

HCI MASTER THESIS GUIDELINE HCIM 2023

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Changes

Version	Description	Date	Author
0.1	Initial version	August 2020	Hilmar Linder

0.2	Iterated version FH+PLUS	November 2020	Bernhard Maurer; Alexander Meschtscherjakov
0.3	Adapted Deadlines	December 2020	Bernhard Maurer
0.4	Added information on earlier thesis hand-in and defense date	December 2020	Bernhard Maurer
0.5	English Version	December 2020	Bernhard Maurer
0.6	Adapted Sections, Exam Regulations FH	January 2021	Bianca Lidolt-Petscher
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0.8	Adapted Sections: 4. Master degree panel exam; adapted exam dates	August 2021	Bernhard Maurer
0.9	Edited Section 4.1 Assessment of Master's degree panel exam	October 2021	Bernhard Maurer
1.0	Edited Section: 3.2. Point 5 & 3.3. M10	October 2021	Bianca Lidolt-Petscher
1.1		November 2021	Bernhard Maurer
1.2	Edited Section: 3.3 M10 Graduation documents; 3.7.1. valid digital signature	December 2021	Bianca Lidolt-Petscher
1.3	Front page: Cohort start year instead of intended academic year for graduation. Minor changes to submission procedure.	November 2022	Jakub Sypniewski; Bernhard Maurer
1.4	Update cohort 2022:	September 2023	Bernhard Maurer
1.5	Update PLUS parts	September 2024	Laura S. Helberger
1.6	Update cohort 2023	Oktober 2024	Bernhard Maurer; Alina Itzlinger
1.7	Update FHS Process (Ethics checklist)	December 2024	Bernhard Maurer

1. General information

This guide sets out guidelines for writing Master's theses in the Joint Master Programme on Human-Computer Interaction (HCI) and describes the basic structure, the requirements regarding content and the formal and organisational requirements.

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1.1. Objectives

The Master's thesis serves as proof of the ability to address scientific topics from the field of human-computer interaction independently and in accordance with current scientific standards regarding content and methodology. It is an integral part of the Master's degree examination.

As part of the Master's thesis, the student is required to address complex tasks from the various core subject areas or research topics of the degree programme, independently solve a problem, document it scientifically and support it with arguments at the academic level. The Master's thesis is worth 25 ECTS credits.

1.2. Learning outcome

With the Master's thesis, students demonstrate their ability to successfully address scientific problems, incorporating sound, subject-specific basic knowledge with the aid of independent literature analyses and applying discipline-specific and cross-disciplinary methods and principles.

The Master's thesis serves to establish the connection between practice and theory in relation to a selected, subject-specific question, and therefore includes a practical/empirical part (project, prototype, study, application of a model, a method, etc.) and a part devoted to conceptual-theoretical discussion. In the Joint Master Programme on Human-Computer Interaction, it is required to write a scientific work that would in principle be publishable as a scientific publication.

1.3. General condition

The subject of the Master's thesis shall be chosen such that it is possible and reasonable for a student to complete it within six months (see Austrian Universities Act (UG) 2002 Section 81 (2)).

During work on the topic and supervision of students, the provisions of the Austrian Copyright Act, Federal Law Gazette no. 111/1936, must be observed (see UG 2002 Section 80 (2)).

Students themselves may propose topics and supervisors. The degree programme and potential supervisors will also propose topics. These topics will be presented to students by mid-December. Topics must include the following points: subject area/topic, research question(s), methodology, type of contribution. Students must select at least two and at most three topic proposals (from the pool of their own topics as well as those proposed by the degree programme). A topic may be addressed by a number of students working together if the individual students' contributions are delineable and separately assessable. On this basis, supervisors are assigned during a meeting of all supervisors. Students then prepare exposés.

In the course accompanying the Master's thesis (Master Thesis Seminar) in the 4th semester, students deepen their knowledge of the scientific work on the basis of specific issues. The organisational aspects are determined by the institution to which the primary supervisor is assigned. Hence, applications for and completion of the Master's thesis are subject either to the exam regulations of Salzburg University of Applied Sciences or to the statutes of the University of Salzburg. **Irrespective of the institution, all Master's theses have to be entered in the PAAV system of PLUS (see 3.1).**

For Master's theses undertaken at Salzburg University of Applied Sciences, the topic of the Master's thesis must be thematically assigned to one of the subjects/modules defined in the master programme. The student is entitled to propose the topic or to choose the topic from a number of suggestions made by the available supervisors. The topic of the Master's thesis as well as the supervisor must be checked and approved by the Head of Degree Programme. If the proposals do not meet the requirements or are not submitted in time, the Head of Degree Programme shall assign a supervisor and a topic in order to ensure compliance with the standard period of study. At Salzburg University of Applied Sciences, the topic of the Master's thesis can only be changed once, and only within the first two months after approval. This change must be justified in writing and approved by the Head of Degree Programme and depends, among other things, on whether a suitable supervisor can be provided.

For Master's theses undertaken at the University of Salzburg, the topic of the Master's thesis must be thematically assigned to one of the subjects/modules defined in the master programme. The student is entitled to propose the topic or to choose the topic from a number of suggestions made by the available supervisors. Supervisors can be persons habilitated at the University of Salzburg. Upon special request, the Dean of the Faculty of Digital and Analytical Sciences may also admit non-habilitated persons as supervisors. They must have completed a doctorate in the research area concerned. Dissertation students may act as co-supervisors. The rules for changing topics and/or supervisors of a Master's thesis at the University are those defined in its current statutes. The student must notify the topic and the supervisor of the degree thesis or master's thesis to the Dean in writing before starting the work. A change of supervisor is permitted until the Master's thesis is submitted. The topic and the supervisor shall be deemed to have been accepted if the Dean does not reject them within one month after receipt of notification.

At either institution, every Master's thesis is accompanied by regular consultations with one or two assigned supervisors who are also assessors regarding subject matter and methodology. The Master's theses are assessed with regard to form and content.

1.4. Role of autonomy

The Master's thesis is written independently, under the student's own responsibility and to academic standards in all phases of the Master's process. This means, by implication, that no one else (neither the supervisors/assessors, nor the degree programme, nor the supervisor of the accompanying course) is responsible for the preparation of the Master's thesis, though all those involved will provide Master's students with the best possible advice and guidance within the scope of the available resources.

In particular, **autonomy** means that master students:

- If they have questions, they should first research the Master's Thesis Guideline and the guidelines of Salzburg University of Applied Sciences (FHS) and the University of Salzburg (PLUS), and only then ask the person responsible for the process or the supervisor,
- be responsible for all organisational matters and proper management of the project (starting on time, agreeing deadlines, correct and timely delivery),
- collect all necessary information and data for the work themselves,
- write the Master's thesis as an independent work and
- submit completed parts of the Master's thesis to the supervisor without being asked to do so, regularly and in the proper form.

2. Content guidelines

2.1. Research relevance

The topic is deemed relevant to a specific field of research if the Master's thesis has made the field of research more complete, more comprehensible or more discriminating. The description of research relevance enables outside observers to gain an insight into the research project and to assess the topicality or importance of the research project. Without a description of relevance, there is no understanding of the research per se.

