

GPE Guideline

Master Thesis

Global Production Engineering
International Master Program
Technische Universität Berlin





Dear GPE Student,

Now you are almost in the final period of your master's study program and short before you start the next step in your professional career.

With this guideline, we wish to help you understand the special regulations of the last exam – the Master Thesis.

We tried to reword the regulations in a more “easy to understand” way and additionally gathered all questions and put them into the Q&A section.

It is expected that you read all sections carefully to meet all thesis requirements to bring your studies to a successful end.

Nevertheless, there always remain some very unique questions, for which we will be pleased to answer you in a personal way.

And of course, we will be grateful for any suggested improvement.

Thank you and good luck.

Your GPE Team



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1. Introduction

GENERAL INFORMATION

Writing a master thesis is statutory according to the examination regulations of GPE. These regulations are based on the general regulations for the Master of Science examination policy signed in Bologna from 29 European Ministries of Education to create a consistent educational system within Europe. The agreement is defined amongst others that 1 ECTS is a workload of 30 hours. A Master Thesis is worth 18 ECTS points which is equal to 540 working hours. This is equivalent to 45 hours a week for a thesis period of 12 weeks (3 months).

Since the start date of the Master Thesis is the registration date, a well-defined schedule should be considered beforehand.

DURATION AND EXTENSION

The Master's thesis is usually written in the fourth semester. It has a scope of 18 LP, and the processing time is 16 weeks. If there is an important reason for which the student is not responsible, the examination board will grant an extension for the duration of the reason. The total possible extension is a maximum of eight weeks. If the total number of extensions exceeds the maximum extension, the student may withdraw from the examination.

Once the topic is officially fixed and signed by the supervising professor and submitted to the GPE Examination office, the period of 16 weeks starts.

CONSEQUENCES FOR A COMPANY

The master thesis can also be written in collaboration with a company, however, this is not a requisite. Hereby a supervisor from the university is still required independently of the company's supervisor.

For a company, this period means in the end, that only 16 weeks are considered as a mandatory student period. In case of an extension or prior occupation period, the company may have to clarify the social insurance situation on its own.

POSSIBLE SUPPORT BY GPE

A longer period of research time before the official registration date may help to extend the time staying at a company to finally get a well-done master's thesis promptly.

Finally, we wish to let you know that GPE endorses a longer period at a company gathering more professional experience and would always help our students within our available legal frame.



1.1. Purpose

The Master Thesis is the finishing touch on the study program. This is where students demonstrate how they can apply what they have learned. Furthermore, it enables the student to develop deeper knowledge, understanding, and capabilities in research in the field of the student's specialization.

The Master's Thesis can be industrial or academic-oriented. Students have sixteen weeks to complete the scientific work on their task. Once the student has handed in the Master's Thesis, the student might have to defend or present the thesis' result at the sponsoring institute and the company (if applicable).

1.2. Scope

The following guideline is intended for use by GPE Students when writing their Master's Thesis. It gives a short introduction to scientific writing and explains how to register for the Master Thesis.

Variations concerning writing demands are possible and depend on the supervising research assistant. The requirements of the supervising assistant are predominant in case of discrepancy.

Please be aware: The GPE examination office is your contact as far as the official and binding registration of your Master Thesis is concerned. Make sure you clarify everything beforehand.

1.3. The Scientific Work Course

During your studies, the course "Scientific Working" is offered. It will focus on scientific writing and will prove very useful when it is time to write your master thesis.

Participation in this course is mandatory. Even though this course will not be recognized for credits, without passing it you will not be allowed to register your master thesis.

2. Preparation, Registration, Processing Time

2.1. Approval

To be permitted to register for a Master Thesis a student must have finished all module credits (90 ECTS) and the internship including the report (12 ECTS).

