

## **Implementation Rules for the Doctoral Degree Regulations for obtaining the academic degree Doctor of Philosophy (Dr. phil.)**

The following Implementation Rules specify the various provisions laid down in the Doctoral Degree Regulations (Dr. phil.) at the Private University for Health Sciences, Medical Informatics and Technology (UMIT). These Implementation Rules are based on the decisions taken by the Doctoral Affairs Committee Dr. phil. as well as on further decisions by the Senate and other Senate committees.

The following Implementation Rules are intended as guidance for doctoral students, supervisors, reviewers as well as the Doctoral Affairs Committee.

The Implementation Rules for the Doctoral Degree Regulations Dr. phil. will be adapted continuously. For the newest version please refer to our Homepage - Study Management (<https://www.umat.at/page.cfm?vpath=studien/studienmanagement/promotionsordnung>).

Further relevant information for doctoral students at UMIT is available via Moodle (<http://moodle.umat.at>, Promotionsstudium/Doctoral Studies -> Dr. phil.).

### **Annexes:**

- Annex 1: Basic requirements for a doctorate at UMIT
- Annex 2: Basic information on the research concept examination
- Annex 3: Instructions for writing a monograph thesis
- Annex 4: Instructions for writing a cumulative doctoral thesis
- Annex 5: Key issues for writing expert opinions
- Annex 6: Assessment of the doctoral thesis and the defense of the doctoral thesis
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**This English translation is intended solely to allow English-speaking doctoral students and/or scientists a better understanding of the Implementation Rules for the Doctoral Degree Regulations. Only the German version is legally binding.**

## § 2 (1) Doctoral achievements

In addition to the required minimum standards, the supervisor may claim further quality standards and requirements for the doctoral thesis (e.g. number of papers required). Usually, the details will be determined in the doctoral thesis agreement (see Annex 7)

## § 2 (2) Doctoral achievements

It is the responsibility of the supervisor to determine, in agreement with the doctoral candidate, which doctoral seminars are required and how else to acquire the curricular part (ECTS credits) of the doctoral program.

UMIT accepts an equivalent of up to 15 ECTS credits for doctoral program lectures or seminars which were acquired prior to the admission to the doctoral program (Dr. phil. program) at UMIT. Prerequisite for the acceptance is a clear relation to the planned doctoral project regarding content or method, as well as the approval of the supervisor. These ECTS points will be credited to the curricular part, the 20 free elective ECTS credits shall not be affected.

Further information on the free elective ECTS credits is available in the Module Manual.

In any case, for the recognition of free elective ECTS credits comprehensive proof must be provided (e.g. conference program, confirmation for teaching activity etc.).

The allocated ECTS credits can only be recognized in full; a partial recognition of ECTS credits for partial performances (e.g. only attendance, no submission of a post-processing assignment) is not intended.

The persons in charge of the study programs are responsible for offering sufficient and adequate lectures and seminars (curricular part) according to the Module Manual.

For a current version of the Module Manual, please refer to our Homepage – Study Management

(<https://www.umat.at/page.cfm?vpath=studien/studienmanagement/promotionsordnung>) or Moodle (<http://moodle.umat.at>, Promotionsstudium/ Doctoral Studies -> Dr. phil.).

## § 2 (2) Private tutorials

A private tutorial is a class for a selected audience, i.e. the supervisor and the invited doctoral students. In the private tutorial, doctoral students present progress reports of their doctoral thesis projects. Private tutorials are work meetings and usually last one working day. The supervisor may also, if needed, invite other persons to attend the seminar.

In order to have a private tutorial credited towards your doctoral studies, the following requirements must be satisfied:

1. The private tutorial is a one-day work meeting;

2. The conduct and the results of the private tutorial shall be recorded by the doctoral student and the supervisor on an examination protocol ("Examination protocol - oral examination)", please refer to <https://www.umat.at/page.cfm?vpath=studien/studienmanagement/formulare--informationen>); and
3. The examination protocol shall be submitted to UMIT's "Service Doktorat" office in due time, i.e. immediately after each meeting or at the latest at the end of the semester.

## **§ 2 (2) Recognition of ECTS credits**

The ECTS credits necessary for completion of the doctoral studies shall be obtained at UMIT. Exceptions may be granted only in justified cases. Courses which were attended external to UMIT and for which ECTS credits are allocated, can only be recognized under the following conditions:

1. The course is offered by a recognized university, national or international postsecondary educational institution or scientific organization;
2. The course will not be offered at UMIT at all or not within the next two semesters;
3. The course will not explicitly be offered on Bachelor or Master level;
4. The request for recognition of ECTS credits shall be submitted prior to attending the external course, the decision is made by the (vice-) chair of the Doctoral Affairs Committee;
5. The request shall be accompanied by a credible justification written by the doctoral student and signed by the supervisor, explaining why his/her participation in this course is necessary for the progress of his/her doctoral thesis project;
6. After the successful attendance of the course, the candidate shall submit a participation certificate, course certificate or the like in due time (i.e. within 14 days after issuance), indicating name, content and learning outcomes of the course, as well as the hosting organization and the extent of the course.

## § 2 (5) Research concept examination

See Annex 2: Basic information on the research concept examination

## § 2 (5) Research Committee for Scientific Ethical Questions – RCSEQ

In the winter semester 2018/2019, the new cooperation contract for RCSEQ between UMIT and the University of Applied Sciences (Fachhochschule Gesundheit - fhg) entered into force, as well as the new RCSEQ Rules of Procedure.

The RCSEQ Rules of Procedure were published on the RCSEQ Homepage ([www.umit.at/rcseq\\_-\\_Zuständigkeit/Competence](http://www.umit.at/rcseq_-_Zuständigkeit/Competence)). Thus, RCSEQ consists of the RCSEQ Office and the RCSEQ Committee.