2.2. Parts of the Master's thesis

The constituent components listed below must be present in a scientifically reasoned Master's thesis; they represent a proposal or framework for structuring the thesis.

Chapter: Introduction:

Explanation and justification of the topic (argumentation phase – introduction): In this phase of the thesis, it is necessary to explain the reasons why the topic of the thesis or the question is relevant and why the topic should be addressed. The motivation for the topic therefore stands in the foreground, though this refers not to personal preferences, but rather the topical significance of the question in the context of research and innovation.

Chapter: Theoretical Grounding & Related Work:

Presentation of current knowledge on the topic (literature phase – basic knowledge): An overview of the topic and concepts and a description of the current state of research (e.g., possible solutions, technologies, theory) should be presented here based on sources from the scientific-technical literature. Special attention should be paid to the correct citation of sources. This should help other readers of the paper to understand the subsequent parts of the paper. Contents of electronic sources (websites) are acceptable but must be saved (see also Section 3.7.1).

Discussion of possible methods and solutions (feasibility phase – analysis): This section can begin with a comparison of methods/approaches from literature, and an assessment and discussion of the chosen method's. Based on the existing literature, here it is necessary to argue which gap this work fills and which questions it addresses. This should be followed by an explanation of different approaches to the topic based on specific variants, in light of the results of the literature phase on the one hand, and with regard to innovative solutions for different fields of application on the other.

Chapter: Research Question(s) & Approach:

Proceeding on the basis of the previous chapters, the specific research question(s) to be addressed in the thesis should be described here (referring to the content of the previous chapter). Furthermore, the specific approach, i.e., the methodology for answering the chosen question(s), should be described in detail, including possible ethical aspects (cf. Research Ethics).

Chapter: Results:

Presentation of solution and results (realisation phase): The independently developed solution or partial solution to a problem or the research question is described in detail.

Chapter: Discussion:

Discussion of results (justification phase): The critical discussion of the technical or analytical work steps is presented here and the relevance to innovation is established. Comparisons with other results on similar questions in the literature are entirely appropriate (reference to questions and knowledge gaps in existing

literature on the topic identified in the “Related Work” chapter). Arguments may also be presented here concerning social relevance and responsibility with regard to the research question(s), or may be placed in the context of an overall social discourse.

Chapter: Reflection & Outlook

The thesis is rounded off with a recapitulation of the main findings and a look ahead to possible further development of the techniques and/or methods chosen. Special attention is paid here to the possibility of innovation in a specific field of application or the further scientific questions that arise from the work.

3. Organisational guidelines

3.1. General overview

In order to finish your Master's degree in Human-Computer Interaction, it is necessary (for all students, regardless of which is the supervising institution you write your thesis) to complete the following steps:

- The completion of all required courses according to the Curriculum (25.06.2019) (incl. free electives; excl. master's thesis and master thesis examination)
- The entry of your data of all SUAS (FHS) courses in plusonline (→ [how-to english](#))
- The submission of the „Prüfungspass“ at the examination office of the PLUS DAS Faculty (a proof of all exams you've finished) – this is ideally done regularly each semester and/or before or right after submitting thesis, but at the latest three weeks before the exam. All FH grades have to be submitted in PLUSonline: <https://www.plus.ac.at/wp-content/uploads/2022/09/Leitfaden-zum-Zeugnismachtrag-fuer-Studierende-von-Joint-Degrees-Beispiel-IngWiss-1.pdf>
- The registration and submission of your Master's thesis in the PAAV System (**as well as FHSys if you are writing your thesis at FHS**) → please submit the thesis in both systems on the same day
- After the plagiarism check in the system is confirmed by your supervisor your thesis can be printed. You have to print them at the PLUS Printcenter (triggered via PAAV system).
 - Writing at PLUS: submit 1 printed version to the PLUS library. The print center directly forwards the Master Thesis to the PLUS library. Costs for printing and the shipping have to be balanced by the student him/herself. You can find more information under the following link: <https://www.plus.ac.at/wirtschaftsabteilung/printcenter/studierende/formatepreise-2/>
 - Writing at FHS: bring 2 printed versions to your master examination + 1 printed version directly submitted to PLUS library via printcenter. All copies can be requested via PAAV.
- A positive assessment of your master thesis by your supervisor
- A positive completion of the master exam

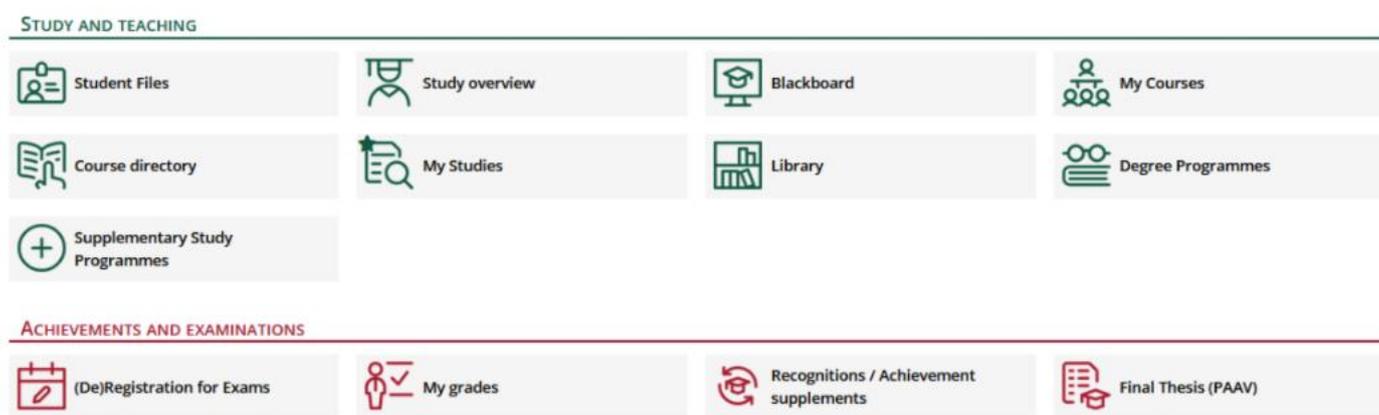
3.2. Procedure for writing a Master's thesis at the University of Salzburg

Point 1: Registration of the Master's thesis

After students have been assigned to topics and supervisors, the Master's thesis must be registered in "PAAV" (Plusonline Thesis Administration [Plusonline-Abschluss-Arbeiten-Verwaltung]) before work begins, as the topic and supervisor must be approved by the Dean.

PROCEDURE: The thesis should be registered in the "PAAV" online database via your personal Plusonline page ("Visitenkarte"). For this you need a valid user account. After entering the provisional topic (working title) and selecting the supervisor, the student must release the entry for the supervisor so that the supervisor

can then confirm the proposed thesis in PAAV. The Dean's final approval is obtained from the Examination Office.



If you have any questions or problems, refer to the help texts provided by PAAV.

