entered in Medcampus (metadata) is used for the purpose of entering bibliographical references in library catalogues and repositories. You need to make sure that this data is correct. Metadata is descriptive information that is required to enable your degree/doctoral thesis to be found online. These data are searchable and visible even if the electronic version of the relevant publication is blocked and is not displayed.

### The library catalogue contains the following metadata:

- » Author
- » Title of paper
- » Number of pages
- » Submission date
- MedUni Vienna organisational unit where the paper was written
- » Supervisor
- » Keywords
- Duration of requested block on publication (max. 5 years)
- Once the block on the paper has expired, abstracts and the full-text version of the degree/doctoral thesis can also be downloaded.

In addition, versions of doctoral theses that receive a positive grade (taking into account the blocking notice) are also transmitted in electronic form to the Austrian National Library (see section 86[2] Universities Act).

### **NOTE:** Cumulative degree/doctoral thesis

### Cumulative/publication-based doctoral thesis

This type of doctoral thesis consists of several articles on related topics/with related content. Before republishing your articles (for example, in a doctoral thesis), it is important to ensure that publication rights are held by the author and have not been transferred exclusively to the publisher.

Prior to publication of the doctoral thesis (through an institutional repository) it is important to inform the respective publishers whether and in what form you would like to republish your own articles. Many publishers demand an embargo, or only permit the additional publication of particular versions (e.g. preprint) of your articles.<sup>4</sup>

The most straightforward and beneficial approach is to publish the articles in open-access form under a Creative Commons (CC) licence (see creativecommons.org).

In this case, it is important to cite the individual articles correctly and provide the following information: authors (co-authors), title, name of journal, DOI (if available) and version details. (DOI: digital object identifier; www.doi.org)

It can only be assumed that a paper was written independently if the student is listed as the lead or senior author, or as an equally contributing author (in the case of interdisciplinary papers), in a top or standard peer-reviewed journal. The paper must be an original research paper that has been accepted for publication or has already been published.

### Cumulative undergraduate or master's thesis

Decisions on the possibility of writing a cumulative undergraduate or master's thesis are taken on a case-by-case basis. Academic papers written as part of continuing education courses must comply with the regulations set out in the respective curriculum. In order to reduce the workload for students, MedUni Vienna permits doctoral students to include their own publications in the results section of their dissertation in the form of reprinted PDF versions of their journal articles, subject to approval by the publishers. If such reprints are not available, the student may include PDF versions of their accepted papers bearing a watermark.

As the standard of writing in the doctoral thesis is an important criterion for the award of a doctorate, the introduction and the discussion section must be completely rewritten. Although a previously published article containing an overview of the topic may be included in the introduction, at least ten pages of the introduction must be newly written.

### Contents

#### Chapter 1: INTRODUCTION 1.1. General introduction 1-29 30 1.9 Objectives (three to six separate objectives) Chapter 2: RESULTS 2.1 Prologue 2.1 PDF version of first thesis 32-40 2.1.1 Interlude 41 2.2 PDF version of second paper 42-50 2.2.1 Interlude 2.3 PDF version of third paper 52-60 Chapter 3: DISCUSSION 60-79 3.1 General discussion 3.9 Conclusions and outlook **Chapter 4: MATERIALS and METHODS** 4.1 Materials 81-82 4.2 Methods 83-100 REFERENCES 101 ff

Table 1: Cumulative doctoral thesis – structure

### 2.6 Predatory publishers and journals

Publishing your academic paper through a publisher sounds tempting, especially if you are contacted by a publisher without approaching them first, and encouraged to publish your paper. However, please be careful – such predatory publishers often employ questionable business practices and ignore the standards that respectable publishers adhere to.

### We encourage you to find out more before you make a decision.

Often, a quick internet search is enough to uncover details of dubious business models. Remember that all rights of use of the publication will be transferred to the publisher once you give your permission for the paper to be published. Usually, it is not possible to withdraw your approval. If in doubt, please consult your supervisor.

MedUni Vienna attaches great importance to the academic achievements of its researchers. The quality and visibility of publications and conference papers plays a central role in this regard. Against the backdrop of electronic media and open access – a welcome development, generally speaking – a number of dubious journals and conferences have become established, with recent media reports rightly denouncing predatory publishing, fake journals and fake conferences. The business models of many such publishers and journals involve demanding money from authors for publishing services that are not performed. Quality checks such as peer reviews are not carried out, and the reliable, long-term availability of the articles is not guaranteed. In some cases, renowned academics have been listed as publishers without their consent.

The aim of such offers of services is not to publish highquality research findings, but to publish as many articles as possible at the lowest possible expense, in order to maximise profit.

Distinguishing between trusted and dubious journals can sometimes be difficult. Often, journals are given titles that can be easily confused with those of established counterparts. Other forms of deceit relate to details of the impact factor, even though the journal is not included in the latest JCR database, or to the use of opaque or questionable metrics (such as the general impact factor).

Useful tips on identifying predatory journals can be found on the MedUni Vienna University Library website at ub.meduniwien.ac.at/en/1/services/openaccess-publishing.

### 2.7 Accessibility

It is useful to create a PDF/A-1a version of the document in order to enable universal access to academic papers in electronic form.

### 3 Structure and digital form of degree/doctoral theses

### Please note the following format requirements when writing a degree/doctoral thesis for submission:

- » DIN A4 portrait page format
- Left margin 3 cm, right margin 2.5 cm, header and footer both 2.5 cm

### » Fonts

Only fonts that are not subject to third-party rights may be used. We recommend using Times New Roman (serif font) or Arial (sans serif). If you use a font that does not meet this requirement, it may be replaced when exporting the PDF/A document. In this case, the appearance of the paper will change either completely or partly, and this can lead to problems when printing out the paper. (More information is available at ub.meduniwien.ac.at/fileadmin/content/OE/ub/ dokumente/PDFa\_erstellen\_2.0.pdf [German only])

- Recommended settings for body text: 1.5-line spacing, 12 pt, larger fonts for headers (14 or 16 pt), preferably a sans serif font
- German or English (abstract and title in both German and English)
- » Vancouver or Harvard referencing style

- » Uniform formatting must be used throughout
- » Page numbers
- Information on the length of the different types of degree/doctoral thesis can be found in the respective curriculum or on the website of the respective institute. (Theses for the Medicine undergraduate programme must be at least 50 pages long.)
  - The number of pages in the main paper includes e.g. summary (DE and EN), introduction, materials and methods section, results section, discussion, bibliography
  - The number of pages in the main paper does not include the cover page, table of contents, acknowledgements, list of illustrations, list of abbreviations and list of tables, appendix, etc.
- >> Use of gender-reflective language
- » Number chapters consecutively
- » Formulas must be generated using a formula editor
- Formulas must be numbered on the right-hand edge of the page, in accordance with chapter number (to simplify corrections), e.g. (1.1), (1.2)
- Illustrations and tables must also be numbered with the chapter number (this makes changes easier), e.g. Figure 1.1: [description], Figure 1.2: [description]
- A sample thesis can be found here: ub.meduniwien. ac.at/en/services/plagiarism-review/guidelines

#### Overview of PDF/A-1a and 1b specifications

To avoid complications and save time when submitting a thesis, the following specifications must be taken into account in the writing phase:

#### » Graphics

Ideally, images should be in JPEG format (for photos) or PNG format (for diagrams or graphics). Make sure that you use exactly the same image for the export that you also intend to use in any printed copies.