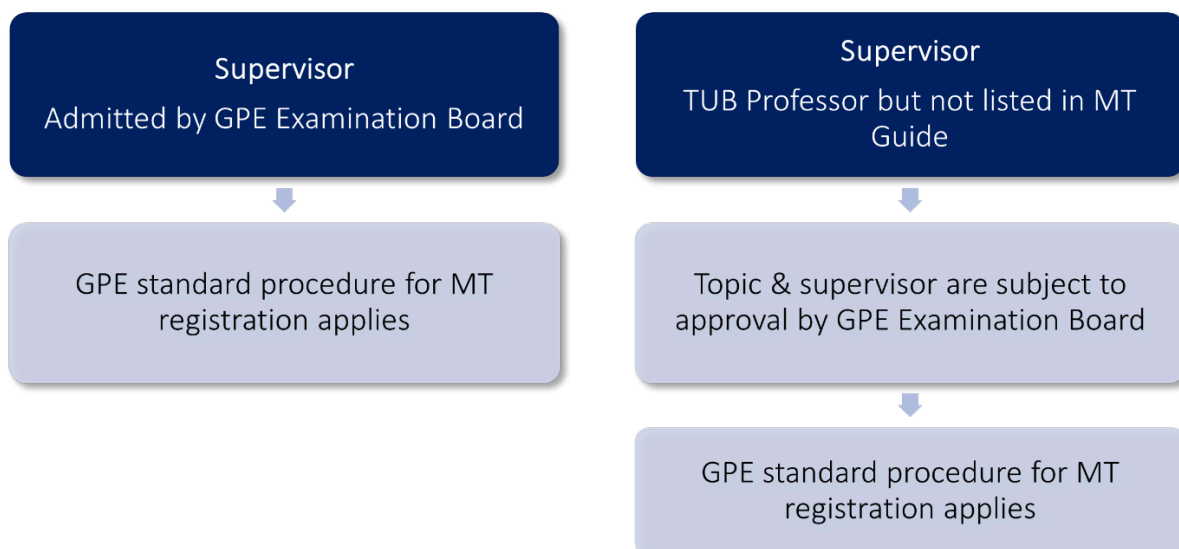
2.2. Allotted Supervisor

Possible supervisors are all lecturers, who are allotted as responsible for a GPE module (see module description) or every professor from TU Berlin, offering courses about the GPE curriculum. The supervisors approved by the GPE Examination Board are listed in the appendix. External supervisors may be accepted upon a special appeal to the GPE examination board.

Research assistants of a TUB professor are entitled to act as "supervising assistants". Professors from other universities are considered external supervisors to whom a supervisor approved by the GPE examination board is assigned.

Supervising assistants and external supervisors will assist you throughout the preparation and writing of the Master Thesis and will submit a grade proposal to the main supervisor.

The responsibility regarding the scientific value as well as the grading of the master thesis devolves upon the main supervisor.



2.3. Shaping Your Topic

GPE does not offer any master thesis topics regularly. However, in case we are informed of an offer, we always forward it to our students. Generally, we recommend the **database of thesis topics of the TUB Faculty V** (<https://www.theses.tu-berlin.de/en/theses>) as an orientation guide regarding the available subject areas.

Additional information is provided during the lecture on SFW I and SFW II.

Nevertheless, you must first decide which area you would like to write a master thesis about, i.e. to which GPE module would it be related.

Then you can either consult the websites of the lecturers in charge of those modules or visit their departments since usually thesis offers are posted on boards.

If you have an idea for a thesis topic but do not know which lecturer to approach, please send us a draft and we may direct you to a suitable supervisor.

Upon finding a supervisor for your Master's thesis you send an email to the GPE office requesting the form to create the abstract of the thesis.

2.4. Non-Disclosure Agreement

We understand that some of the data you work with at the company might be confidential. However, the master thesis should be above all an academic scientific paper to be available publicly at the university.

Since the beginning of 2016 and after being a subject of discussion among several study programs, the TU Berlin has decided no longer to accept non-disclosure agreements in bachelor and master theses. The reason for this decision is mainly legal:

1. Non-disclosure agreements are not provided in the examination regulations.
2. Non-disclosure agreements limit the examination authority of the University.
3. Non-disclosure agreements restrict the proper management of these important examinations. The non-disclosure clause undermines the administrative process of submitting the theses, provided for in the examination regulations, preventing third parties, such as administrative officers, access to the theses and the carrying out of the examination office procedures. Also, in case of disagreement on the evaluation of a thesis, it is unavoidable to include other persons, such as the members of the examination board, third-party opinions, courts, and lawyers in case of a legal suit. In addition, not all bodies and persons who come into contact with the thesis can keep it undisclosed.
4. Non-disclosure agreements delegate liability to an unknown level and under unknown conditions to the university and affected staff of the examination boards and examination offices. In addition, in most cases, neither the examination offices nor the examination boards are fully aware of the details of the non-disclosure agreements and associated confidentiality clauses. Moreover, students also accept liability for the non-disclosure agreements and associated confidentiality of their master thesis, without having complete control, over whether the theses leave the company premises and are disclosed to third parties.