In case of technical problems, please send an email with a precise description of the problem to PLUS IT Services at ticket@plus.ac.at

Point 2: 1st part of the Master's examination – courses on the curriculum

The following documents are to be submitted to the Examination Office as soon as all courses of the curriculum have been completed:

- completed examination pass, see Faculty Office website – forms and guides for students
- copies of any certificates of recognition and proof of practical experience

Point 3: Submission of the Master's thesis

To be completed BEFORE submitting the Master's thesis:

- 1) Record dates of meeting with the supervisor in PAAV
- 2) Upload the Master's thesis as a pdf file for the plagiarism check
 IMPORTANT: both the upload and the successful plagiarism check must be confirmed by the supervisor in PAAV – please allow time for this!
- 3) After the plagiarism check has been carried out, you will receive an E-Mail with the information that the Master's thesis can be bound
- 4) Enter abstracts in German and English, keywords and OESTAT categories

The following documents must be ordered via PAAV (as described earlier):

- 1 master theses in book binding; do not use any logos/seals of the University

(for students writing their thesis at FHS: please send 1 version ordered via PAAV which is automatically forwarded to the PLUS library and bring 2 to your defence at FHS)

Point 4: 2nd part of the Master's examination – panel exam

After the grade or assessment of the Master's thesis has been entered or uploaded to PAAV by the assessor and the 1st part of the Master's diploma has been successfully completed, the student receives the "Notification of exam date" form for the final Master's degree panel exam via email.

The Examination Office must receive the completed exam date form with all required signatures 2 weeks before the planned Master's examination at the very latest. This is a minimum deadline and must not be missed! Please note that arranging an exam date or obtaining the necessary signatures may take some time and you should take this into account in your timetabling.

Point 5: Graduation documents

Students will be notified immediately via email once the graduation documents have been completed.

Please note that it will take more than two weeks for the documents to be issued since the documents also have to be signed by the FHS. This process may legally take up to maximum of 4 weeks.

The Master's examination certificate and the award certificates can be collected in person from the Examination Office after the examination has been passed.

- Go to <https://www.statistik.at/> (Surveys/Educational institutions/Ustat2), complete the questionnaire in either German or English, print out the pdf document generated afterwards and hand it in with the completed graduate survey (to be sent by email) at the Examination Office before collecting the graduation documents.

You should register for the graduation ceremony at the Admissions Department (Kapitelgasse 4):

<https://www.plus.ac.at/communication-and-fundraising/service-for-students/graduation-ceremonies/?lang=en>

For information on examination matters, please contact the Examination Office:

Faculty Office DAS + Examination Office DAS & NLS Faculty

Examination Office

Hellbrunner Strasse 34, A-5020 Salzburg, Austria

Tel. 0662-8044-1000

Email: das.pruefungsreferat@plus.ac.at

3.3. Procedure for writing a Master thesis at Salzburg University of Applied Sciences (FH Salzburg)

Phase	Milestone	Objective	Where/who	Deadline	Remarks
Topic identification phase	M1	Individual discussions with supervisors regarding potential topics		October – January	(optional)
	M2	Application for supervision	FHSys	14 February, 12:00 noon	Enter and apply for title and supervisor in FHSys
Implementation phase	M3	Consultation 1	Supervisor	Recommendation: end of February	Discussion based on first exposé
	M4	Consultation 2	Supervisor	Recommendation: beginning of April	Discussion based on preliminary version
	M5	Consultation 3	Supervisor	Recommendation: Mid-May	Discussion based on preliminary version
	M6	Consultation 4	Supervisor	Recommendation: Mid-July	Discussion based on preliminary final version of Master thesis
	M7	Submission of final version (1st deadline)	FHSyS	8. September	FHSyS upload of final version; submission of one copy each with "simple" binding to supervisor and second assessor, if applicable
	M8	Bound final version	Degree Programme Office	Final exam day	The Master thesis must be submitted to the examination board, after which the bound final versions must be handed in to the office and any disclosure agreement requested
	M9	Master's degree panel exam	FHS	Expected Week 42 13 October to 17 October	Details of the arrangements will be announced at the end of September
Successful completion phase	M10	Graduation documents Graduation ceremony	FHS/PLUS	November/ Mid-November	All graduation documents will be arranged by PLUS – see Point 5: Graduation documents Participation in the graduation ceremony at FH in autumn depends on whether the graduation documents can be completed in time.
Second attempt	M9a	Submission of final version	FHSys	1. December	Milestones M10-M12 will be deferred accordingly and the relevant dates will be announced separately.
Third attempt	M9b	Submission of final version	FHSys	3 March of the following year	Milestones M10-M12 will be deferred accordingly and the relevant dates will be announced separately.

Table 1 Milestones for Master's thesis at Salzburg University of Applied Sciences (FH Salzburg)

In justified cases, students can apply for their master's final examination to be brought forward to an examination date in June by February 1 (according to the semester regulations) at the latest using the

dedicated form (see myFHS1) at office.ct@fh-salzburg.ac.at, whereby M7 in Table 1 is moved to a date in June. The dates of the other milestones will then also be postponed and will be announced separately.

3.4. Role of the Thesis Seminar

The purpose of the course accompanying the Master's thesis (Master Thesis Seminar) is to deepen scientific methods in seminar form, based on the continuously emerging issues. The general content and organisational framework are also addressed. Individual supervision is provided by the pool of supervisors at both institutions.

3.5. Consultations

The Master's thesis is supported by ongoing consultations with the supervisor regarding subject matter and methodology. Supervisors are also responsible for the initial assessment of the Master's thesis. Students are entitled to four consultations with their supervisors. Students are alone responsible for contacting their supervisors to discuss the format of future collaboration and explore the likely outcomes.

3.6. Ethical Approval and IEC consultation process for master theses at FHS

Research projects "on and with human beings", which "may impair the physical or psychological integrity, the right to privacy, other subjective rights or interests worthy of protection of the study participants or their relatives"² must be reviewed according to scientific-ethical criteria by an ethics committee (IEC - Institutional Ethics Committee) set up at the Salzburg University of Applied Sciences.

Master's theses that fall under the above criteria are brought to the IEC in consultation with the supervising lecturers. The IEC is consulted in a multi-stage process:

1. In consultation with their supervisor, students complete the checklist of the IEC as part of the supervision meetings. The current version of the checklist can be downloaded from myFHS: <https://myfhs.fh-salzburg.ac.at/pages/viewpage.action?pageId=92190121>
2. The supervisor will decide how to proceed. If the project is deemed to be relevant for the IEC, the student will forward the checklist, including the supervisor's feedback on the checklist, to the Ethics Committee (IEC). The email address is: ethik@fh-salzburg.ac.at
3. On the basis of the checklist, the IEC will decide how to proceed. Either the research project is deemed to be ethically unobjectionable, or a full application must be submitted to the Ethics Committee (IEC) of the Salzburg University of Applied Sciences. The form for the full application to

¹See section "Application for preponing the Master Final Examination": https://myfhs.fh-salzburg.ac.at/download/attachments/9109834/2023-04-19_Academic%20Calendar%20STJ%202023_24.pdf?version=1&modificationDate=1681903834262&api=v2

²Source: Geschäftsordnung des „Institutional Ethics Committee“ (Ethikkomitee) of Fachhochschule Salzburg GmbH. §1 (4). Download under Institutional Ethics Committee (IEC) - Ethikkomitee - myFHS (fh-salzburg.ac.at) <https://myfhs.fh-salzburg.ac.at/pages/viewpage.action?pageId=92190121&preview=/14419487/92176505/Gesch%C3%A4ftsordnung%20IEC.pdf>

the IEC is available via the following link: <https://myfhs.fh-salzburg.ac.at/pages/viewpage.action?pageId=92190121>

4. the feedback of the Ethics Committee (IEC) on the full application contains either 1) an approval of the exposé or 2) an approval of the exposé with conditions (minor revision) or 3) a recommendation to revise the exposé or the full application and to resubmit it to the Ethics Committee (IEC) (major revision).