### » Transparency

Transparent content will be lost during export or displayed incorrectly, so you need to make sure that transparency is deactivated for any diagrams or graphics in PNG format.

#### » Effects

When creating your thesis, do not use any effects such as shadows, watermarks or transparent backgrounds for graphics, diagrams and tables (in the form of graphics). Avoid text boxes (with transparency effects), as content may be lost or no longer legible when exporting to the PDF/A file. If the use of text boxes cannot be avoided, do a test export first to check whether they are displayed correctly in the PDF/A document.

### » Special objects

Embedded audio and video data are not permitted – they will either be lost during export or prevent you from exporting your thesis to PDF/A format.

#### » File size

The final PDF/A file including all content must not exceed 18 MB – larger files will not be accepted by MedCampus. (Please bear in mind that PDF/A files can be up to one third larger than standard PDF files.)

#### » Appendices

Make sure that you observe all of the prerequisites for conversion to PDF/A when creating individual appendices. If your appendices are already in PDF format, you can simply merge them into your main text once it too is in PDF format to create a single PDF document using Adobe Acrobat Professional 8.0 and subsequent versions. The resulting document can then be converted into a PDF/A document. Always check whether the content of your texts, tables, graphics, etc. is still correct after each conversion. You will need to prepare the relevant source PDFs individually so that they still appear as intended after the conversion. See information on creating a PDF/A document: ub.meduniwien.ac.at/en/services/plagiarism-review/ guidelines

### » PDF/A format

PDF/A is an electronic document file format that was developed to facilitate long-term archiving of electronic documents. It complies with ISO 19005. The file extension itself does not reveal whether the document is a PDF, or a document saved as a PDF/A. This is only determined by means of automated validation (such as in MedCampus). The following versions are accepted: PDF/A-1a and 1b; PDF/A-2a, 2b, 2u and PDF/A-3.

### Primary factors for PDF/A formatting

Under PDF/A, fonts and content must be reproduced exactly to ensure long-term archiving and accurate reproduction.

To achieve this:

- All fonts used must be embedded in the PDF file.
- All glyphs/fonts for all characters must be fully included in the PDF itself.
- The character set encoding must be correct.
- If spacing/kerning is inconsistent, the PDF file cannot provide an exact reproduction, which means that it does not comply with PDF/A standards.

Please note that not all programs can generate all PDF/A variants. As a result, a valid PDF/A can only be generated if the prescribed standards (for the chosen format) are complied with.

See Wikipedia for further information: de.wikipedia.org/wiki/PDF/A The following table provides an overview of the different structure elements which must be included in every degree thesis.

Element	Mandatory (where applicable)/optional	Page numbering
Title page	mandatory	None
Affidavit	mandatory	Roman numerals for page numbering
Acknowledgements	optional	Roman numerals for page numbering
Foreword	optional	Roman numerals for page numbering
Summary/abstract	mandatory	Arabic numerals for page numbering
Table of contents	mandatory	Arabic numerals for page numbering
Main text	mandatory	Arabic numerals for page numbering
List of illustrations	as required	Roman numerals for page numbering
List of tables	as required	Roman numerals for page numbering
List of formulas	as required	Roman numerals for page numbering
Table of tools	as required	Roman numerals for page numbering
List of abbreviations and symbols	as required	Roman numerals for page numbering
Bibliography	mandatory	Arabic numerals for page numbering
Glossary	as required	Roman numerals for page numbering
Appendix	as required	Roman numerals for page numbering

Table 2: Overview of sections and page numbering

Explanation of the term "as required": If the thesis contains figures, tables or formulas, or if tools (e.g. Al tools) were used, it is mandatory to provide a corresponding index or table of tools. As in the table of contents, the number of the page where the figure, table or formula concerned appears must be provided.

The most important elements are described in more detail in the following chapters.

MedUni Vienna's guidelines for the design of the title page are in accordance with the Austrian ÖNORM A2262 standard.

#### The title page must include the following information:

- » University logo
- » Type of degree/doctoral thesis (master's, undergraduate or doctoral thesis)
- » Title (optional: subtitle) of degree/doctoral thesis
- » Prospective degree and degree programme or (where applicable) elective
- » Name and address of MedUni Vienna (i.e. the university where the thesis was submitted)

- » Internal or external organisational unit where the thesis was written
- » Name of supervisor and (where applicable) co-supervisor
- » Name of author
- » Submission date, relevant details of place of submission

### Please note that for data protection reasons, the matriculation number must not be included on the cover page or in the text.

ORCID (Open Researcher and Contributor ID) is a registration system that attributes academic papers (publications, research papers, etc.) to individuals by means of a unique identifier. This helps to avoid confusion due to, for example, researchers having identical or similar names, or changing their name. ORCID is a nonprofit organisation and researchers can register with ORCID free of charge.

Digital object identifier (DOI): a DOI is a unique, persistent digital identifier that can be assigned to digital, physical or abstract objects.

DOIs are always structured in the same way and begin with a sequence that always starts with '10.', followed by a multi-digit identifier (prefix). The prefix is separated from the object's identifier (suffix) by a forward slash ('/'). The following example shows the pattern used for all DOIs: 10.nnnnn/example.

A DOI is usually automatically assigned by the journal/ publisher when a text is published or when a text or document is published in a repository and entered in one of the registries. Objects that have been assigned a DOI and registered are permanently accessible using a tool called a DOI resolver. An object can be accessed either by entering the DOI in the search mask at www.doi.org/ or typing the DOI into a web browser after 'dx.doi.org/' (e.g. dx.doi.org/10.nnnnn/example). In many cases, the DOI does not link directly to the referenced object, but to a landing page where the object is described in human-readable form and can be viewed.