The RCSEQ Office advises on scientific/ethical questions as well as on submissions, it accepts RCSEQ submissions and can enforce shortened procedures together with the RCSEQ Chair (Rules of Procedure RCSEQ §4(7)) - Contact: [rcseq@umit.at](mailto:rcseq@umit.at).

The RCSEQ Committee consists of nine members and meets on a regular basis. The dates for these meetings are published on the RCSEQ Homepage ([www.umit.at/rcseq\\_-\\_Sitzungstermine/Meeting dates](http://www.umit.at/rcseq_-_Sitzungstermine/Meeting dates)). In these meetings, planned research projects will be examined in accordance with scientific-ethical criteria prior to their beginning.

The RCSEQ Committee is responsible if a research project

- is under no legal obligation to be submitted to a statutory ethics committee and
- involves particularly vulnerable groups of people and/or
- involves particular categories of personal data (Rules of Procedure RCSEQ §1(2)).

All doctoral thesis projects have to be submitted to a statutory ethics committee (e.g.: the Medical University of Innsbruck) or another board for ethical/scientific questions (e.g.: RCSEQ, Ethics Board of the University of Innsbruck) - which is generally organized by/at one/several institution(s) - for examination and a statement (Rules of Procedure RCSEQ §4(5)).

This submission must take place prior to the beginning of the doctoral project (in any case prior to the start of an empirical data collection), i.e. in case of Dr. phil. studies typically after the successful passing of the research concept examination (Doctoral Degree Regulations Dr. phil. §2(5)).

The doctoral candidate shall decide together with the supervisor to which ethics committee or board for ethical/scientific questions he/she shall submit his/her doctoral thesis:

Depending on the research project, the involvement of certain ethic committees may be legally required (e.g.: analyses of hospital patient data or for studies related to medicinal products or medical devices). In this case, the supervisor together with the doctoral candidate have to ensure that the research project is submitted to the responsible ethics committee.

Otherwise, the project can be submitted to RCSEQ or another board for ethical/scientific questions. However, it must be considered that a project – if applicable – shall be submitted preferably to the institution where the research project will be con-

ducted or the institution where the supervisor works (e.g.: a survey among UMIT students which is supervised by a UMIT professor should be submitted to RCSEQ).

Upon application for admission to the doctoral examination procedure, a positive statement by a statutory ethics commission or a board for ethical/scientific questions must be submitted to the competent Doctoral Affairs Committee. Only then, the doctoral examination procedure can begin.

In case of unresolved questions or uncertainties, please contact the RCSEQ Office ([rcseq@umit.at](mailto:rcseq@umit.at)) for advice.

## **§ 2 (6) Subject-specific relevance**

„Published with subject-specific relevance” means that articles shall be published in subject-specific publication organs for the professional public also outside of UMIT, either on national or international level. The publication does not have to be indexed in subject-specific literature data bases.

The following publications (Note: according to UMIT’s scoring system for publications, categories A – C) can, in particular, be classified as subject-specific:

- Articles in peer-reviewed or non-peer-reviewed specialist journals.
- Articles in edited volumes or specialist books.
- Contributions to peer-reviewed or non-peer-reviewed conferences or workshops (in particular lecture, poster, or abstract).

## **§ 4 (1) Admission requirements**

Only candidates with a Master, Magister or Diploma from a regular study program will be accepted. Candidates from post-graduate Master study programs will not be accepted as those programs usually do not require a Bachelor degree as a prerequisite and candidates therefore fail to achieve the required standards and /or the study period is too short.

Prior to signing the doctoral agreement, the Doctoral Affairs Committee determines whether the formal admission requirements have been met by the new doctoral candidates. The Committee also verifies the subject-specific relevance of their study performance so far (see § 4 (2) of the Doctoral Degree Regulations) and requests – if necessary – additional qualifications.

## **§ 6 (1) Acceptance as doctoral candidate**

### **UMIT-GTCs:**

UMIT’s GTCs must be signed by the applicant otherwise the supervisor has to withdraw his/her affirmation.

## **Roles in the supervision process:**

Supervisors can be: internal habilitated academics or for a maximum of 25% of the doctoral thesis external habilitated academics or professors with „Venia docendi“ or „Venia legendi“ at a renowned university in Austria or abroad or a post-secondary educational institution in Austria or abroad with relevant experience regarding content and/ or method of the doctoral thesis, as well as current research experience.

External supervisors shall be approved topic-specifically by the Doctoral Affairs Committee in each individual case taking into consideration the student-tutor-relationship and an updated curriculum vitae as well as a current list of publications. Generally, in case of an external supervisor, additionally an in-house co-supervisor will be appointed who also has to fulfil the above mentioned criteria.

In the course of the doctoral examination procedure, upon request and with a statement of reasons, an expert advisor may be consulted for his/her special professional and/or methodological knowledge. All roles are described in detail in Annex 8.

Students will be informed about the roles and duties of the supervisor i.a. through the doctoral thesis agreement (see Annex 7).

Supervisor and co-supervisor shall be indicated on the cover page of the doctoral thesis. Expert advisors need not be indicated on the cover page.

## **Change of topic:**

The topic of the doctoral thesis chosen at the date of application shall be the working title until the date of submission. Any change of the working title is at the supervisor's discretion and is his/her responsibility. This concerns all minor modifications. A complete change still needs to be examined and approved by the Doctoral Affairs Committee.

## **§ 7 (1) Doctorate**

See Annex 1: Basic requirements for a doctorate at UMIT

## **§ 7 (3) Final papers**

Final papers include, in particular, Bachelor, Master, Diploma or Doctoral theses.