The IEC will usually respond to the checklist within one week. The Ethics Committee's feedback on a full application, if applicable, will be provided within eight weeks of submission of the application at the latest. If the IEC recommends a 'major revision', the revised synopsis and revised full application must be resubmitted to the IEC. Submission deadlines and Ethics Committee meeting dates are available on myFHS. Further details of the procedure in case of objection by the Ethics Committee can also be found there. The supervisor of the thesis will guide the student through this process.

3.7. Disclosure agreement

The non-disclosure request for Salzburg University of Applied Sciences (see Appendix 6.3) must be completed in all its parts, signed and handed in to the Degree Programme Office at latest by the submission deadline for the final version. In the event of a disclosure agreement (exclusion of publication), the Master's thesis can only be borrowed from the library of Salzburg University of Applied Sciences or the University of Salzburg after the non-disclosure period of up to 5 years has expired. Please note that Master's theses are only blocked in cases where publication would demonstrably harm corporate interests, for example.

Disclosure agreements refer exclusively to the temporary exclusion from publication in the respective libraries. They expressly do not include any confidentiality agreements with the students or supervisors and reviewers concerned. Salzburg University of Applied Sciences and the University of Salzburg accept no liability in this regard.

The rules governing non-disclosure requests at the University of Salzburg are set out in the relevant documents (see statutes etc.).

3.8. Submission of the Master's thesis

3.8.1. Salzburg University of Applied Sciences

For Master's theses supervised at Salzburg University of Applied Sciences, the general examination regulations apply (see exam regulations in their latest version, Section 25).

Every submission deadline is binding for the student. If the Master's thesis is not handed in on time, it shall be assessed as "insufficient". In the case of a negative assessment, the Master's thesis will not be approved and will be returned to the student for resubmission, stating the reasons. A reasonable period of time not exceeding one semester shall be set for revision and resubmission. The Master's thesis may be submitted for approval three times and, in the case of a negative assessment, the student may apply to repeat the academic year.

The Master's thesis shall be assessed within three to four weeks after submission. The precise deadline shall be set by the Head of Degree Programme. The assessment shall be made available to students after the Master's thesis has been assessed.

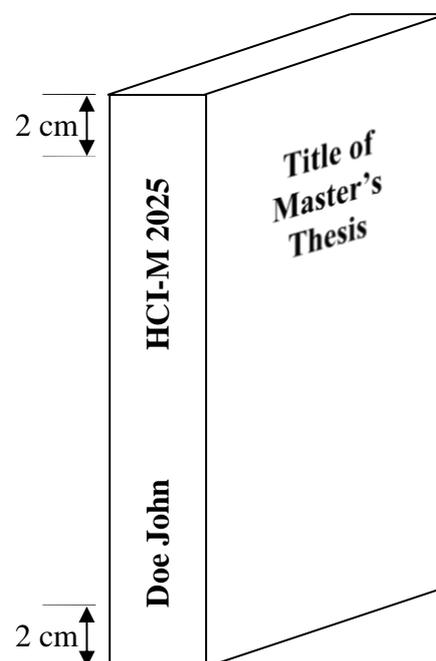
Approval is a prerequisite for admission to the Master's degree panel exam. The exam regulations of Salzburg University of Applied Sciences in their latest version include further details on the execution and organisation of Master's theses (see exam regulations in their latest version, Section 25).

For Master's theses written at **Salzburg University of Applied Sciences**, the following must be submitted:

- **Electronic submission of final version with a legally valid signature** (e.g., https://www.a-trust.at/de/produkte/Qualifizierte_Signaturservices/ID_Austria/) of the **"Declaration on oath"** (see Milestone M7) **in FHSyS**. The qualified digital signature is possible according to the guidelines eIDAS (see <https://esignature.ec.europa.eu/efda/tl-browser/#/screen/home>). **See also Section 6.5**. Further, submission of a **signed original in a simple binding** in case no legally valid digital signature is applicable. Please check with your supervisor if they request a dedicated print-out of the thesis for the grading, or if they are fine with the digital version. The thesis may be deposited at the Degree Programme Office.
- **Electronic submission of final signed version in PAAV** (<http://paav.sbg.ac.at>) (please submit your thesis in both systems on the same day)
- **Two Master's theses bound in hardcover**: Two originals of the Master's thesis signed by the student are to be brought to the Master's examination in bound form, A4 format with **hardcover**, in **dark blue** colour (see Milestone M9). The student must ensure that the electronic final version is absolutely identical to the bound final version with regard to content. The only exception is the signature on the "Declaration on oath" - this signature can be digital in the FHSys and analogue in the bound version. It is important that you have a legally valid signature in both versions.
- **Additionally**, you are required to upload your thesis to **gitlab.mediacube.at**. You should have access to this with your FHS credentials. Please also grant your main supervisor access to this repository. This is for internal documentation and reviewing of your thesis. Please add the link of your gitlab upload also in your thesis document (e.g., appendix) and the FHSys upload. The following data needs to be submitted:
 - Source file of thesis (e.g., latex or word)

- supplementary material such as web sources, cited papers as pdf
- IEC Checklist
- study data (if applicable), questionnaires, ...but NO declarations of consent or data that allow conclusions to be drawn about the identities of study participants (e.g. pseudonymization keys). Raw data and processed data from the evaluations (log data, tables, graphs, scripts, ...
- Source Code, etc.
- **Upload of Research Diary (see also 5.8)**
- **One thesis, bound in hardcover, is submitted directly to the library at PLUS (prints can be triggered in PAAV)**

The embossed lettering of bound theses comprises the last and first names (on the lower part of the spine), the degree programme code, e.g. HCI-M, and **year of graduation** (on the upper part of the spine), and the title of the Master's thesis on the front cover. The title may also be printed directly on the cover. The first page of the Master's thesis (see Appendix 6.1) should appear on the right-hand side after opening the cover. Note: Master's theses **may be printed on both sides** and **must be printed in colour**. Normal printing paper (80 g per m²) is sufficient.



3.8.2. University of Salzburg

The rules for submission and assessment of a Master's thesis at the University are as defined in its current statutes.

Submission of the Master's thesis

To be completed BEFORE submitting the Master's thesis:

1. Record dates of meeting with the supervisor in PAAV
2. Upload the Master's thesis as a pdf file for the plagiarism check
 - a. **IMPORTANT:** both the upload and the successful plagiarism check must be confirmed by the supervisor in PAAV – please allow time for this!
3. After the plagiarism check has been carried out, the Master's thesis can be bound.
4. Enter abstracts in German and English, keywords and OESTAT categories

The following documents must be handed in to the Examination Office before being able to proceed with the PAAV process and receiving your Master's degree:

“Prüfungspass” and announcement of examiner for final exam. The Master's thesis examination date could be announced simultaneously or after the grading of the Master's Thesis. Then the Master's thesis is graded by the supervisor and the student orders and pays 1 version via PAAV which automatically goes to the PLUS library; please do not use any logos/seals of the University.