### For further information visit:

- » www.doi.org
- >> en.wikipedia.org/wiki/Digital\_object\_identifier
- >> www.tuwien.at/en/library/digital-scholarship/ austrian-national-pid-services



### Diplomarbeit

### Titel

### zur Erlangung des akademischen Grades

Doktor:in der gesamten Heilkunde (Dr. med. univ.)

an der Medizinischen Universität Wien

> ausgeführt am: Institut/Klinik für ...

### unter der Anleitung von:

Name dem:der Betreuer:in Name des:der Co-Betreuer:in (wenn vorhanden)

### eingereicht von

Vorname Zuname

Wien, am

### 3.2 Affidavit

The affidavit is a declaration that the student has carried out the work independently, and serves as verification of the student's academic integrity, as reflected in references to any other authors and respect for copyright. As the thesis is submitted in electronic form, the affidavit does not have to be signed. The affidavit is signed electronically by means of the abbreviation "eh", which stands for eigenhändig, the German for manu propria or "m.p." (meaning "with one's own hand").

### Sample affidavit:

I hereby solemnly declare that this thesis was written independently and without the assistance of third parties, that other sources besides those cited were not used and that excerpts from the sources used – both content and verbatim quotations – are indicated as such.

Vienna, (date)

Signature, m.p.

The affidavit is a declaration that you have written the thesis independently and that you have not used any sources other than those stated. You must not present text generated using artificial intelligence (AI) as your own work under any circumstances!

This means that any machine translations or text enhancements that have been used to optimise text flow and grammar, and which were created using artificial intelligence or other algorithms, must be properly cited and referenced in the relevant section of the thesis and included in the bibliography. Additionally, a table of tools used must be created, in which you specify which software was used for which purpose in which section, along with an indication of the degree of revision.

A declaration containing details of the unit(s) where the thesis was written (institutes, laboratories, etc.) and any parts of the work that were carried out by individuals other than the author (e.g. contributions by employees, technicians and supervisors) should also be included. The requirements for proper identification and recognition of such information can be found in the MedUni Vienna Affiliation Policy.





### 3.3 Acknowledgements (optional)

The acknowledgements should be no longer than one page. They usually refer to the following individuals:

- » The supervisor of the degree/doctoral thesis
- » External individuals who provided support
- Any institutions outside MedUni Vienna that contributed to the completion of the degree/doctoral thesis
- » Colleagues
- » Family and friends
- » Lecturers

Please check in advance whether (private) individuals agree to be mentioned by name.

### 3.4 Foreword (optional)

Your reasons for choosing the topic can be explained in the foreword; acknowledgements can also be included.

In doctoral theses, the prologue should help readers to link the introduction with the first inserted, previously published paper, and highlight the student's specific contribution to that work. Similarly, interludes should be used to draw connections between the previously inserted papers and the next, again to help readers, and to underline the part played by the author in the research described.

### 3.5 Summary/abstract in German and English (max. one page in each language)

The summary is often described as the most frequently read section of a degree/doctoral thesis, so it should include the key details of the research and encourage readers to read the entire thesis. With this in mind, the summary/abstract should contain the following information:

- The topic area (background) and research problem/ reasons for carrying out the research
- » Approach, rationale and methodology
- Results, conclusions, and/or possible practical applications

In order to be displayed in MedCampus, the summary/ abstract must be max. one page long in each language. Please note that only summaries/abstracts of up to 5,000 characters in length can be saved in MedCampus.

Summaries/abstracts in undergraduate theses must be no longer than one page.

#### 3.6 Table of contents

The table of contents reflects the structure of the degree/ doctoral thesis and the breakdown must therefore be identical to that in the thesis. A maximum of three numbered levels must be used (i.e. 1.1.1 followed by 1.1.2, and so on). The position of each chapter in the text must be clear from the page numbering.

Please remember that the table of contents is read almost as frequently as the summary/abstract, so chapter headings and subheadings should be as informative as possible.

### 3.7 List of illustrations/tables/formulas (where applicable)

All figures in the text must be accompanied by a description, all tables must include a heading and all formulas also require an appropriate description. Lists of illustrations, tables and formulas must be provided in the thesis, including a clear reference to their position in the text (page number, etc.). The descriptions of illustrations and tables in the text must be identical with those in the list.

### 3.8 List of abbreviations and symbols (where applicable)

The list of abbreviations contains all of the abbreviations used in the degree/doctoral thesis, listed alphabetically. Specialised abbreviations and symbols must also be briefly explained.

### 3.9 Bibliography and list of sources

A uniform, customary and common format should be used for the bibliography. Where possible, use a literature management program (see also section 5 Citation). However, before submitting the thesis, it is always advisable to independently check the bibliography for consistency, completeness and correctness; a literature management program is not a replacement for this step.

### 3.10 Table of tools used

When using machine translations and text enhancements derived from artificial intelligence or other algorithms, a table of tools used must be created, in which you specify which software was used for which purpose in which section, along with an indication of the degree of revision.



### 3.11 Main text

The text must be written using a general format and divided into sections (introduction, main text, findings). This means that the degree/doctoral thesis consists of several chapters, which in turn may also be grouped into parts.

The following structure is required for doctoral theses: introduction, findings, discussion, materials and methods, (appendix).

### 3.11.1 Introduction

The introduction provides brief information about the background, research topic, objectives and scope of the degree/doctoral thesis, as well as the materials and methods employed. All in all, this represents a short introduction to the project. The introduction should also clearly explain the reasons for carrying out the research.

### 3.11.2 Main text

The main section of a degree/doctoral thesis describes in detail the research problem, the methods used to investigate it and the approach applied. The chapters must be logically structured and coherent in themselves. Readers must not be assumed to have any information that has not been covered in one of the preceding chapters.

In the case of practical work, the main text can be split into a theoretical and a practical section. Embedded illustrations, tables and formulas must be introduced and explained in the text and not simply inserted without explanation.

For studies that require the approval of an ethics committee, the relevant ethics committee reference number must also be provided.

It is not necessary to include a notice of approval from the Ethics Committee in the appendix!

#### 3.11.3 Findings – interpretation and discussion

The most important findings of the student's surveys/ experiments/research are presented after the main text. The findings must be presented separately from the discussion.

When interpreting the findings, reference should always be made to the research questions raised in the introduction; these questions should also be answered.

### The following points can be addressed in the discussion:

- » Comparisons with (the student's) previous research
- » Conclusions/comparative explanations
- » Critical analysis of content and methods
- » Theoretical and practical implications
- >> Outlook and possibly suggestions for further research projects, or description of additional research required
- » Comparison with findings of other studies
- Description of limitations that had an effect on the study findings

### 3.12 Appendix

The appendix contains all elements that were important for carrying out the research, e.g. questionnaires, status sheets, programme listings, print layouts, measurement tables, indexes, measurement reports, case report forms, medical history reports, Ethics Committee reference number (where applicable), additional detailed findings (tables, diagrams), publications compiled while carrying out research for the degree/doctoral thesis, etc. The pages in the appendix must be numbered using Roman numerals (i, ii, iii, iv, etc.).