## **§ 7 (5) Doctoral thesis / form**

According to the Doctoral Degree Regulations, doctoral theses may only be cumulative theses or monographs. Special forms or mixed forms are not permitted.

See Annex 3: „Instructions for writing a monograph thesis“

See Annex 4. „Instructions for writing a cumulative doctoral thesis“

See „Leaflet on the requirements of cumulative doctoral theses, in particular on publication quality“ by the Senate Commission for Research Evaluation (AGFE) (see ger-



man version via Moodle: <http://moodle.umat.at>, Promotionsstudium/ Doctoral Studies -> Dr. phil.).

## § 7 (6) Doctoral thesis

### **UMIT affiliation of publications:**

When (parts of) the results of the doctoral thesis are being published, the stating of the affiliation with UMIT is mandatory and shall be concluded in accordance with the following scheme (§ 2 (6) in conjunction with § 7 (6)):

UMIT – Private Universität für Gesundheitswissenschaften, Medizinische Informatik und Technik, Hall in Tirol (German)

UMIT – Private University for Health Sciences, Medical Informatics and Technology, Hall in Tirol (English)

Besides the affiliation with UMIT, it is also possible to indicate further affiliations.

### **AGFE vote for cumulative doctoral theses:**

Requirements for cumulative doctoral theses are regulated in detail in the „Leaflet on the requirements of cumulative doctoral theses, in particular on publication quality“ by the Senate Commission for Research Evaluation (AGFE) (see Moodle: <http://moodle.umat.at>, Doctoral Studies -> Dr. phil.). The scheme for the classification of journals for cumulative doctoral theses is also available on this page.

Extended abstracts – also peer-reviewed – which have been published in a conference transcript will not be accepted as publications for a cumulative doctoral thesis.

After approval by the chairperson of the Doctoral Affairs Committee, the AGFE votes will be forwarded to the supervisor and the respective student by the Doctoral Affairs Committee (through Study Management), however not to the reviewers as they shall evaluate the quality of the doctoral thesis unbiased.

### **Copyright notice:**

The filing of a copy of each doctoral thesis, including cumulative doctoral theses, at the Austrian National Library in Vienna is necessary due to the statutory publication obligation provided for in § 43 of the Austrian Media Act (“Obligation to offer and deliver copies of print media products”).

Regardless of this statutory publication obligation, pay close attention to secondary publication rights for publications included in your cumulative thesis! If you plan to publish your cumulative doctoral thesis somewhere else (e.g. online or as a book), please consider the following issues:

If your scientific work includes parts (e.g. articles) which have been published already or which you have submitted for publication or you plan to submit for publication, please ensure that you follow the conditions of the respective journals and publishers and that you seek the consent of your co-authors.

On the one hand, the legal framework is included in the publishing agreements, and, on the other hand, the [SHERPA/RoMEO](#) listings provide information on the self-archiving policies of publishers.

If a contract does not allow the publishing within the framework of a cumulative thesis, the explicit approval of the publisher must be obtained. Approval can be sought directly from the publisher or from a Copyright Clearance Center.

In the event that no authorization of the publisher is available, perhaps the pre-print version (submitted version) or the "accepted version" could be used instead for the cumulative doctoral thesis. For detailed information on publishers' conditions hereto, please refer to [SHERPA/RoMEO](#).

## **§ 9 (1) Assessment of the doctoral thesis / reviewer**

With the request for the initiation of the doctoral procedure, the doctoral candidate and the supervisor shall also submit recommendations for reviewers including their contact data.

The external reviewers currently should not have a close scientific relationship (e.g. joint publication or joint research project) with the (co-)supervisor or doctoral student.

## **§ 9 (2) Assessment of the doctoral thesis / expert opinion and grade**

See Annex 5: Key issues for writing expert opinions

See Annex 6: Assessment of the doctoral thesis and defense of the doctoral thesis



## **§ 10 Examination board, defense**

The oral defense of the doctoral thesis shall last approximately one hour. It consists of a scientific presentation (20 – 25 minutes) and the subsequent discussion and debate with the examination board. The presentation shall correspond to the usual scientific criteria (e.g. structure, definition of specialist terms, literature references).

The examination board shall consist of at least three professors, university lecturers or private lecturers, or persons with Venia docendi for the respective subject area. At least one member of the examination board shall be a member of the Doctoral Affairs Committee, he/she shall be the chairperson of the examination board. If possible, the supervisor and/or co-supervisor shall be a member of the examination board.

## **§ 13 Publication**

UMIT forwards the completed theses to the Austrian National Library in Vienna at least once a semester.

Monographs will be filed as electronic full text in UMIT's library catalogue (OPAC) after obtaining the approval of the doctoral candidate and the supervisor.

## **Annex 1: Basic requirements for a doctorate at UMIT**

„The doctoral thesis must meet the scientific standards, must be an independent work of the doctoral candidate and must contribute to progress in research.“

### *§7 Doctoral Degree Regulations Dr. phil., UMIT*

Doctoral degrees will be awarded to students who

- have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;
- have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;
- have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work;
- are capable of critical analysis, evaluation and synthesis of new and complex ideas;
- can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;
- are able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge-based society.

[Shared 'Dublin' Descriptors for the Bachelor's, Master's and Doctoral awards; Report from an informal group of the Joint Quality Initiative, 23.3.2004, Dublin. http://www.fibaa.org/uploads/media/CompletesetDublinDescriptors\\_03.pdf](http://www.fibaa.org/uploads/media/CompletesetDublinDescriptors_03.pdf)

## Annex 2: Basic information on the „research concept examination“

In order to improve the quality of doctoral theses and to be able to implement as early as possible various perspectives, the research concept examination was introduced as a mandatory requirement (see § 2 Sect. 5 of the Doctoral Degree Regulations).