3.9. Approval of the Master's thesis

Approval is a prerequisite for admission to the Master's degree panel exam. The assessment is carried out according to the regulations and statutes of the respective institutions and according to the quality guidelines of the degree programme.

In the appendix you will find the current version of the assessment scheme for written papers at Salzburg University of Applied Sciences, which can serve as a guide for the assessment (however, the weighting of individual aspects may vary depending on the topic and problem of the Master's thesis).

After the positive assessment of your Master's thesis, the student receives the “Notification of exam date” form for the final Master's degree panel exam via email from the examination office of the PLUS Faculty of Digital and Analytical Sciences.

4. Master's degree panel exam

The Master programme in Human-Computer Interaction concludes with a Master's examination by a panel of examiners. This examination carries 3 ECTS credits. Proof of positive completion of all prescribed exams and approval of the Master's thesis are prerequisites for admission to the Master's degree panel exam. The examination which concludes a Master programme consists of a Master's degree panel exam in front of an examination board. The Master's examination is conducted by a commission, consisting of four persons: the supervisor; one examiner each from PLUS and SUAS; a chairperson, who should neither be the supervisor nor one of the examiners. The examining board is led by the chairperson, who should preferably not be an examiner himself.

The Master's examination consists of an oral examination including the following components: (1) presentation of the Master's thesis including a defense of the Master's thesis and (2) two examination interviews on content relevant to the curriculum.

The Master's degree examination lasts approximately 50 minutes per student and consists of the exam parts listed in Table 2. The timings are suggested guidelines of Salzburg University of Applied Sciences and may differ for the Master HCI degree programme.

Time	Exam part	Remarks
30'	1) Presentation of the Master thesis (15') and Defence of the Master's thesis (15')	Presentation and expert discussion of the chosen Master thesis topic. Supervisor and examination board can ask questions related to the thesis.
10'	2) Oral examination on content relevant to the curriculum	Curriculum-relevant content from core courses. Exam-relevant content and learning materials will be announced by the examiner upon request .
10'	3) Oral examination on content relevant to the curriculum	Curriculum-relevant content from core courses. Exam-relevant content and learning materials will be announced by the examiner upon request .
10'	Internal discussion	Internal discussion by the examining board

Table 2 Exam procedure for the Master degree examination

Relevant content for the oral examination on the curriculum will be defined by corresponding scripts / textbooks for the semester in which the course was attended and will be announced by the examiner upon request.

The defence of the master thesis is not an examination in the sense of a course examination, but aims at argumentation competence, detailed knowledge, specialist knowledge in the thematic (surrounding) field of the thesis. Students indicate their preferences in regards to examination modules for the master panel exam in advance. The list of possible modules will be announced before the exams.

4.1. Assessment of the Master's degree panel exam

The Master's degree panel exam is in three parts. These parts are weighted for scoring as follows:

- Presentation of the Master thesis including defence
40 pts max. (10 pts max for presentation, 30 pts max for defense)

From	To	Grade
0	19	5
20	26	4
27	32	3
33	36	2

37	40	1
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- Oral examination on how the topic of the Master thesis relates to relevant subjects of the curriculum.
30 pts max.

From	To	Grade
0	14	5
15	20	4
21	24	3
25	27	2
28	30	1

- Oral examination on how the topic of the Master thesis relates to relevant subjects of the curriculum.
30 pts max.

From	To	Grade
0	17	5
18	23	4
24	28	3
29	32	2
33	35	1

At least 50 of the 100 available points plus at least 33% per exam part (13 points if 40 points are scored, 10 points if 30 points are scored) are required in order to receive a positive assessment for the panel part of the Master's degree examination. If the candidate receives a negative assessment on the Master's degree panel exam, the whole panel exam must be repeated at the next exam date.

The examination follows this 5-level grading scheme:

From	To	Grade
0	49	5
50	66	4
67	80	3
81	91	2
92	100	1

5. Formal guidelines

5.1. Formal structure / layout

With regard to the formal structure of a Master's thesis, the guidelines in Table 3 apply (unless otherwise agreed with the main supervisor).

Inner title page	As per specification (according to Appendix 6.1)
Declaration on oath	As per specification (according to Appendix 6.2)
Abstract	Brief summary of the thesis (approx. 200 words) in English
Acknowledgements	Optional
Contents	Numbered headings including page references
Constituent parts	As specified in Chapter 2.2
List of figures	The Master's thesis must include a list of figures clearly indicating the title, author, year or date and page number of the figures
List of tables	The Master's thesis must include a list of tables clearly indicating the title and page number of the tables, if necessary also the author and the year or date
List of abbreviations	Abbreviations used, listed in alphabetical order and written out in full
Bibliography	Complete references in alphabetical order are mandatory. Citations and references must comply with the ACM citation style ³
Index	Optional; contains key terms and/or proper names and adds them to the respective page references in the Master's thesis for easier location
Glossary	Optional; briefly explains important specialist terms
Appendix	Optional; for research papers, source code extracts, study data, questionnaires, etc.

Table 3 Formal structure of a Master's thesis

Regarding the layout of the Master's thesis, the guidelines in Table 4 are suggested. However, candidates may use their own layouts.

Page division	A4 format; top margin 2.5 cm; bottom margin 2.5 cm; left margin 2.5 cm; right margin 2.5 cm; gutter 0.5 cm
Page numbering	Top right, starting with 1 on the page following the title page

³ <https://www.acm.org/publications/authors/reference-formatting>

Line spacing	Generally, 1.5 lines; exception: single spacing for literature references and programme text
Alignment	Ordinary paragraphs justified; everything else (lists, references, etc.) ragged
Header	Distance from top: 1.5 cm; section on the left, page number on the right
Footnotes	Superscript numbers in the text; footnote at the bottom of the page on which the reference is given; text must remain comprehensible even without the footnote; also used for product information (software, hardware)
Font	<p>Arial, font size 12pt or Calibri, font size 12pt</p> <p>Main chapter headings in bold and font size 16pt</p> <p>Level 2 chapter headings in bold and font size 14pt</p> <p>Chapter headings at level 3 and any lower levels in bold and font size 12pt</p> <p>Programme segments in Courier New, 10pt; use tabs for indentations; it is recommended to indicate line numbers</p> <p>Emphasis is provided using italics and, in very rare cases, boldface; underlining is not allowed</p> <p>Footnotes, figure captions and table captions in font size 10pt</p>
Spacing	<p>There should be 6pt spacing between a heading and the text below.</p> <p>There should be 12pt spacing between a heading and a sub-heading (each heading should have more spacing from the preceding heading or text than from the following text or heading, so that there is also a visual connection with what follows)</p> <p>The first entry of an enumeration (e.g., bullet list) has 6pt additional spacing from the preceding text; the last entry of an enumeration has 6pt additional spacing from the following text; entries in between have normal line spacing</p>
Illustrations and tables	<p>Every image that is not self-made has a source reference</p> <p>Every table with external data has a source</p> <p>The text must be readable and comprehensible without illustrations</p> <p>Every figure or table must be referenced from within the text</p>
Formulas	Formulas are to be consecutively numbered for each section separately with the number right-justified so that it can be referenced later in the work
<i>Direct quotations</i> (= verbatim adoption of a passage from a source)	Less than 3 lines: mark as quotation by inverted commas; cite source with page(s). More than 3 lines: indent with single line spacing and text in italics; cite source with page(s)
<i>Indirect quotations</i> (= giving the sense, non-	To be identified at the end of the relevant paragraph before the full stop by citing the source without indicating page numbers

verbatim adoption of a
passage from a source)

Table 4 Rules for layout of a Master's thesis

5.2. Length of the Master's thesis

A Master's thesis for the HCI Joint Master Programme usually comprises 50-100 pages. This refers to the core parts of the Master's thesis (not the abstract, appendices, title page, indexes, program code, etc.). The length of a Master's thesis on the HCI degree programme is usually between 24.500 and 30.000 words. Exceptions can be agreed with the supervisor.