# 4 Requirements for structuring the text of degree/doctoral theses

Students must follow the requirements for the structure, subdivision and form of expression when writing their degree/doctoral thesis (Structure and digital form of degree/doctoral theses).

The citation system must be based on customary standards (i.e. Vancouver or Harvard style).

#### The style of the degree/doctoral thesis must take the following aspects into account:

- The student's own work should be presented in such a way that readers can immediately distinguish between sections taken from the literature and those produced by the student.
- The selected style must ensure that facts are presented as such, while conjecture and assumptions must be recognisable as such and only appear in the discussion.
- Facts established using specific techniques should be described in an abstract or general form, i.e. without using sentences written in the first person.
- The research problem must be formulated in the past tense ("The aim of this thesis was ..."), as the problem should have been solved by the time the degree/doctoral thesis is written.
- > Value judgements about processes, methods and forms of implementation should only be included in the discussion in an abstract form (avoid expressions such as "The xxx process is bad").

### **5** Citation

One of the main characteristics of a degree/doctoral thesis is that the sources used are carefully selected and correctly referenced. This is true of direct (word-for-word) quotations, as well as text written by the student that is based on other authors' ideas. Besides the literature used, references must also be included for internet sources, images, etc.

### All degree/doctoral theses must include a list of sources or bibliography.

#### 5.1 Quotations - general information

An important idea should introduce the remarks that follow it. Citation has several meanings, which are linked to the various requirements for its use. We can distinguish between purely academic citation and citation in accordance with copyright law. These usages overlap in many, but not all, respects. This section is intended to provide a rough categorisation for these two approaches.

### Correct citation of sources is both essential and absolutely necessary!

In an academic context, citation refers to the use of other people's ideas expressed in the author's own words, the direct and word-for-word use of text, as well as the use of other people's illustrations and images. In the case of purely academic citation, it is sufficient to indicate such uses in order to avoid committing plagiarism. By contrast, in the legal sense, correct citation in accordance with copyright law requires fulfilment of certain provisions of the Austrian Copyright Act. Without going into copyright terminology or copyright requirements in too much detail, a very simple rule of thumb is that facts and knowledge are not protected by copyright. Entire works, such as illustrations, photos or longer continuous passages of text, are (in most cases) covered by copyright law. Consequently, if you use content that is copyright protected, you must bear in mind other aspects besides the correct citation of the source. If you quote text directly and verbatim (citation in the legal sense), you must also consider where the text was taken from, as well as citing the source correctly. The work from which you want to guote must have been published. Work is considered to have been published if it is available in the form of a journal article or book, or in a publicly accessible repository. Articles and other texts posted on the internet are also deemed to have been published if they have been made available to the public with the copyright holder's consent. When you find potential sources online, you should ask yourself whether the author intended to make the work available to the general public. If the source is a homework assignment or set of

notes that were produced by another student and were uploaded to a platform that is not generally accessible, such as Moodle, the chances are that the answer to this question is "no". If the source is a specialist article posted on a generally accessible platform, the answer is clearly "yes".

See section 5.2 for information on the use of images/ illustrations and photos.

#### Put simply:

If you use your own words to state facts or knowledge that are not based on your own thoughts, correct citation of the source is sufficient to avoid plagiarism. In this case, you do not need to take copyright law into account. However, if you use entire works (word-for-word extracts from texts, entire texts, etc.), you must ensure that the source has been published and that you reference it correctly.

### 5.2 Referencing pictures and photographs

If you wish to use illustrations in your degree/doctoral thesis that you did not produce yourself, they must be correctly cited (in the list of illustrations and/or next to the illustration), and the agreement of the publisher must be obtained (evidenced by e.g. the relevant invoice number, licence number and date of approval). Please note that tracing an image also constitutes making a copy, and requires authorisation as a result. If you do not use a diagram or picture in its originally published form, but in an edited form, you will also need to obtain specific approval from the publisher/rights holder. If you edit the image on the basis of this approval, the modification must be indicated in your thesis (e.g. using a note such as "modified from XXX" or "adapted from XXX"). The consequences of using illustrations created by third parties without an appropriate citation are the same as those outlined in section 5 Citation.

Infringements of copyright can result in criminal or civil charges being brought.

Please note that in most cases, pictures found on the internet are subject to copyright and cannot simply be copied and used. For such images, either a licence/right of use must be obtained from the copyright holder, or the licence terms applying to the work must be observed. Images created using artificial intelligence are also considered to have been created by third parties and must be indicated as such (including a reference).

### Tip:

If the publisher approves your use of the desired image, you must carefully read the approval notice, any other documents provided and/or the applicable general terms and conditions. Publishers often require sources to be referenced in a certain way (e.g. defined wording; particular positioning of the citation, such as directly under an image/ illustration and not in the list of illustrations, etc.). If you do not follow these requirements, you run the risk of legal consequences due to a breach of the licensing terms, even if you have obtained the publisher's approval.

In the case of use of illustrations or images published under a free or CC licence, it is not necessary to obtain the approval of the rights holder once again. The licence terms are generally defined, and you should also read them and use the image or illustration accordingly. As a rule, in addition to correct and complete citation, this includes a reference to any modifications made and a link to the relevant CC BY licence. However, changes to content are not permitted under some CC licences.

How do I obtain approval? There are several different ways to obtain approval, including by means of a brief email to the rights holder (e.g. the publisher), or by using tools integrated directly into an online article or book (e.g. a reference to a CC licence) or the website. For further details, visit https://ub.meduniwien.ac.at/en/1/services/open-accesspublishing/

### 5.3 Appropriate citation: basic rules

Generally speaking, all ideas from third parties that you incorporate into your thesis must be properly referenced.

There are two types of quotation: direct quotation, when passages or sections are taken word-for-word from other texts, and indirect quotation, where only the content of another text is quoted using your own words and sentence structure. Both forms must be clearly identified as quotations.

### In any event, quotations must meet the following requirements:

### 1. Identification

### 2. Referencing

### Re 1. Identification

Direct quotations must be clearly identifiable as such, and must be used verbatim and in a manner that is true to the original source (including punctuation and any spelling mistakes). Short word-for-word quotations are presented in the text in quotation marks. Word-for-word quotations that extend over several lines can be presented separately from the rest of the text for emphasis in an indented paragraph (e.g. indented by 1.5cm). In this case, quotation marks are not required.