**Registration for the examination:** The registration has to be submitted in writing (via Email) by the supervisor to [doktorat@umit.at](mailto:doktorat@umit.at).

**Written research concept:** 10 days prior to the examination, the research concept of a maximum of 20 pages (incl. bibliography and other annexes) shall be submitted to Study Management ([doktorat@umit.at](mailto:doktorat@umit.at)) in digital form (see structuring proposal below)

**Duration of the examination:** max. 60 minutes (thereof max. 20 minutes oral presentation)

**Date:** within 3 semesters after being accepted as a doctoral candidate

**Examination dates:** At least 4 examination dates shall be offered per semester. No more than 4 candidates shall be accepted per examination date.

**Examination board:** The examination board consists of the supervisor and at least 2 other persons with Venia docendi. The examination board shall include a member of the Doctoral Affairs Committee and this person shall thus be the chair of the examination board. A co-supervisor, if any, can be appointed as substitute for the supervisor and only in this case he/she has a voting right in the examination board.

If a supervisor is unable to attend the examination on short notice, he/ she shall subsequently receive detailed information on the examination process by the chairperson of the examination board.

**Process:** Firstly, the candidate shall provide a scientifically-oriented oral presentation. Secondly, an oral discussion with the examination board takes place. At the end of this discussion – if applicable - the recommendations of the examination board will be summarized and communicated orally (for notes)

**Assessment:** „successfully completed“ or „not successfully completed“

**ECTS credits:** 5 (only if „successfully completed“)

**Possible repetitions:** If a candidate is assessed with „not successfully completed“ the examination may be repeated **once** (within a time frame of 3 – 6 months, at the latest until the end of the 4<sup>th</sup> Semester).

According to § 2 (5) of the Doctoral Degree Regulations, the research concept examination shall be completed until the end of the 3<sup>rd</sup> semester. If the doctoral candidate joins the doctoral studies during a semester, he/she has to finish the studies after a period of eighteen months after he/ she started the program.

In the event of unexcused failure to take the examination within this period of time, he/she will receive a failing grade once.

The doctoral candidate is entitled to repeat the examination once within a period of three to six months according to the Doctoral Degree Regulations § 2 (5). The Doctoral Affairs Committee shall decide on a new examination date in agreement with the supervisor. If the last permissible repetition is failed, admission to the doctoral studies shall expire.

## Research concept structuring proposal

The following table may serve as assistance for drafting the written research concept for the examination. Depending on the topic and the methodical approach, it is also possible to use another structure or other contents may be added.

	<b>Examples for contents</b>
<b>Title of the doctoral thesis</b>	<i>No more than 140 characters – should be as precise as possible.</i>
<b>Doctoral studies and supervisor</b>	<i>Details on the doctoral studies and the supervisor</i>
<b>Introduction and re-search idea</b>	<ul style="list-style-type: none"> <li>• <i>Subject: What is the topic/subject of this work?</i></li> <li>• <i>Importance: why is this subject important and for whom?</i></li> <li>• <i>Problem: Is there a research gap?</i></li> <li>• <i>Motivation: Why is it important to solve this research gap?</i></li> <li>• <i>This work can help in solving (a part of) the research problem in which scientific field?</i></li> </ul>
<b>Theoretical background and current research status</b>	<ul style="list-style-type: none"> <li>• <i>How are the basic technical terms of this subject area defined?</i></li> <li>• <i>What is the current research status with regard to the topic?</i></li> <li>• <i>What is the theoretical background of this thesis?</i></li> </ul>
<b>Aim of the research/ hypothesis and/or research questions</b>	<ul style="list-style-type: none"> <li>• <i>Aim(s) of the research and/or research question(s)</i></li> </ul>
<b>Methodical approach</b>	<ul style="list-style-type: none"> <li>• <i>Type of study: type of quantitative and/or qualitative research, e.g. intervention study, observational study, secondary data analysis (like e.g. systematic review, meta-analysis, modelling etc.)</i></li> <li>• <i>Justification of the chosen study design with reference to the research question</i></li> <li>• <i>Target figures: e.g. which clinical parameters, structural parameters, etc.</i></li> <li>• <i>Target population: A statement/ a generalization of the results shall be made for which population?</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Information on sample selection and sample size (sample size estimate)</i></li> <li>• <i>Setting: The research project can be implemented in which setting? How is the recruiting of the volunteers or other observational units handled?</i></li> <li>• <i>Intended collection of data (for each research question): How and by whom are the data to be collected? Description of the survey instrument, the validity and quality of data collection instruments</i></li> <li>• <i>Intended analysis strategy and data evaluation method (separately for each research question)</i></li> <li>• <i>Ethical considerations</i></li> </ul>
<b>Novelty value/ „So-what-question“</b>	<ul style="list-style-type: none"> <li>• <i>Novelty value expected for this work?</i></li> <li>• <i>What is the use of the research results and who do they help?</i></li> <li>• <i>Are they of any further use?</i></li> <li>• <i>Which decisions can be supported by the results of this work?</i></li> </ul>
<b>Ethics vote</b>	<ul style="list-style-type: none"> <li>• <i>Is there already a RCSEQ vote or a vote by any other ethics committee, or when will the application take place?</i></li> </ul>
<b>Literature list</b>	<ul style="list-style-type: none"> <li>• <i>Consistent referencing in accordance with common literary styles</i></li> </ul>
<b>Schedule</b>	<ul style="list-style-type: none"> <li>• <i>Intended milestones for the implementation of the empirical survey</i></li> <li>• <i>Intended milestones for writing publications/unifying text/monograph</i></li> </ul>
<b>Structure of the doctoral thesis</b>	<ul style="list-style-type: none"> <li>• <i>Provisional structure of the thesis</i></li> </ul>