5.3. Citation

Every citation must be verifiable and fully comprehensible. Flawless citation reflects scientific diligence. In all cases, ideas taken over from third parties – whether verbatim or giving the sense – must be identified as such. It must therefore be possible to clearly distinguish between the candidate's own views and those of other authors. The ACM citation style⁴ should be used throughout.

5.4. Plagiarism

All sources must be cited in full in the bibliography. Plagiarisms are not only verbatim quotations without inverted commas and citation of the source, but also indirect quotations that give the impression that they are based on the author's own findings. Paraphrasing does nothing to alter this, i.e., replacing words with similar ones or changing the syntax or the order of sentences.

Please be aware of the institutional guidelines at FHS⁵ regarding the use of text generation tools in your thesis. Excerpt: "For non-supervised examination formats such as homework, seminar papers or theses, the principle of independent performance applies. This means that homework, seminar papers or final papers must be composed independently by the author and without use of any other than the cited sources and aids. This is the basic prerequisite for a possible positive assessment."

5.5. Language style

⁴ <https://www.acm.org/publications/authors/reference-formatting>

⁵ <https://myfhs.fh-salzburg.ac.at/display/REK/Einsatz+von+KI+in+Lehre+und+Studium+%7C+AI+in+Teaching+and+Studies>

Scientific papers should not contain statements that are merely expressions of opinion without a well-founded train of thought processes. As in all academic papers, the language style of the Master thesis is characterised by objectivity and freedom from subjective evaluations or polemic.

5.6. Gender-neutral language

Linguistic discrimination against individuals and groups of persons is not permitted. The use of gender-neutral language is obligatory at both institutions in view of the effort to combat discrimination (see Austrian Federal Constitutional Law Article 7 (1)-(4)). The Master thesis must be written in accordance with the guidelines of the respective institution.

5.7. Spelling

The thesis must be grammatically and orthographically correct according to the new spelling rules⁶. It is recommended, on the one hand, to use the spell checker and, on the other hand, to have the thesis proofread by a third party.

5.8. Research Diary (only for FHS supervisions)

In accordance with §25(7) of the examination regulations of the Salzburg University of Applied Sciences, the development process of the Master thesis is also assessed in addition to the formal criteria and the subject-related content. The research diary is part of the formal requirements of the thesis and should document the process of developing the thesis. It doesn't affect the grading itself but is part of the formal check of the thesis (see Section 6.4). The research diary consists of notes that act as a progress report. The research diary allows the student to detail and explain their research process in chronological order, and the supervisors to understand and follow the thesis process better. The records start with the start of the supervision in the summer term and ends when the thesis has been completed successfully.

The notes must be accessible to the supervisor of the thesis at all times. The research diary set up in such a way that the approach/process, work steps and workload are comprehensible and justifiable for the supervisor. For students, the documentation of the development process is a good opportunity to create a collection of material for the final thesis, as the documentation can include literature, images, videos, etc.

The notes have the following minimal requirements:

- They must be continuously updated [<https://gitlab.mediacube.at>] (e.g., once a week, even if there are no major things to report)
- They must outline the content of the meetings with supervisors (date, topics of discussion, agreement on next steps, etc.)

⁶ <http://www.rechtschreibrat.com/>

- They must be uploaded to the gitlab repository of the thesis and need to be visible to the supervisors of the thesis.
- The notes should be written in a single file starting with the newest date (create a folder “research diary”; additional files and support material can be used, but a text-based log is sufficient)

These minimal requirements need to be fulfilled in order to pass the formality check of the thesis assessment. Beyond that, the students decide on the exact content, structure, and formatting of the notes based on their individual process. The basic requirements need to be fulfilled, in order to pass the formality check of the thesis assessment.

6. Appendix

6.1. Inner title page

TITLE OF THE MASTER'S THESIS

Master's thesis in partial fulfilment of the requirements for the degree of

“Master of Science”

Author: First name Last Name

Submitted to the Joint Master Programme on Human-Computer Interaction

Salzburg University of Applied Sciences

Paris-Lodron-University Salzburg

Assessed by:

Title First name Surname (supervisor)

Place, date of submission

6.2. Declaration on oath

I, first name, surname, born on **day.month.year** in **place**, hereby certify that I have adhered to the principles of scientific work to the best of my knowledge and belief and that this Master's thesis was written by me independently. I have not used any sources and aids other than those indicated.

I affirm that I have not previously submitted the Master's thesis as an examination thesis in any form, either in Austria or abroad, and that this thesis is consistent with the thesis submitted to the assessors.

Place, on **day.month.year**

Signature

First name Surname

Personal identification number (FHS + PLUS)

6.3. Request to Salzburg University of Applied Sciences for non-disclosure of Master's thesis

6.4. Master's thesis assessment form

Assessment form of the Master's thesis (guideline of FHS)

Name of student	
Title of the Master's thesis	

Remarks	Maximum points	Assessment
Relevance (explanation and justification of the topic including research question)	Max. 5 points	
Presentation of current knowledge on the topic	Max. 10 points	
Scientific approach or research design	Max. 25 points	
Presentation of solution and critical discussion	Max. 20 points	
Overall impression of the quality of scientific implementation and of the Master's thesis	Max. 5 points	
Summary and outlook	Max. 5 points	
Content assessment overall	Max. 70 points	
Formal assessment overall	Max. 10 points	
Overall assessment	Max. 80 points	

All assessors must agree on an assessment. If the candidate receives a negative final grade from one of the assessors or on the formal assessment, this means in every case that the Master's thesis will not be approved. Please bear in mind: your assessment concerns only the quality of the content of the Master's thesis; formal correctness and typographical quality will be assessed by the degree programme and included in the assessment of the Master's thesis.

0 to 39	Insufficient
40 to 50	Sufficient
51 to 64	Satisfactory
65 to 73	Good
74 to 80	Excellent

Assessment form – Formal assessment of the Master thesis (guideline of FHS)

Name of student	
Title of the Master's thesis	

Suggested length of thesis 20.000 - 24.500 words. Texts can also be shorter, as long as the content criteria are met. Theses that drastically exceed or fall short of this guideline will be evaluated more critically.