Generally speaking, direct quotations do not need to be italicised, unless the original text contains corresponding emphasis or highlighting, which must also be included in the direct quotation in such cases.

- Any spelling mistakes must be retained and indicated using "[sic]", e.g. "Here is a spelling mitsake [sic]!".
- If parts of a quotation are omitted, this must be indicated using "[...]". However, the message contained in the quotation must not be distorted, e.g. "Text has been omitted [...] here.".
- If information is added to the quotation, this is indicated using "[]", e.g. "[Text has been] added to the quotation here.".

Further information on this subject can be found in the manuals published by major expert organisations, among other sources (see chapter 9).

#### Re 2. Referencing

The form and manner in which references are provided for quotations differs from one academic discipline and expert organisation to the next (see chapter 10 Degree/ doctoral theses – quality checklist). If you are unsure about the citation rules that apply to your thesis, please consult your supervisor. As a basic rule, the quotation must be referenced as precisely as possible so that it can be easily found in the source work.

### Please also note the following points regarding citation:

- If tables/charts/figures/formulas are taken from the literature used, where possible the page number in the original source must also be provided (or, where applicable, the original table/diagram/figure/formula number), e.g. "(43, p.19)", "(Smith et al., 2021, Figure 5)", "(78, p.5, Fig. 2)".
- When using direct quotations, the original page number should always be stated – if available – in addition to the source e.g. "(Miller et al., 2011, p. 7)", "(45, para. 3)", "(WHO, 2023, Overview section)". The reference must be inserted immediately after the end

of the direct quotation.

If the page number is not available, other information should be provided that will enable the reader to find the quotation in the source, such as a paragraph number or chapter heading/title.

- If statements such as "A number of studies have shown that..." are used, the studies (publications) must also be referenced directly in the part of the text where such statements appear.
- Academic literature (including academic literature published online) must always take precedence over other publications.
- As a rule, only sources that have actually been read may be referenced. If you become aware of content through a secondary source (e.g. if the original source is not accessible), this must be indicated in the form of a secondary citation. This can be done by adding "cited in" and referencing the secondary literature (ideally including the exact page number); the original source that was not read is not given a reference number/short citation or listed in the bibliography. The citation in the text would look like this: "ABC, cited in XYZ (p.137), showed that ..."; only XYZ is referenced and included in the bibliography.
- Information from literature is presented in your own words and using your own sentence structure (paraphrasing). The meaning of statements must not be altered and numerical information should be quoted as accurately as possible. If it is only possible to paraphrase literature using language that closely resembles the original text (e.g. listing technical terms), the reference should include the exact page number or paragraph, if possible.
- If sources are translated, you should focus on using your own formulations and text structure (e.g. paraphrasing, summarising). Word-for-word translations should be avoided where possible.
- The closer your own words are to a source written in another language, i.e. the less you use your own formulations and sentence structures, the greater the need for an appropriate degree of transparency: the reference must include the exact page number if possible, and the reader must be made aware of these circumstances by adding a statement such as "own translation" or "translated by the author". If text is translated word-for-word in the thesis, it must be

referenced in the same way as a direct quotation and indicated accordingly, with "own translation" added or referring to the translation software used, e.g. "translated using DeepL" and documented in the table of tools used. If you intend to use translation software, you must consult your supervisor beforehand. Please also consider data protection requirements when using such software (see chapter 8 Data protection).

The wording and positioning of references must always clearly indicate the source that was used and to what extent. Avoid extended sequences of references at the end of paragraphs wherever possible. In general, these have several disadvantages and are only permissible if all of the information in the paragraph is actually contained in equal measure in all of the references listed.

Moreover, it is too time-consuming and troublesome for readers to find out which information comes from which source, and there is also a risk that contents will be mistakenly attributed to a particular publication, or it will be implied that authors have made statements that are not included in the cited source. In addition, if readers find several references at the end of a passage of text, they will not be able to recognise immediately whether all of the information is actually taken from the sources referenced.

The longer the section concerned and the more information it contains, the greater the impact of these drawbacks. As a result, it is advisable to place references next to the information they refer to.

Simply lifting content including references from another source (without having read the source yourself) is not permitted.

### 5.4 Artificial intelligence

Artificial intelligence (AI) tools are now available for many different tasks: for clinical and research activities, as well as for literature research and the creation of texts and illustrations, translations, program codes, etc. However, these tools do not just deliver advantages – they also entail risks that should not be underestimated and, in some cases, have consequences that are, as yet, unforeseeable.

When writing a thesis, the question that is most likely to arise regards the use of text generators. At present, the best-known of these is ChatGPT, which became well-known worldwide when it was released at the end of 2022. Many such programs are now available, and the risks and potential benefits for all of these text generators are by and large the same.

>> Use of AI must be properly referenced in theses. Attention is drawn to the following, in particular (German only): section 2a(3)(2) Hochschul-Qualitätssicherungsgesetz (Act on Quality Assurance in Higher Education): ris.bka.gv.at/eli/bgbl/i/2011/74/P2a/ NOR40261627

### 5.4.1 How do AI tools work?

Al tools use statistical patterns to generate answers to prompts entered by the user. The tool determines the most likely sequence of words and displays it without understanding the content (stochastic parrot). (Bender et al., 2021)

In order to generate coherent texts, AI tools are trained using existing texts. These data sets consist of texts that are freely available online. For example, ChatGPT was trained using various sources, including Wikipedia.

#### 5.4.2 Limitations

Although they are referred to as artificial intelligence, text generators are not able to actually understand the content they produce. This means that although they can produce texts that sound convincing, the texts can also contain incorrect and made-up information (known as hallucinations).

It is also possible that the AI was trained using low-quality or unscientific material, and will generate biased and questionable results as a result. In addition, the data used for training and the answers the AI generates may be out of date. Put simply, text generators are precisely that – and not search engines. As a result, responsibility for the use of AI-generated content always rests with the user, and this calls for appropriate content-related, linguistic and analytical skills. This underlines the fact that AI tools are not a substitute for personal abilities; at best, they are a means of support.

In any event, the issue of data protection must be considered before using an AI tool. In terms of the General Data Protection Regulation (GDPR), the question of where entered data are stored and where servers are located needs to be considered, and you must also bear in mind that data entered into generative AI tools may be processed, both by the tool itself and by human AI trainers or programmers.

Accordingly, patient data must not be entered. Also, think very carefully before disclosing research data. In addition, it is often necessary to register and provide personal data in order to use an Al tool.