## Annex 3: Instructions for writing a monograph thesis

A monograph thesis presents and documents the research problem, research process and the results of the scientific work in the form of a scientific “book”. Generally, a monograph thesis includes the following parts:

- **Cover page** (Observe specifications!)
- **Table of contents**
- **Abstract:** (in German and English)  
(Max. 1 page each including background, aims and research questions, used methods, most important results as well as conclusions and implications on science and practice)
- **Presentation of the problem and aim**  
Introduction to the topic (backgrounds, topicality, relevance, motivation), detailed presentation of the current state of research, theoretical basis and literature overview, identification of research gaps and classification of one’s own work. The aim of the work, hypotheses or/and research questions are derived thereof.
- **Methods**  
In this part, the research method that will be used to answer the research question shall be described and justified in a reproducible manner. This includes i.a. the replicable presentation and justification of the study design, measuring instruments, target population, samples, ethical aspects, evaluation strategies, etc.
- **Results**  
The research results shall be presented by means of text, tables and illustrations. Tables and illustrations shall be commented, although they should be self-explanatory. Comparisons are reasonable and feasible, however without interpretation and personal judgement in this part of the work. The presentation of the results shall be clearly aligned with the research questions.
- **Discussion**  
This core element of the thesis aims to interpret the results, answer research questions and draw conclusions for science (development of a theory) and/or practice; or to document the confirmation or rejection of hypotheses. Limitations of the survey and prospects for further research shall be discussed as well. If



there is more than one research question, an overall discussion should supplement the discussion of the results for the individual questions.

➤ **Bibliography:**

All sources shall be cited fully, consistently and verifiably. Details thereto are regulated in UMIT's Plagiarism Guideline.

➤ **Annex**

Measuring instruments, data, special types of evaluation, transcripts as well as further material which would affect the reading flow of the monograph can be added in the annexes. In this case the author has to refer to this material in the running text. Depending on the extent, material may also be attached in digital form.

➤ **Author's declaration:**

A declaration by the author stating that the thesis is the result of his/ her own work shall be provided at the end of the work. The declaration shall be signed by hand. For this purpose, the doctoral candidate shall use the "author's declaration sample".

The above list comprises the necessary contents of the doctoral thesis. The specific structure, as well as layout and names of chapters may differ, depending on research questions, evaluation and results. Hereby, the specific conventions of the respective disciplines shall be taken into account.

Additionally, any supplementary guidelines specific to the respective Dr. phil. study programs or from the respective supervisors shall be considered.

## Annex 4: Instructions for writing a cumulative doctoral thesis

A cumulative doctoral thesis represents the results of scientific work as a collection of peer-reviewed, stand-alone publications that have already been published or have been accepted for publication under a shared topic (professional context). The connection between the individual papers shall be explained in a unifying text (summary).

Regarding its scientific contribution, the cumulative doctoral thesis in its entirety shall be equivalent to a monograph thesis. The cumulative doctoral thesis consists of (see § 7 Sect. 5 of the Doctoral Degree Regulations)

- at least **two subject-specific, scientific publications with** the doctoral candidate **as first author** or
- at least **three** subject-specific, scientific publications with the doctoral candidate **as first author in one** of them and **as co-author in the other two**
- in renowned, **peer-reviewed**, national and international scientific journals.

It is mandatory that the manuscripts have already been published or have been accepted for publication. The Senate Commission for Research Evaluation (AGFE) issues recommendations regarding the approval of the journals. After the submission of the doctoral thesis, the Senate Commission for Research Evaluation (AGFE) assesses the subject-specific relevance, quality and coherence of the publications to one another and with regard to the doctoral thesis topic (see also the Senate Commission's „Leaflet on requirements for cumulative doctoral theses, in particular on publication quality“, or Moodle: <http://moodle.umat.at>, Promotionsstudium/Doctoral Studies -> Dr. phil.).

### Unifying text:

It is the aim and purpose of the unifying text to (a) explain the subject-specific scientific context between the publications and to present their overall relevance and (b) to provide room to address aspects which cannot be discussed in detail and in a differentiated way in scientific journals due to limitations in space.

## **Layout of the cumulative doctoral thesis:**

The cumulative doctoral thesis shall be submitted in bound paper form and shall consist of the following parts:

- **Cover page** (Observe specifications!)
- **Table of content**
- **On a separate page: list of all references of the published/ accepted publications which are included in the thesis, including information on the publication status if not yet published (e.g. „in print “).**
- **Abstract:** (in German and English)  
(Max. 1 page each including background, aims and research questions, used methods, most important results as well as conclusions and implications on science and practice)
- **Presentation of the problem and aim**  
Introduction to the topic (background, actuality, relevance, motivation), detailed presentation of the current state of research, theoretical basis and literature overview, identification of research gaps and classification of one's own work. The aim of the work, hypotheses or/and research questions are derived thereof.
- **Categorization of the publications**  
A short presentation on how the publications fall into line with the subordinate field of research and which aims and research questions will be answered therein. This part, in particular, shall provide the reviewers with an overview of the relation between the publications and the thesis in its entirety.
- **Methods:**  
This chapter shall include an overall presentation and justification of the research approach and the methods. The presentation may be brief and may refer to more detailed presentations in the respective publications. However, it can also describe aspects which could not be discussed in detail and in a differentiated way in scientific journals due to limitations in space. The presentation as such shall, in any case, be internally consistent and clearly understandable without reading the publications first.
- **Results:**  
This chapter comprises a summary of the results of the publications or additional results and their classification in the overall context. The presentation

may be brief and may refer to more detailed presentations in the respective publications. However, it can also describe aspects which could not be discussed in detail and in a differentiated way in scientific journals due to limitations in space. The presentation as such shall, in any case, be internally consistent and clearly understandable without reading the publications first. If results (tables, illustrations) are extracted from publications they shall be cited correctly (see UMIT's Plagiarism Guideline).