The students involved in activities with companies are also advised not to accept any given confidentiality agreement, but at least to push for a time restriction and limitation of liability.

The Faculty Council and the examination boards think that successful and trustful cooperation between students and private companies is also possible without non-disclosure agreements, for which there are numerous examples. Non-disclosure agreements are generally prohibited in Ph.D. dissertations, which does not prevent collaboration with companies. To handle confidential information tools have been developed. For instance, to place sensitive information in annexes of the thesis, not to be submitted to the examination office. It is also possible to produce two versions of a thesis, one with confidential information, and the other “public to the university”, where for example sensitive information shall be concealed by a non-dimensional representation.

Summing up, this decision serves the following purposes:

- To protect the master thesis supervisors, who by signing a non-disclosure agreement, are at any time liable without limitation.
- To protect the students, who will keep the opportunity to present their intellectual property to potential employers, when applying for new jobs.

Therefore, and in agreement with the decision from the TU Berlin Faculty V of January 2016, the GPE Examination Board has deliberated that master theses with a non-disclosure agreement will no longer be accepted.

2.5. Registration

Upon finalizing the topic, the abstract has to be signed by your main supervisor and, if applicable, the assistant supervisor. The start date is the date of the receipt stamp of the GPE examination office of the thesis topic signed by your supervisor.

The submission deadline for the registration sheet at the GPE exam office is two weeks after the supervisor's signature.

2.6. Verification of Registration

The original abstract has to be submitted to the GPE examination office for verification and registration.

Upon verification by the examination office, you will receive a confirmation of the registration, which includes the submission deadline.

A copy of the fully signed abstract must be included in your thesis hardcopies (mandatory - see section 5.3).



2.7. Submission of Master Thesis

By the deadline, you have to submit at the GPE office the following:

- 2 printed copies, each including the **original** (NOT scanned) signed “affirmation in lieu of oath” and the fully signed abstract
- 1 digital copy (“doc(x)” or “pdf”) on a CD

Please be aware that the digital data will be verified by plagiarism software.

2.7.1 The Printed Copy

Submit your thesis bound (either hard cover or soft cover with transparent front cover and cardboard back cover). Do not bind your thesis by spiral or coil. Choose white paper. Normally a single-page print is done. Hereby you can individually agree on a two-page print with your supervisor.

2.7.2 The Digital Copy

In addition to the printed copy a digital version of the thesis burned on a CD/DVD has to be submitted. Choose either the format “.pdf” or “.doc(x)”.

2.7.3 Submission During Covid-19

In addition to the printed copy a digital version of the thesis burned on a CD/DVD has to be submitted. Choose either the format “.pdf” or “.doc(x)”.

2.7.4 Acknowledgement of Receipt

Upon complete submission of your thesis, you will receive an acknowledgment of receipt by email.

2.8. Failing Due to Noncompliance with Formality Rules

Incomplete or delayed submission of a master's thesis results in the immediate and irreversible failure of the master's thesis.