In light of these factors, it pays to take a critical view of the use of AI text generators when writing theses. When it comes to supervision, this also gives rise to the question of whether a submitted thesis constitutes the author's own work if they did not produce parts of it themselves. As a consequence, AI tools should only be used in consultation with your supervisor.

If such tools are used for translations or proofreading, this must also be clearly indicated and made transparent to the reader (see e.g. the APA blog).

Any use of AI tools, whether for text generation or for text enhancement such as machine translations and text improvements based on AI or other algorithms, must be specified in the table of tools used and an indication given of the degree of revision. The software used must be included in the bibliography. Additionally, text passages or word-for-word translations generated using such tools should be cited directly in the corresponding section.

The table of tools is a supplement which openly discloses the resources used in the thesis. It is not a substitute for citation standards, the description of methods and tools used, or the list of references.

#### Please note the following:

- You must always take data protection requirements into account before entering any information into the software (do not submit any personal data!). Carefully review what happens to the data, including whether it can be traced back to individuals, and whether such data is further processed or utilised.
- Include the AI tool in the bibliography in the list of software used. You are responsible for verifying results for correctness, plausibility and possible bias before using them. As the author of the thesis, you are responsible for the correctness of the statements presented in it.
- Document the use of AI as precisely as possible when writing your thesis (in the table of tools used, the methodology section) and describe the degree to which you have revised it. Reference the specific location in the text where generated content, illustrations and word-for-word translations are used. Outputs and prompts must be documented and can be linked in the table of tools or listed in the appendix.

### For further information see:

APA Style Blog (2023) How to cite ChatGPT. Available at apastyle.apa.org/blog/how-to-cite-chatgpt (last accessed on 17 January 2025).

Bender, E.M., et al. (2021) On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? (from FAccT,21: 2021 ACM Conference on Fairness, Accountability, and Transparency, Virtual Event Canada, 3-10 March 2021), Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, pp. 610-623. Available at doi.org/10.1145/3442188.3445922

Foltynek, T., et al. (2023) ENAI Recommendations on the ethical use of Artificial Intelligence in Education, International Journal for Educational Integrity, 19, article number 12. Available at doi.org/10.1007/s40979-023-00133-4

IEEE Computational Intelligence Society (2023) Information for Authors IEEE Transactions on Artificial Intelligence Author Instructions. Available at cis.ieee.org/publications/ieee-transactions-onartificial-intelligence/information-for-authors-tai (last accessed on 14 January 2025). Niederkofler, H./University of Vienna blog (2023) OK with AI? Unlocking the potential of AI tools and maintaining integrity Available at blog.univie.ac.at/en/life-at-uni/okwith-ai (last accessed on 17 January 2025).

Thirunavukarasu, A.J., et al. (2023) Large language models in medicine, Nature Medicine, 29, pp. 1930–1940. Available at www.nature.com/articles/ s41591-023-02448-8 (last accessed on 14 January 2025).

University of Vienna (pub.) (2024). Guidelines der Universität Wien zum Umgang mit Künstlicher Intelligenz (KI) in der Lehre ('University of Vienna Guidelines on Working with Artificial Intelligence [AI] in Teaching'; German only). Second edition (Vienna). Available online at phaidra.univie.ac.at/detail/o:2092606 (last accessed on 2 December 2024)

### 6 Plagiarism review

Academic papers written and supervised at MedUni Vienna undergo a plagiarism review following submission to the university (i.e. upload to MedCampus), and following assessment they are made publicly accessible via the University Library repository (repositorium.meduniwien.ac.at). Please note that theses are made available indefinitely.

### Golden rules for avoiding plagiarism:

- 1. Make sure you understand the significance of plagiarism, self-plagiarism and deception of reviewers. Present new text and findings.
- 2. DO NOT COPY ANY passages within your thesis.
- 3. If you have transferred exclusive copyright to a publisher, ask the publisher for permission if you want to use works that have already been published, including your own.
- **4.** You are permitted to use plagiarism-checking software to identify possible instances of plagiarism in your thesis before submitting the final version.

### 6.1 What is plagiarism?\*

According to Section 2a(3)(2) Hochschul-Qualitätssicherungsgesetz (Act on Quality Assurance in Higher Education): "An act of plagiarism is [...] committed when text, content, or ideas are appropriated and presented as one's own. This encompasses in particular the appropriation and use of text, theories, hypotheses, findings or data by directly quoting, paraphrasing or translating them without appropriate acknowledgement and reference to the source and the original author." (ris.bka.gv.at/eli/bgbl/i/2011/74/P2a/NOR40261627) (last accessed: 10 December 2024)

Plagiarism is the unlawful incorporation of another person's intellectual property into one's own work, without acknowledging the other person's work as such. However, plagiarism takes various forms and is not limited to word-for-word copying. In practice, mixed forms of the types of plagiarism explained below can occur.

\*See also the information on scientific misconduct in the current Good Scientific Practice Guidelines at www.meduniwien.ac.at/gsp



#### A distinction can be made between the following forms:

### Full plagiarism

This involves passing off another author's work as one's own without their consent.

#### Translation plagiarism

This means translating foreign-language works or parts of foreign-language works and incorporating the translation into one's own work without acknowledging and referencing the source.

### Self-plagiarism | auto-plagiarism | recycling | augmented publication

This is the use of one's own existing and/or published texts without acknowledgement or correct referencing.

### **Plagiarism of ideas**

This occurs when ideas, opinions or findings are incorporated without appropriately acknowledging their source.

#### **Plagiarism of structure**

This refers to a particular form of plagiarism of ideas, where the structure of another author's text is fully or partly appropriated (e.g. table of contents, chapter structure, sequence of presentation).

### Image or illustration plagiarism

Incorrect citation of pictures, photos, etc. Image or illustration plagiarism occurs when illustrations from a plagiarised text are appropriated, or illustrations produced by another person are explicitly presented as the author's own work. This includes full or partial plagiarism of photos, graphics, videos, pictures, tables, diagrams, etc., when the true source is not mentioned or not correctly referenced, or the required permission has not been obtained.

#### Copy and paste | shake and paste | find and replace

These terms refer to instances of plagiarism where texts are not independently produced by the author but are assembled from sources that are sometimes acknowledged and sometimes unacknowledged. "Find and replace" plagiarism is a form of invalid paraphrasing, where individual words are replaced by synonyms.

### "Pawn sacrifice" plagiarism

Text and/or content is used (verbatim), but the reference only relates to part of the original text. However, large sections are appropriated from the same source without referencing, which serves to conceal their origin.

### Code plagiarism

The use of programming code, algorithms, classes or functions without permission or reference (see Maurer, H. A., Kappe, F., Zaka, B. [2006]. Plagiarism – A Survey. Journal of Universal Computer Science, 12[8]: 1050-1084).