The following criteria must be met:

- The bound version of the thesis corresponds to the version submitted digitally
- The Master's thesis is formulated in a gender-neutral way
- The thesis is formally correct (see Chapter 5.1)
- The citation style satisfies the guidelines in Chapter 5.1 and 5.3
- The chapter structure meets the requirements
- The supervision process has taken place (1) and is documented (2)
 - At least 2 personal consultations have taken place as part of the supervision process
 - The research diary documents the development process of the thesis and was submitted to the supervisor before the submission deadline
- The ethical grounding was established during the supervision process and, if necessary, submitted to the Institutional Ethics Committee (IEC)
- git repository for submission is stated in thesis, accessible and complete (LaTeX code or source file, Research Diary, IEC checklist, all publications and web pages as pdf; source code, templates and scanned study material; evaluation data,...).

Formal assessment	Maximum points	Assessment
Typing, spelling, punctuation errors	Max. 3 points	
Correct and consistent citation	Max. 3 points	
Correct formal structure	Max. 2 points	
Readability, layout	Max 2 points	
Overall assessment	Max. 10 points	

Formal correctness	Verbal report	
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Assessment form – Formal assessment of the Master thesis (guideline of FHS)

Name of student	
Title of the Master's thesis	

Relevance (explanation and justification of the topic including research question):

	<p style="color: red; text-align: center;">Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • In your professional opinion, is the scientific relevance given and has it been argued? • Is it argued for what reasons and with what aim the topic of the paper was chosen or why the topic was addressed? • Has a research question been concisely defined and justified within the research area? Does the research question allow the reader to grasp the content of the Master's thesis and thus clearly delineate the problem? • Does the work explain how providing an answer to the research question made the research area more complete, more comprehensible, clearer or more discriminating?
POINTS	POINTS (max. 5)

Presentation of current knowledge on the topic:

	<p style="color: red; text-align: center;">Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • Is the research area sufficiently described and defined? • Does the explanation of the research area provide a sufficient overview of current knowledge on the topic?
--	--

POINTS	<ul style="list-style-type: none"> • Is the research area adequately and comprehensibly narrowed down (to a sub-research area) and in sufficient detail? • Has sufficient preparation been made for the following conceptual statements? <p>POINTS (max. 10)</p>
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Scientific approach or research design:

POINTS	<p>Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • Were the conceptual and theoretical basic principles sufficiently clarified, argued and prepared? • Are the interrelationships between the research area, research question, chosen research design, conceptual-theoretical statements and possible outcome argued and/or justified? • Are the chosen approaches / models / ways into the problem compared with others in the literature? • Are different methods and solutions critically discussed? • Were arguments made with a focus on the research result(s) or the solution to the problem and was there sufficient preparation for the discussion of the well-founded research result(s) or solution to the problem? • Research design (methods): Was the chosen research design explicitly explained? Does the chosen research design correspond to the problem in question? <p>POINTS (max. 25)</p>
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Presentation of solution and critical discussion:

POINTS	<p>Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • Were adequate theoretical and methodological aspects clearly described, justified and discussed for the chosen solution(s) (e.g., survey methods, evaluation methods, etc.)? • In empirical studies: Quality of the investigation and data collection? Quality of data analysis and interpretation of data? • Is the solution critically reflected upon, such as discussing limitations and relations to existing work? <p>POINTS (max. 20)</p>
---------------------	--

Overall impression of the quality of scientific implementation and of the Master's thesis

	<p>Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • Quality of statements: are speculative statements, implicit evaluations, subjective statements avoided? Concise language? Discriminating, theoretically sound use of terms, avoiding inconsistencies? Scientific language? • Comprehensible, logical argumentation? Consistent, coherent argumentation? Sources used to develop arguments (as opposed to merely reproducing them)? Contexts argued? • Quality of evidence, sources, literature: high-quality, subject-appropriate, up-to-date (state of research) literature used? Literature incorporated in a logically correct manner?
POINTS	POINTS (max. 5)

Summary and outlook:

	<p>Replace the following guide questions with a coherent text that answers the questions with regard to content.</p> <ul style="list-style-type: none"> • Does the paper contain a summary of the most important results? Does it provide a conclusive answer to the research question posed at the outset? • Do further fields of action result from the critical reflection of the results? Have these been identified?
POINTS	POINTS (max. 5)

Assessor 1 (Name in block capitals, signature, date)

Assessor 2 (Name in block capitals, signature, date)

6.5. Qualified Digital Signature / Qualified e-Signature (QES)

How to get it?

One of the main providers in Austria is A-Trust, which offers the cell phone signature or ID Austria. Information on how to create a cell phone signature or ID Austria can be found here: <https://a-trust.at/>

There are other providers that also allow you to create a QES online. This includes sending photographs of ID documents and photos of yourself via a secure app on your cell phone.

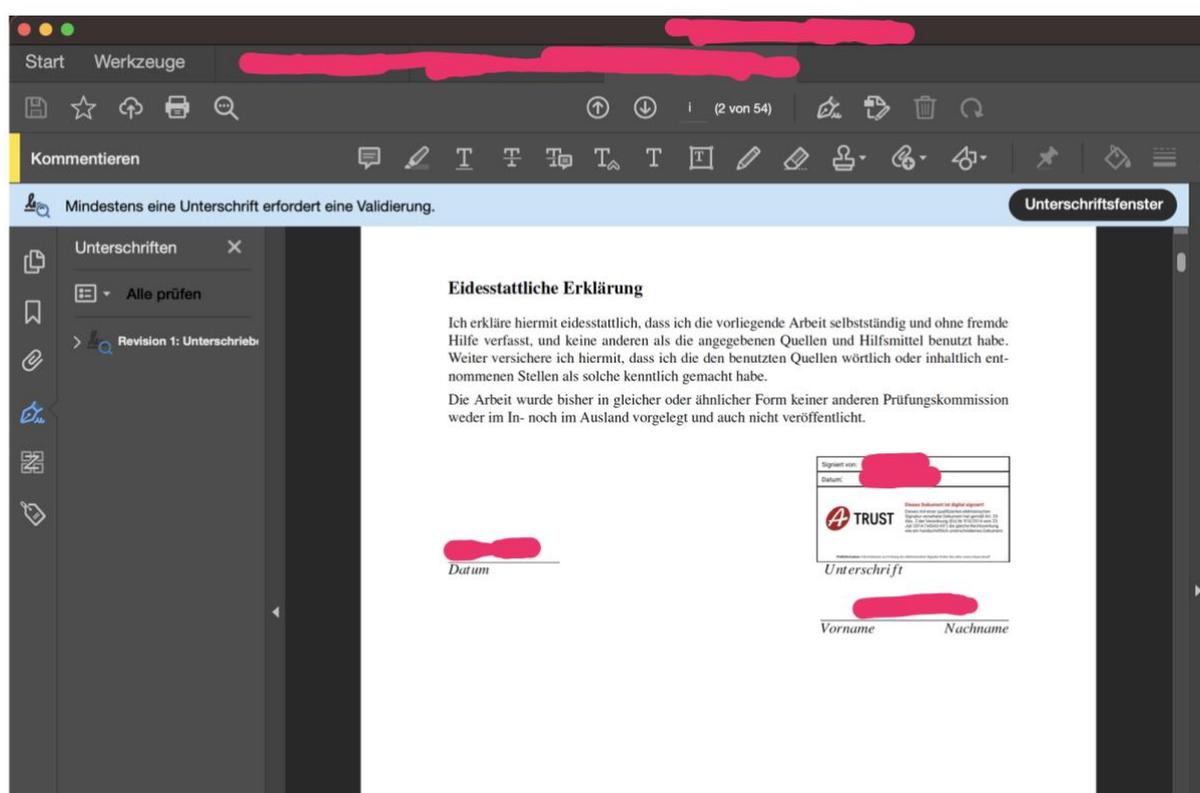
A list of providers in Europe can be found here. As some services cost money, no recommendation is made: <https://eidas.ec.europa.eu/efda/tl-browser/#/screen/home>

How do I ensure that the digital signature is valid when I submit it?