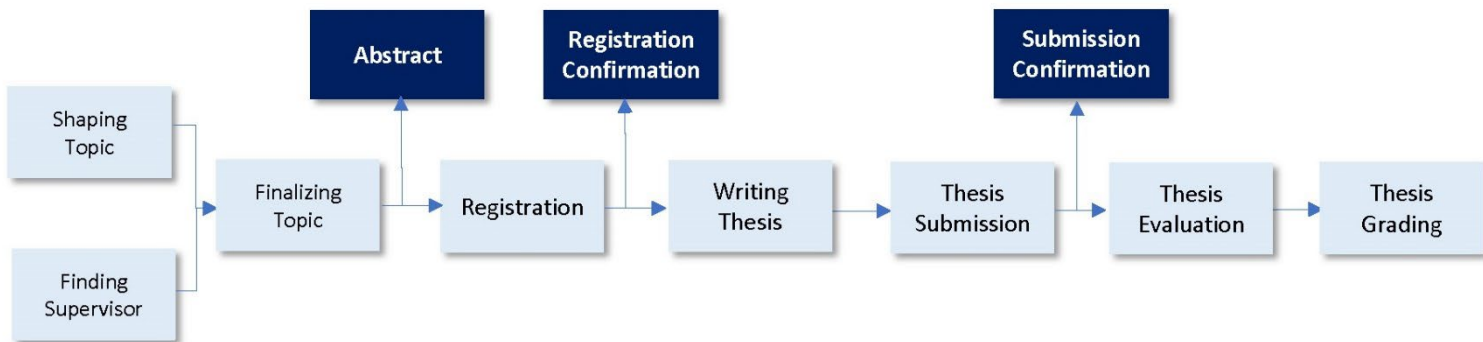
2.9. Grading of Master Thesis

The supervisor and supervising assistant may need up to 6 weeks for evaluation. Upon receipt of the grade, the GPE office will notify you about your grade, and the process of issuing your final master certificate will be initiated. This may take another 8 to 12 weeks. Therefore, after the submission of the thesis, it may take 4 months until the master certificate is available.

In case you are writing a thesis in cooperation with a company you may have to present your thesis to the company's supervisor. Nevertheless, the university's main supervisor is the grading authority – not the company.

2.10. Overview of the Steps for a Successful Thesis

The following diagram shall help you to understand the order of the steps to your master thesis.



2.11. Possible Timeline



3. Composition

3.1. Content

The following guidelines about the layout of student research papers and Master Thesis are meant to be an aid for GPE students. They address common and recurring questions concerning formal aspects. The guidelines about layout are suggestions, not instructions. Variations are possible after the consultation with the supervising assistant.

Altogether the volume should not exceed 80 – 100 pages.

The structure of a seminar paper or Master Thesis should follow the below-mentioned scheme:

Front Cover	Might be transparent
Title page	Author's name and title of thesis (in case of a transparent cover sheet the sheet should be blank), Title of thesis, author's name, matriculation number, date, name, and academic degree of Supervisor(s)
Affirmation	Declaration that you have produced the thesis on your own - Printed and originally signed by you
Abstract	Copy of the task description given to the student office for Master Thesis registration (Please ask the student office for your template)
Acknowledgment	(optional), e.g. words of gratitude
Table of contents	Headers of chapters and subsections with page numbers
List of tables	Table headers with consecutive numbering and page number
List of Figures	Figure headers with consecutive numbering and page number
List of abbreviations	Index of used symbols and abbreviations
Introduction	Introduction of problem aims, and procedure
Main part	Theoretical part: process of relevant current literature
Your part	Independent processing of the problem and drafting of solutions
Conclusion/Discussion	Answers to researched questions, a critical reflection regarding contents and methods and implications for theory and practice, conclusion and discussion have to be separated
Bibliography	The procedure of listing the references should be agreed on with the supervisor
Appendix	Figures, tables, etc. that are not of central importance to the paper but an addition
Back Cover	Never transparent

3.2. Layout

While designing the outer appearance of a Master Thesis one should take into account several factors. Special details should be agreed on with the supervising assistant.

- Thermal binding: hardcover, at least 120g/m², or using a transparent covering page. Please use the service offered by various copy shops.
- White paper, DIN A4, one-sided print
- Use text processing tools; do not handwrite your thesis. Use a high-quality printer, e.g. laser printer or a good inkjet printer.
 - Apply center justification
 - Font: Times New Roman 12 point or Arial 11 point
 - Line pitch: 1.5 spacing
 - Margins: top/bottom: 25mm, left 35 mm, right 25 mm
- Even the design of the intervals in the text, particularly with bullet points
- The first level of classification sections 1,2,3 etc. must begin on a new page
- Headings must be formatted uniformly and have to stand out from the surrounding text
- Paragraphs in the text must followed by a blank line for emphasis
- Avoid coloring the text. A colorful design of the thesis will not have any influence on its quality.

3.3. Appropriate Language and Style

The Master Thesis shall be written in English or German.

Besides certain formal guidelines, a scientific paper must comply with distinctive linguistic standards. It has to be free from mistakes (complete sentences, correct orthography, and grammar) and display a logical structure.

Further guidelines are:

- choice of concise phraseology
- clear and unambiguous language
- objective style, avoid phrases like: "I believe", "I suppose", "in my opinion", "of course"

Please avoid the following words or phrases:

- fillers, e.g. "like mentioned above"
- exaggerations, normative and unnecessary phrases such as "unbelievable", "enormous"
- conventional wisdom or
- trivialities in foreign words

The following guidelines will help to adjust your personal style:

- short and concrete sentences; only whole sentences, no omissions
- clear logical relationship between sentences
- coherent linguistic flow, balanced sentence structure
- avoidance of questions

Foreign words have different types of spelling which are all correct, e.g. color vs. colour. One way of spelling has to be chosen and kept throughout the text. Decide beforehand whether British or American English is to be used.