➤ **Discussion:**

This core element of the thesis aims to interpret the results, answer research questions and draw conclusions for science (development of a theory) and/or practice; or to document the confirmation or rejection of hypotheses. Limitations of the survey and prospects for further research shall be discussed as well. The discussion refers to the overall results of the publications and shall refer to all papers and shall thus move beyond the discussions contained in the individual publications.

➤ **Bibliography:**

All sources used in the unifying text shall be cited fully, consistently and verifiably according to the rules of good scientific practice. Details thereto are regulated in UMIT's Plagiarism Guideline.

➤ **Annex 1**

Measuring instruments, data, special types of evaluation, transcripts as well as further material can be added in the annexes. In this case, the author has to refer to this material in the running text. Depending on the extent, material may also be attached in digital form.

➤ **Annex 2**

If the publications have not yet been integrated into the results section, they shall be printed in the annex of the unifying text.

➤ **Author's declaration**

A declaration by the author stating that the thesis is the result of his/ her own work shall be provided at the end of the work. The declaration shall be signed by hand. For this purpose, the doctoral candidate shall use the "author's declaration sample".

The above list comprises the necessary contents of the doctoral thesis. The specific structure, as well as layout and names of chapters may differ, depending on research questions, evaluation and results. Hereby, the specific conventions of the respective disciplines shall be taken into account.

Additionally, any supplementary guidelines specific to the respective Dr. phil. study programs or from the respective supervisors shall be considered.

It is recommended that the supervisor contacts the Senate Commission for Research Evaluation (AGFE) already in the planning stage of the cumulative doctoral thesis for an assessment of the chosen journals in case they are not classified in the Senate Commission`s list of journals.

## Annex 5: Key issues for writing expert opinions

### Key issues for writing expert opinions on doctoral theses in UMIT's Dr. phil. study programs

#### Aim

The aim of this document is,

- to ensure that all parties - the reviewers as well as the doctoral candidate - understand the review criteria and review process;
- to ensure the quality of the theses reviews;
- to increase the transparency of the procedure;
- to regulate the procedure in case there are major discrepancies between the reviews;
- to ensure the possibility to raise objections against the expert opinions in case of conflicts.

#### Requirements for a doctorate

The doctoral degree verifies the candidate's ability to conduct profound scientific work independently. The doctoral thesis must meet scientific standards, be an independent piece of scientific work written by the doctoral candidate and must contribute to the progress of science (pursuant to §1 Sect. 2 of UMIT's Doctoral Degree Regulations Dr. phil.).

**The scientific quality of theses is very important to UMIT. The usual scientific requirements for theses shall apply at UMIT.**

#### Time frame

In order to bring the process to a timely conclusion, we ask you to return your expert opinion within six weeks, at the latest eight weeks after receipt of the thesis.



## **Contents of the expert opinion:**

Please address the following issues in your expert opinion:

### **1. Basis of the expert opinion:**

Short description of the thesis (monograph, cumulative doctoral thesis, topic, author, number of pages, submission date, in case of cumulative thesis: title of the papers, journal).

### **2. Aim of the work and relevance of the topic:**

Short description of the purpose of the thesis and how to classify the relevance of the work. Statement on the subject-specific relevance of the topic.

### **3. Summary of the contents:**

Short description of the most important contents (methods, results). This summary may differ from the structure of the thesis.

### **4. Assessment of the thesis:**

#### **4.1. Classification:**

Clear reference to the topic, clearly defined hypotheses or research questions on doctoral level, presentation of the research gap, structural conclusiveness from the presentation of the problem via the generation of hypotheses or research questions and the selection of the research method up to the presentation of the results and the conclusions, appropriate outline of the different chapters, successful integration into the overall context.

#### **4.2. Quality of the contents:**

Originality of the scientific problem, actuality of the scientific problem, applicability to theory and practice, in-depth analysis of current scientific literature, sophistication and analytical depth of the presentation, scientific relevance of the results, reflexivity of the discussion.

#### **4.3. Quality of the research methods:**

Transparency and appropriateness of the selection of the method, quality of the application of the method, plausible presentation of the inclusion and exclusion criteria of the information (literature, empiricism), reproducibility of the results based on the described methods, traceability of the statements through the available (empirical) data, critical reflection of the methods.

#### **4.4. Formal quality:**

Clear language, exact definitions, precise argumentation, comprehensibility of the presentation, no typing errors, adequate formal layout of the text, tables and illustrations, additional visualizations, uniform and correct citing system, correct indices.

#### **4.5 Scientific personal contribution:**

Adequate extent of personal scientific contribution to the doctoral thesis (see „author's declaration“ for information on the candidate's contribution to the thesis); no plagiarism or citing errors.

#### **5. Overall assessment of the doctoral thesis:**

Brief justification indicating the strengths and weaknesses of the thesis, as well as an application to the Doctoral Affairs Committee

- for acceptance (indicating the grade - see grade scale below)
- rejection („non sufficit“) or
- revision of the thesis (in this case clear recommendations for revision must be included).

### **Process-related criteria**

Reviewers shall receive the following documents from the Study Management Office:

- the **doctoral thesis**;
- a **curriculum vitae** of the candidate;
- a **list of publications** of the candidate;
- the **author's declaration**;
- the **key issues for writing expert opinions**.