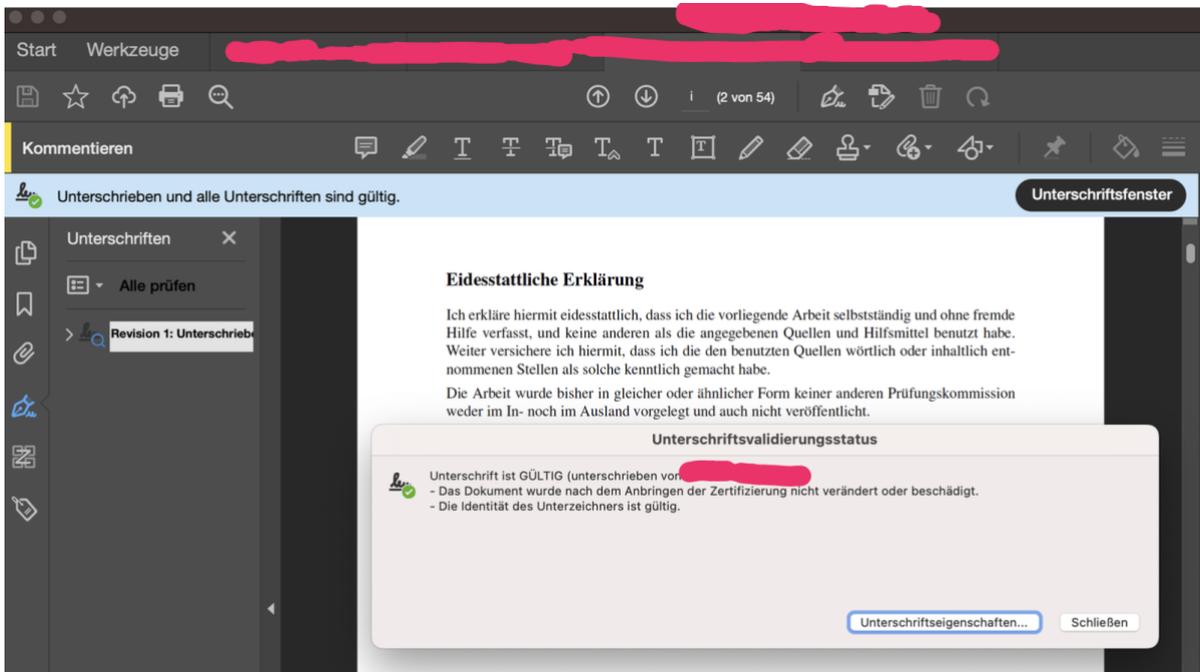
For a valid signature, the signed document must not be changed. Any change will invalidate the digital signature. You can check the validity of the signature e.g., in Adobe Reader.

Other services are:

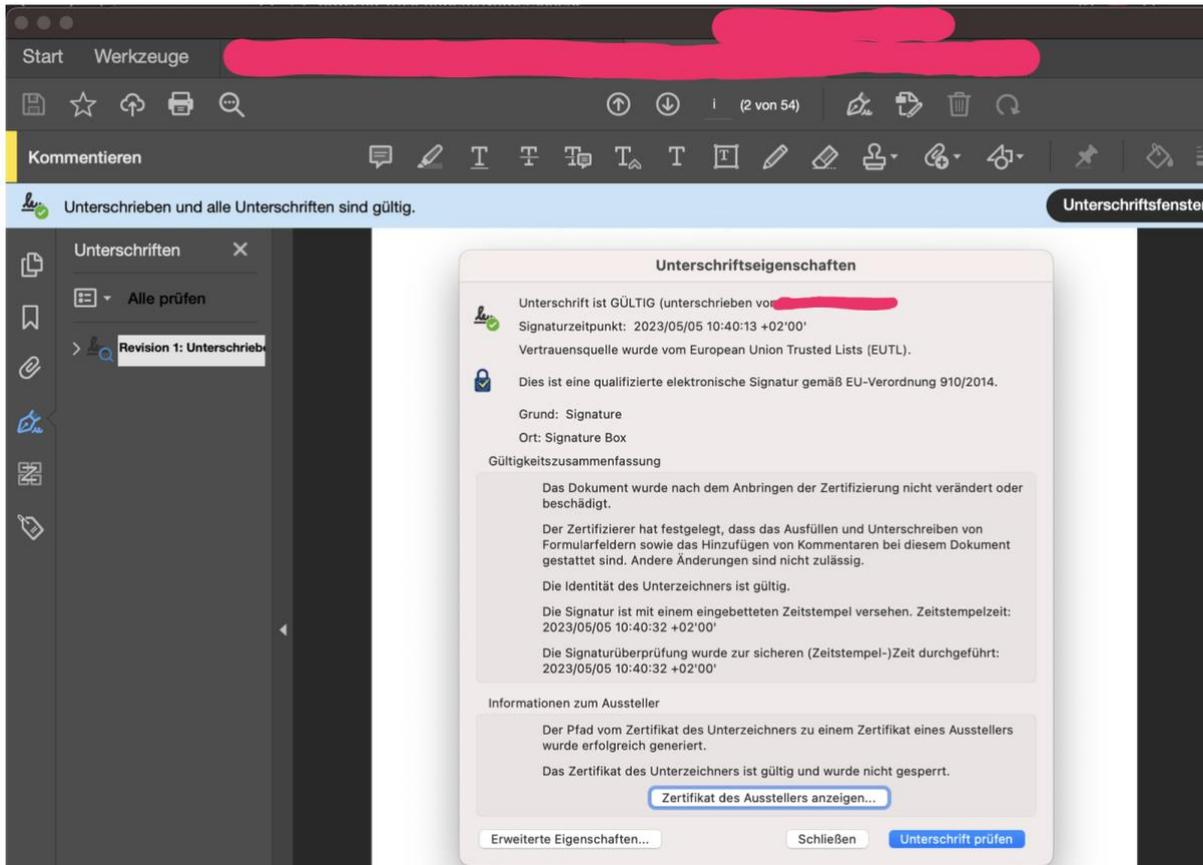
- https://www.a-trust.at/de/tools/PDF_verifizieren/
- <https://ec.europa.eu/digital-building-blocks/DSS/webapp-demo/validation>



This work was signed with a digital signature. The next step is to verify the validity of the digital signature or to ensure that it is a QES.



A click with the left mouse button on the signature opens the window "Signature validation status". The signature must be VALID, i.e. the identity of the signatory is valid or the document has not been changed after the certification was applied.



Clicking on the Signature properties button is necessary to see whether the signature is a QES according to the EU regulation. Visible here by icon and in the text.