Scientific papers contribute to further academic discussion and the candidate should therefore not express his subjective opinion. Therefore, the personal I-form has to be considered inappropriate. Those passages, under the condition that the intellectual property of others has been correctly identified, which represent more than common knowledge, demonstrate the author's proprietary achievement. Those passages should not just reproduce facts that are already known. One's own achievement can be shown through restructuring in a new, different, debatable manner and by addressing omitted or ignored aspects. The author's creative proprietary achievement and his critical reflections are evident to the examiners, even without expressive notice of his personal opinion.

4. Citation

Several methods of citation are accepted. The most important rule concerning this issue is consistency, which means one form of citation should be used throughout the document. It is an important part of the research process because:

- it allows others to identify and locate the materials used in your work. Many readers rely on quotations and footnotes to identify other relevant literature on a topic.
- it demonstrates the depth of your research showing that you have read and engaged the relevant literature on your topic. This indicates that you have an informed understanding of your subject and enhances the credibility of your findings.
- it allows you to give proper credit for the ideas of others and avoid plagiarism.

Plagiarism refers to the process of copying the work of others and submitting it as one's own. Plagiarism is a violation and is one of the most serious offenses in the academic world. Every thought or idea that is adopted from someone else has to be quoted. The used sources have to be given unambiguously and to be strictly verifiable. If you do not follow a stringent way of quoting, you will fail the master thesis!

It is recommended to use one of the commonly used styles like the CIRP style (see: <https://www.elsevier.com/journals/procedia-cirp/2212-8271/guide-for-authors>) for referencing. Nevertheless, your supervisor may advise you, which style is most appropriate and should be used.

Once you decide on one style it has to be used for the entire thesis. To avoid misunderstandings, the supervisor should be asked to provide further information about the accepted standard within the institute. Examples are given afterwards.

4.1. Example: Short References

Short references help to keep the text clear and comprehensive.

- They are marked with square brackets and consist of the first three letters of the author's name connected to the year (two numbers) by a hyphen:

Example: [PET-09]

- If it is a book, monography, etc. the page number has to be referenced as well (with "p. xx):

Example: [Mül-08, p. 20]

- Short references are to be inserted right behind the relevant text passage:

Example: "[...] womit der direkte Zusammenhand hergestellt wurde" [Mus-10, p.3].
Des Weiteren [...]

- Identical short references to different sources can be differentiated by using small letters:

Example: [Sch-08a], [Sch-08b], [Sch-08c] ...

4.2. Footnotes

Footnotes should not be used for citation. As described in the last point, short references are to be used in the text to mark citations.

4.3. References of Figures and Tables

The sources used for figures and tables have to be included in the list of sources. Short references are to be inserted at the end of the caption (with the same format and if necessary with the page number).



Figure 3.1: Campus plan TU Berlin [Tec-12]

- Tables and diagrams are created individually. In this case, the reference should look as follows:
Example: Name of item [Own design]
- If a figure is designed after an example from an existing source, the reference should look as follows:
Example: Name of item [Own design based on Reu-08, p.213]

4.4. References in the List of Sources

The order of the information of the source is different depending on the type of source. The specific page number mustn't be stated in the list of sources but in the short reference to the relevant text passage (since multiple citations can be made from one source).

Please pay attention to the correct and consistent use of punctuation marks (full stops, commas, semicolons, colons).

4.4.1 Specialist Publication

[Aut-xx] Author1-Surname, Author1-Prenome-FirstLetter.; Author2-Surname, Author2-Prenome-FirstLetter.: Main Title. Subtitle. Issue description. Place of issue: Publisher, Year.

Example:

[Fah-11] Fahrenwaldt, H.; Schuler, V.: Praxiswissen Schweißtechnik. Werkstoffe, Prozesse, Fertigung. 4th Issue. Wiesbaden: Vieweg+Teubner, 2011.

4.4.2 Specialist Journal

The page number has to be included when referencing specialist's journals, since it may refer to one article among many others published in the journal. This also applies to the short reference, when citing only one text passage.

[Aut-xx] Author1-Surname, Author1-Prenome-FirstLetter.; Author2-Surname, Author2-Prenome-FirstLetter: Main title. Subtitle. In: Name of the journal, Issue, Page number. Place of issue: Publisher, Year.