Upon request, the documents may be sent to the reviewers in paper format.

The date of submission of the documents and the time period for the review has to be documented in the student record.

If the reviewer is unsure about his/ her decision, he/ she may ask professional colleagues for advice. Upon request, the Doctoral Affairs Committee may support him/ her in this process.

## **Grade scale:**

for an outstanding performance – summa cum laude

for a very good performance – magna cum laude

for a good performance – cum laude

for a sufficient performance – rite

for a non-sufficient performance – non sufficit

**Summa cum laude** shall only be awarded if the topic is outstanding and contributes significantly to the advancement of the scientific discipline, the theoretical foundation and location based on the international research status is very well defined and all aspects are presented in excellent quality.

Works graded with **non sufficit** lack sufficient theoretical foundations, literature research and processing is incomplete or was conducted unsystematically, the selection and presentation of methods is incomprehensible or the presentation and discussion of the results is inadequate and insufficient.

If only parts of the work are insufficient (not more than 25 % of the doctoral thesis), a **revision** may be recommended by the reviewer. In this case, clear recommendations thereto shall be provided.

## Annex 6: Assessment of the doctoral thesis and the defense of the doctoral thesis

Following acceptance of the doctoral thesis, each reviewer shall assess the work individually according to the grading scale stated in § 11 (4) of the Doctoral Degree Regulations. Based on the two grades, the Doctoral Affairs Committee shall determine the overall grade for the written work according to the following scheme:

Assessment reviewer 1	Assessment reviewer 2	Written work overall grade
summa cum laude	summa cum laude	<b>summa cum laude</b>
summa cum laude	magna cum laude	<b>magna cum laude</b>
summa cum laude	cum laude	<b>magna cum laude</b>
summa cum laude	rite	<b>cum laude</b>
magna cum laude	magna cum laude	<b>magna cum laude</b>
magna cum laude	cum laude	<b>cum laude</b>
magna cum laude	rite	<b>cum laude</b>
cum laude	cum laude	<b>cum laude</b>
cum laude	rite	<b>rite</b>
rite	rite	<b>rite</b>

The grade for the defense of the doctoral thesis shall be determined by the examination board in accordance with § 11 (4) of the Doctoral Degree Regulations. The final overall grade results from the evaluation of the thesis (it is of higher significance) and the defense. The following table serves as a recommendation for assessing the final overall grade. Deviations thereof have to be justified in the examination protocol:

Written work overall grade	Grade for the defense of the doctoral thesis	Final overall grade
summa cum laude	summa cum laude	<b>summa cum laude</b>
summa cum laude	magna cum laude	<b>magna cum laude</b>
summa cum laude	cum laude	<b>magna cum laude</b>
summa cum laude	rite	<b>magna cum laude</b>
magna cum laude	summa cum laude	<b>magna cum laude</b>
magna cum laude	magna cum laude	<b>magna cum laude</b>
magna cum laude	cum laude	<b>magna cum laude</b>
magna cum laude	rite	<b>cum laude</b>
cum laude	summa cum laude	<b>magna cum laude</b>
cum laude	magna cum laude	<b>cum laude</b>
cum laude	cum laude	<b>cum laude</b>
cum laude	rite	<b>cum laude</b>
rite	summa cum laude	<b>cum laude</b>
rite	magna cum laude	<b>cum laude</b>
rite	cum laude	<b>rite</b>
rite	rite	<b>rite</b>

Deviations from this grading recommendation are permitted, but have to be justified in the examination protocol.

Note: If the defense of the doctoral thesis is graded as „non sufficit“, no final overall grade shall be awarded.

The overall grade of „summa cum laude“ can only be awarded, if all three partial performances were graded as „summa cum laude“.

## **Annex 7: Sample - Doctoral thesis agreement**

For a current sample of a doctoral thesis agreement please refer to our Homepage <https://www.umat.at/page.cfm?vpath=studien/studienmanagement/formulare--informationen> (Promotionsstudium/Doctoral Studies).



## Annex 8: Role descriptions – supervision of Doctoral theses

### **Role descriptions relating to the supervision of doctoral students who attend doctoral studies at UMIT to obtain the academic degree Doctor of Philosophy “Dr. phil.”**

(Issued by the competent Doctoral Affairs Committee on 26.02.2019)

#### **Preliminary note**

One of the prerequisites for the acceptance as a doctoral candidate at UMIT is the submission of a doctoral thesis agreement concluded between the doctoral candidate and his/ her supervisor (see § 6 (1) Doctoral Degree Regulations „Dr. phil.“). The doctoral thesis agreement governs the mutual rights and obligations of the parties.

Optionally, in order to ensure intensive and targeted professional support of the doctoral candidate throughout his/ her doctoral project, a co-supervisor and/or an expert advisor<sup>1</sup> can be appointed.

#### **Aim**

This document describes the minimum requirements and responsibilities of the three provided functions/roles involved in the supervision of doctoral students who wish to obtain the academic degree Doctor of Philosophy “Dr. phil.” at UMIT.

- **Supervisor**
- **Co-supervisor**
- **Expert Advisor**

This role description shall foster transparency as well as a clear definition and demarcation of the tasks and responsibilities of the mentioned roles. It is part of the Implementation Rules and serves as an important source of information for doctoral students, supervisors, co-supervisors, expert advisors and the Doctoral Affairs Committee who is responsible for the academic self-administration of the doctoral studies, as well as for all other relevant stakeholders.