#### Source plagiarism

References are lifted directly from a source, but the author has not read the content themselves. The actual source is not referenced and the work is passed off as the author's own research.

#### **Citation plagiarism**

Citation plagiarism occurs when references, including bibliographic information, are taken from other sources without acknowledgement.

### Ghostwriting

This involves passing off another author's work as one's own with their consent.

\*See also the information on scientific misconduct in the current Good Scientific Practice Guidelines at www. meduniwien.ac.at/web/en/rechtliches/good-scientificpractice/

### 6.2 Consequences of plagiarism

It is important to remember that plagiarism is not a trivial offence, and in addition to consequences that have become well-known due to reports in the media – such as revocation of an academic degree and nullification of assessments that have already taken place – there may also be legal consequences under criminal and civil law. Plagiarism is intellectual property theft and can be punished accordingly. As a result, the student may be ordered to pay damages to the original author, and certain deliberate acts of copyright infringement may be punished by up to six months in prison or a fine of up to 360 day-fines.

In case of plagiarism, sanctions under university law may also be imposed in accordance with the Statutes of the Medical University of Vienna.

If deficiencies that significantly impede assessment are identified in the course of the plagiarism review and/or during the assessment of the undergraduate, master's or doctoral thesis, the student must be given the opportunity to rectify these deficiencies and resubmit the revised thesis (see section 17a[11a] and [11b], and section 17b[13] of Part II of the Statutes of the Medical University of Vienna). If it is determined in the course of assessment that a degree/doctoral thesis contravenes the rules of good scientific practice, the thesis must be awarded a fail grade (section 15a[2] of Part II of the statutes).

If it is determined after assessment and before graduation that a degree/doctoral thesis contravenes the rules of good scientific practice, in accordance with section 73 Universities Act the assessment must be nullified, by notice of the curriculum director (see section 15a[3] of Part II of the statutes).

If it becomes clear after graduation that the academic degree or title has been obtained under false pretences, in particular by means of the pretence of scientific or artistic achievements, the academic degree or title is to be revoked pursuant to section 89 Universities Act. Please also note that a suspicion of or allegations of plagiarism can cause reputational damage, even if they ultimately turn out to be unfounded. The best way to prevent this is by working precisely and transparently, in line with the principles of good scientific practice.

# 7 Degree/doctoral theses completed as part of research projects

If a student's thesis will be written as part of a research project, an agreement between the student and MedUni Vienna must be concluded in advance (except in the case of doctoral candidates who have an employment contract with the university). Supervisors can obtain the contract template (Agreement on Participation in Projects by Students) on request from the Legal Department.

### Prepublications

If a degree/doctoral thesis or parts of it have already been published (e.g. as a journal article or an abstract for a poster presentation), this must be clearly indicated, for instance at the start of the chapter on the methods employed. Ideally, the topic covered by the thesis should be distinct from that of the research project if possible, in order to highlight the degree candidate's work; in other words, the activities carried out by the student should be clearly presented. Significant rewording of texts that have already been published is appropriate if this makes sense in terms of the content or is possible in view of the subject matter. Ultimately, a degree thesis should be the student's own work, while a pre-publication usually has several authors. However, even if a degree candidate is the sole author of a prepublication, their thesis should contain formulations using the candidate's own words, or new wording. Any prepublications should be referenced in the appropriate places in the thesis in the same way as other literature (in order to avoid self-plagiarism). If content in the thesis matches content contained in the original publication, copyright-related aspects must also be taken into account.

**Note:** Publications related to undergraduate and master's theses are also covered in the guidelines for supervisors (page 9).

### 8 Data protection

Please note that once completed, your degree/doctoral thesis will be published online in the MedUni Vienna University Library repository (or after a maximum of five years if the publication is blocked pursuant to section 86[4] Universities Act). This means you should avoid providing personal data in your CV, such as your address, signature, telephone number, matriculation number, etc. Students must also avoid publishing information that could endanger the well-being of other people (e.g. use of interviews or other personal data). Please also note that if you would like to address questions focused on individuals or patients, or topics that form part of MedUni Vienna's research, you must consult and obtain the approval of the Ethics Committee, as well as - if necessary - the university's Data Protection Committee and/or the Clearing Board for Teaching.

Personal data, i.e. all information that can be traced back to a specific individual, are subject to special legal protection<sup>5</sup>. This means you are obliged to pseudonymise personal data – in other words, remove information that can be used to determine an individual's identity, such as names and dates of birth – where possible during your research. Any data in your thesis should be anonymised as far as possible before publication, which also includes removing identification numbers (e.g. social insurance numbers, patient IDs, etc.).

If pseudonymisation of any raw data used in writing the thesis is not possible, you must ensure that third parties do not gain unauthorised access to the data. This involves taking steps to ensure that hardware is sufficiently encrypted (e.g. locking your laptop) and that providers of software solutions do not use information for their own purposes, as well as to create a secure data environment.

<sup>&</sup>lt;sup>5</sup> In particular, see the General Data Protection Regulation (GDPR, Regulation [EU] 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC)



### 9 Other requirements

When writing a degree/doctoral thesis at MedUni Vienna, in addition to the generally applicable legal regulations, care should be taken that the following guidelines and regulations are observed, where relevant:

- The Austrian Arzneimittelgesetz (Pharmaceuticals Act), Medizinproduktgesetz (Medical Products Act), Gentechnikgesetz (Gene Technology Act), Tierversuchsgesetz (Animal Experimentation Act) and Tierversuchs-Verordnung (Animal Experiments Order), as amended
- Copyright Act, Federal Law Gazette No. 111/1936, as amended
- » The Declaration of Helsinki:



www.wma.net/policies-post/ wma-declaration-of-helsinkiethical-principles-for-medicalresearch-involving-humansubjects Good scientific practice and ethics in science and research: Medical University of Vienna Guidelines on Good Scientific Practice – Ethics in Science and Research:



### www.meduniwien.ac.at/en/gsp

MedUni Vienna Ethics Committee regulations (German only):



ethikkommission. meduniwien.ac.at

MedUni Vienna Data Protection Committee regulations:



www.meduniwien.ac.at/web/en/ about-us/organisation/committees/ data-protection-committee/