Example:

[Bre-13] Brecher, C.; Haber, D.: Thermisch bedingte Verlagerungen von Werkzeugmaschinen. In: ZWF – Zeitschrift für wirtschaftlichen Fabrikbetrieb, 07-08/2013, Seite (page) 483-486. München: Carl Hanser, 2013.

4.4.3 Webpage

Webpages have to be referenced according to the following example:

Webpages – TEXT

[Aut-xx] Author1-Surname, Author1-Prenome-FirstLetter.; Author2-Surname, Author2- Prenome-FirstLetter: Main title. Subtitle. Name of the webpage, Year.
URL: www.abc.de, last access: DD.MM.YYYY.

Example:

[Kro-13] Kroh, R.: Mensch und Roboter kommen sich näher. Maschinenmarkt – das Industrieportal, 2013.
URL:
<http://www.maschinenmarkt.vogel.de/themenkanaele/automatisierung/robotik/artic es/410177>, last access: 16.09.2023.

Only if the URL is relevant (mostly the case with images):

Webpages – IMAGES

[Hrs-xx] Publisher-Name (Eds.): Title of the image. Name of the webpage, Year.
URL: www.abc.de, last access: DD.MM.YYYY.

Example:

[Tec-13] Technische Universität Berlin (Hrsg.): Campus Charlottenburg. Technische Universität Berlin Service, 2012.
URL: http://www.pressestelle.tu-berlin.de/fileadmin/a70100710/Dokumentationen/Imagematerial/TU-Logos/TU-Logo_kurz_RGB_rot.png, letzter Zugriff am: 05.11.2023

4.4.4 Norms and Guidelines

Short references for norms and guidelines are different. The complete name of the norm/guideline is kept and connected to the year with a hyphen.

[Norm-xx] Name of the Norm. Issue: Norm title. Norm subtitle. Place of issue: Publisher, Month. Year.

Example:

[VDI-4499] VDI 4499. Blatt 2: Digitale Fabrik. Digitaler Fabrikbetrieb. Berlin: Beuth, 05.2011.

4.4.5 Further Specifications for the List of Sources

Missing Information

If necessary information for the references is not available, the following abbreviations can be used:

- n. a. - without author
- n. T. - without title
- n. pl. - without place
- n. pu. - without publisher
- n. y. - without year

Example:

[Fah-11] Fahrenwaldt, H.; Schuler, V.: Praxiswissen Schweißtechnik. Werkstoffe, Prozesse, Fertigung.
4. Auflage. o.O.: Vieweg+Teubner, 2011.

In some cases, the publisher has to be referenced instead of the author. Therefore, the publisher is referenced as the “author” of the source with “(Publ.)”

Example (of an internet source):

Example:

[Deu-13] Deutsche Forschungsgemeinschaft (Publ.): DFG gründet „Deutsches Komitee für Nachhaltigkeitsforschung in Future Earth“. Deutsche Forschungsgemeinschaft, 2013.
URL: http://www.dfg.de/foerderung/info_wissenschaft/allgemeine_informationen/info_wissenschaft_13_16/index.html, letzter Zugriff am: 16.09.2023.

All sources have to be alphabetically listed according to their short references.



5. Design Sample

5.1. Title Sheet

Master Thesis

TITLE

submitted by

NAME of Student

Matriculation Number:

A thesis submitted

in partial fulfillment of the requirement for the Degree of Master of Science
in Global Production Engineering at the Technische Universität Berlin

Supervisor: 1. Prof. Dr.-Ing. Example, Technische Universität Berlin
2. Dr. Beispiel, Technische Universität Berlin

Company: Name of Company's Supervisor, Name of Company, (IF APPLICABLE)

Place, date



5.2. Affirmation in Lieu of Oath - Mandatory

Family Name, First Name:

Matriculation number:

Title of Thesis:

Affirmation in Lieu of Oath

I hereby declare in lieu of an oath that I have produced the aforementioned thesis independently and without using any other than the aids listed. Any thoughts directly or indirectly taken from somebody else's sources are made discernible as such.

To date, the thesis has not been submitted to any other board of examiners in the same or a similar format and has not been published yet.

Place, Date

Your *original, hand-written* signature.

Your Signature



5.3. Abstract of the Thesis - Mandatory

Should not be more than one page (maximum 2 pages), also be included in your Master Thesis hardcopies – this is mandatory.