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<sup>1</sup> Note: The role of an „expert advisor“ can i.a. also be used as a means of personal and professional development and a means to support young scientists at UMIT. Hence, it is possible that Assistant-Professors ((according to UMIT’s academic qualification model), on their way to their own habilitation, may be introduced to the supervision of doctoral students and may to some extent get involved in the supervision process, step-by-step and mentored by experienced supervisors.

## **SUPERVISOR**

According to the Doctoral Degree Regulations currently in force, the doctoral candidate shall with his/her request for the initiation of the doctoral procedure also submit a recommendation for a supervisor who subsequently has to be approved by the Doctoral Affairs Committee. The supervisor is the doctoral candidate's first contact person. He/she has to continuously accompany the doctoral process and has to ensure that all UMIT regulations and quality criteria are observed. The respective rights and obligations are regulated in the doctoral thesis agreement.

### ***Minimum requirements for supervisors:***

- Habilitation or habilitation equivalent
- Research activities
- Relevantly qualified (with regard to the topic of the doctoral thesis)
- Experience in supervising academic theses

### ***Duties:***

- Implementation of a schedule and a work plan in agreement with the doctoral candidate (usually part of the doctoral thesis agreement)
- Provision of ongoing support and mentoring for the doctoral candidate in each semester with regard to planning, implementation and preparation of the doctoral thesis (e.g. guidance on questions related to the content and methodology, feedback on drafts within a reasonable time)
- Assistance and support of the doctoral candidate with regard to publications (development of a project plan, guidance on the choice of scientific journals, feedback on drafts, support for replies)
- Conduct of periodic consultation sessions via phone or in person, in each semester
- Willingness to organize result seminars and private tutorials (Note: credits for result seminars and private tutorial can only be accredited if the supervisor was present)
- Monitoring of the progress of the doctoral project (e.g. calling for periodic written or oral reports, inquiry in case of inactivity)
- Passing of information to the Doctoral Affairs Committee in the event of unexpected problems related to the doctoral project
- Ensuring the compliance of the professional guidelines for good scientific practice
- Writing of a report on completion of the doctoral project
- Participation in the research concept examination as supervisor or as a member of the examination board
- Participation in the oral defense as supervisor or as a member of the examination board

- In the case of the involvement of a co-supervisor or an expert advisor: willingness for coordination with the other parties on a regular basis

### **Framework condition:**

- One person can only supervise a maximum of eight doctoral students at the same time.

## **CO-SUPERVISOR**

Upon request of the supervisor or on the Doctoral Affairs Committee's initiative, a co-supervisor can be appointed. The inclusion of a co-supervisor must be requested and justified and requires the approval of the Doctoral Affairs Committee. The request can be submitted at the beginning of the doctoral process as part of the doctoral thesis agreement, but also at a later stage by filing an informal request.

A co-supervisor may support one or both of the following aims:

- a) Co-supervisors are able to provide additional scientific expertise (e.g. interdisciplinary topics). Co-supervisors can be members of UMIT's permanent scientific staff or can be sufficiently qualified external scientists.
- b) In the event of external supervisors<sup>2</sup> the UMIT co-supervision shall ensure the compliance with UMIT's regulations and quality criteria.

### **Minimum requirements:**

- Habilitation or habilitation equivalent
- Research activities
- Relevantly qualified (with regard to the topic of the doctoral thesis)
- Experience in supervising academic theses

### **Duties:**

- Subject-specific scientific support for the supervisor of the doctoral project
- Conduct of periodic consultation sessions via phone or in person
- Willingness to work closely with the supervisor

## **EXPERT ADVISOR**

An expert advisor can contribute to the doctoral project with his/ her subject-specific professional expertise (e.g. regarding methodological, subject or data-related questions) which has a significant impact on the success of the respective doctoral project.

An expert advisor can be called in at the request of the supervisor by the Doctoral Affairs Committee. His/her inclusion shall be requested in writing and shall be justified in detail with reference to the respective doctoral thesis project. This can only be done after the conclusion of the doctoral thesis agreement.

The request must include the following information:

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<sup>2</sup> External supervisors are persons who are not members of UMIT's permanent scientific staff.

1. Name of the expert advisor, verification of compliance with the minimum requirements and approval by the superior
2. Name of the doctoral candidate, name of the supervisor, title of the doctoral project
3. Description of the topic-related expertise which will be contributed
4. Short justification for the inclusion of an expert advisor

The Doctoral Affairs Committee shall take a decision on the request. The Doctoral Affairs Committee reserves the right to evaluate the quality and extent of the expert advisor's guidance as well as the supervisor's and the co-supervisor's (if applicable) supervision on a regular basis.

### **Minimum requirements:**

- Academic qualification: Assistant-Professor (according to UMIT's academic qualification model)
- Special professional expertise in methodological, subject or data-related questions that is relevant for the doctoral project
- Subject-specific research activity
- Employment contract with UMIT

### **Duties:**

- Advice for doctoral students regarding questions related to methodology, content or data in consultation with the supervisor
- Willingness to conduct consultation sessions via phone or in person and to participate in meetings between the doctoral candidate and the supervisor
- Willingness to work closely with the supervisor
- Willingness to participate in result seminars and private tutorials (Note: credits for result seminars and private tutorials can only be accredited if the supervisor was present)
- Willingness to actively participate in doctoral thesis-specific publications as co-author.

### **Framework condition:**

- The work as expert advisor can be listed in one's Curriculum Vitae. Hence, first verified experiences in the supervision of doctoral students may be documented. For this purpose, the Study Management Office can issue a written confirmation (Service Doktorat).
- The expert advisor can be mentioned in the acknowledgements of the doctoral thesis in order to pay tribute to his/her support, but he/she will not be listed on the cover page.
- One person can only counsel a maximum of two doctoral students as expert advisor at the same time.