» MedUni Vienna Data Clearing House regulations:



www.meduniwien.ac.at/ daten-clearingstelle

Where applicable: Regulations of the MedUni Vienna Data Clearing House for Teaching (German only):



www.meduniwien.ac.at/web/ueberuns/organisation/organisationseinheiten-mit-spezieller-servicefunktion/teaching-center/clearing-stellelehre-der-meduni-wien Guidelines on the protection and utilisation of intellectual property; Mitteilungsblatt of the Medical University of Vienna, 2020/2021 academic year, Vol. 28, No. 31 (German only):



www.meduniwien.ac.at/web/ fileadmin/content/ serviceeinrichtungen/ rechtsabteilung/ mitteilungsblaetter\_2021/28\_ Mitteilungsblatt\_21052021\_IP\_ Richtlinien.pdf



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» Topic bank for the Medicine undergraduate programme:



ssm.meduniwien.ac.at/n202/ block24/lvleiter.html

Topic bank for the Medical Informatics master's programme:



data-science.meduniwien.ac.at/en/ studies-training-and-furthereducation/the-medicalinformatics-masters-programme/ topics-exchange/ Information on gender-reflective language, and support tools for gender and diversity-related aspects in research (German only):



www.meduniwien.ac.at/ diversity-resources



» MedUni Vienna Affiliation Policy:



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### 10 Degree/doctoral theses – quality checklist

### Before submitting the project plan

- The student chooses a topic and registers the undergraduate/master's thesis with the Studies and Examinations Department
- Check whether approval must be obtained (e.g. from the Ethics Committee or Committee for Animal Experimentation) – the authorisation number must be stated in the thesis or, alternatively, a note confirming that approval has been obtained
- Is the approval of the Data Protection Committee/Data Clearing House for Teaching required?
- Does an agreement need to be concluded between the student and MedUni Vienna (if the thesis will be written as part of a research project)? In case of doubt, please contact the MedUni Vienna Legal Department: rechtsabteilung@meduniwien.ac.at

### **Before writing**

- Careful choice of literature/knowledge management system
- Thorough literature research: academic literature (including academic literature published online) must always take precedence over other publications.
  (For assistance with database research, e-journals and use of the library, please contact the Teaching Library at: schulung-bibliothek@meduniwien.ac.at)
- Make reference to the degree thesis in publications prior to approval, describe the contribution of the degree thesis and include references to it where applicable
- >> Observe requirements regarding PDF/A format generation
- » Clarify use of AI tools with supervisor

### During the writing process

- Include complete and correct references in line with the chosen citation style, both in the text and in the bibliography
- Printed manuals describing the citation styles used by the various expert organisations can be obtained from various sources, including the University Library.

### Vancouver style:



NLM (Citing Medicine)



AMA (Manual of Style, 11<sup>th</sup> Edition)



IEEE (Reference Guide)

### Harvard style:



e.g. AGPS



APA (Publication Manual, 7<sup>th</sup> Edition)



Chicago (Manual of Style, 17<sup>th</sup> Edition)

#### Footnote system:



Chicago (Manual of Style, 17<sup>th</sup> Edition)

### » Overview

Cite them right



Cite them right (print version)



Cite them right Online-Version Login: "Medizinische Universität Wien"

- Cite and write make a note of relevant references (including exact page numbers where applicable) while writing
- Indicate other authors' thinking, ideas and content as such
- Insert references directly at the relevant point in the text (not just at the end of the paragraph)
- » Attribute specific figures clearly to the relevant source
- Always specifically reference any studies referred to (exception: secondary quotations)
- >> Use quotation marks ("...") to indicate direct quotations, with a reference to the exact page number Present the text true to the original and down to the letter; mark any editorial changes with [].
- Text translated word for word must be indicated/ referenced in the same way as direct quotations (including a note on what was translated and by whom)
- Include page numbers at points in text that are very similar to the original source text

- References to illustrations, tables, graphics and formulas must include the exact page number (where appropriate, provide the original number of the illustration, table, graphic or formula)
- Proper numbering of illustrations, tables, graphics and formulas
- Make reference to changes made to illustrations, tables and graphics (e.g. adapted from, modified from, etc.), and obtain a licence for modification of the illustration, etc. from the publisher/rights holder
- Source reference and the publisher's declaration of consent (evidenced by e.g. the invoice number, licence number and date of approval) must be obtained and included in the thesis, e.g. in the list of illustrations or next to the illustration in question. Remember to read the licensing terms carefully and follow them!
- For assistance with obtaining approval, visit www.copyright.com
- Where applicable, mention the research project within which the thesis is being written
- List publications where the thesis or part of the thesis has previously appeared (e.g. poster presentations, abstracts), reformulate texts taken from such publications, and reference relevant parts of the publications, including exact page numbers
- Methods section: use your own words as far as possible – do not copy and paste from published works or other degree/doctoral theses
- Indicate use of AI tools, save prompts to and responses from AI tools, and include them in the appendix where appropriate

### **Before uploading**

- Make sure the pages of the thesis are properly numbered
- >> Use Roman numerals (i, ii, iii, iv, etc.) for the pages in the appendix
- Ensure that you have followed formatting requirements
- Make sure that the structure of the thesis meets the requirements:
  - Table of contents
  - List of tables
  - List of formulas
  - List of tools
  - List of abbreviations and symbols
  - Bibliography
- » All chapters must be included in the table of contents
- All illustrations, tables, graphics and formulas must be properly numbered and include a title in accordance with the relevant standards
- Make reference to adapted illustrations, tables and graphics (modified from, adapted from, etc.)
- Ensure that permission has been obtained from copyright holders
- » Check the quality of quoted sources
- Check the bibliography to make sure it contains all of the quoted sources
- Check the bibliography to ensure that information on all sources is uniform and correct
- Check URLs and links in the bibliography to ensure that they work properly
- Check that personal data have been removed or redacted throughout the thesis
- Check that all of the tools that have been used are listed (AI, etc.)
- Check data in MedCampus and update/correct if necessary:
  - Correct title (English/German)
  - Correct OU



### **11 Abbreviations**

- AI Artificial intelligence
- CC Creative Commons
- CC BY A CC BY licence grants unrestricted, irrevocable, free, worldwide and unlimited rights for any user to use a work in any way and for any purpose. Authors and other parties must be named, and copyright and licence notices must be retained.

DOI	Digital object identifier
GDPR	General Data Protection Regulation
EK	Ethics Committee
UG	Universitätsgesetz 2002, Federal Law Gazette I
	No. 120/2002
ORCID	Open Researcher and Contributor ID

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This document does not contain any references. In addition to MedUni Vienna's regulations regarding degree/doctoral theses, this manual is based on:

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### 12.1 List of illustrations

Figure 1: Completing a degree/doctoral thesis	p.10
Figure 2: Cover page template	p. 18
Figure 3: Forms of plagiarism	p. 31

### 12.2 List of tables

Table 1: Cumulative doctoral thesis – structure	p. 12
Table 2: Overview of sections and page numbering	p.16

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