Originally signed by

- the main supervisor
- the assistant supervisor (if applicable)

Global Production Engineering
International Master Program
Technische Universität Berlin



Master Thesis Abstract «MT_ID»

For: *cand. MSc. «Vorname» «Name»,* **Mat-No.** *«Matrikelnr»*
Field of Study: *Global Production Engineering* **Intake:** *«Intake»*

Main - Supervisor: *«MainSupervisorTitel» «MainSupervisorFirst2» «MainSupervisorLast»*
Supervising Assistant: *«SupervisorAssistantFirst» «SupervisorAssistantLast»*
 in cooperation with industry

Module Group/Module: *the corresponding module group/Module*
Start date: *Receipt Date E-Mail supervisor at GPE Examination Office*

Title *«FinalTopic»*

Abstract
?????

Motivation
?????

Goal
?????

In detail the following points shall be elaborated:
?????

If applicable (supervisor assistant):

Place, Date - «SupervisorAssistantFirst» «SupervisorAssistantLast»

Place, Date - «MainSupervisorTitel» «MainSupervisorFirst2»
«MainSupervisorLast»

*If applicable (supervisor not listed in GPE MT guideline:
according to §42,3 AllgStuPo TUB the examination board hereby appoints «MainSupervisorTitel» «MainSupervisorFirst2»
«MainSupervisorLast» as examiner for the module and is entitled to act as an supervisor.*

Place, Date - Prof. Dr.-Ing. H. Kohl
Head of Examination Committee in "Global Production Engineering (GPE)"

5.4. Table of Contents and Structure

The table of contents shows the structure of the thesis. It gives the reader a first overview of the setup and contents of the piece of work. For this reason, you should pay special attention to the table of contents. In the Master Thesis, the outline is reflected through the table of contents. The table of contents has to be a list of all the sections of the paper. Page numbers for the particular chapters and sub-chapters must be given. There should be no more than four levels (i.e. 1.1.1.1). Every chapter title has to be understandable; a reference to a higher level is not acceptable. Full sentences and questions should be avoided.

Even though the title page is not numbered it should be counted as page number one. The pages which contain text, appendix, and bibliography should be numbered with Arabic numbers. The Table of Contents, List of Figures, etc. should be consecutively numbered with capital Roman numbers.

Each main chapter should be of sufficient length and approx. one page. The length of a chapter is mainly defined by its structure of contents. The central idea of a chapter is dealt with in the main part of the chapter. Other ideas and attached ideas are treated in subsequent sub-chapters.

For the chapter arrangement, no chapter or sub-chapter should stand alone without a further corresponding chapter (i.e. chapter 1.1 must be followed by chapter 1.2). The chapters should be balanced and each should have its own value.

Each headline should be followed by several paragraphs. One paragraph consists of at least two sentences and reflects one coherent idea.

The section headings have to express content, not form, i.e. instead of "introduction" and "conclusion" there should be written e.g.: "delimitation of the problem", "structure, objective and strategy of the treatise" as well as a "summary of the results". Should a line of subchapters prefix an introductory paragraph, it must not be placed just between the chapter heading and the heading of the first subchapter. Moreover, in this case, the introduction has to be seen as an autonomous sub-chapter with a corresponding heading.

All illustrations and tables must have their source acknowledged directly under the respective element; the term "source:" has to be explicitly mentioned. The source of tables and illustrations that are depicted in a modified form should be referred to through an addition e.g. "drawing on:" or "relating to:". Representative elements employed should be referred to in the text. When referring to other parts of the text, the exact page number or at least chapter must be given, simply quoting "above" is insufficient.

5.5. List of Figures and List of Tables

The use of figures and tables requires a list of figures and tables index.

List of Figures:

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5.6. List of Abbreviations

Abbreviations must be defined either in brackets (e.g. Strategic Business Unit, subsequently SBU) or in the footnotes when used for the first time within the text. Next time using the term you only use the abbreviation.

E.g.: “The master program Global Production Engineering (GPE) is a non-consecutive study program. GPE is proud of their huge number of students already working for well-known companies at managing levels.”

If you use abbreviations extensively in your thesis, you should provide a list of abbreviations and their corresponding definitions. The heading “List of Abbreviations” should be centered and appear 1” below the top of the page. Arrange your abbreviations alphabetically at the left margin single-space within each entry and double-space between entries.

List of Abbreviations:

m	Meter
S	Seconds
T	Tons
W	Watt



5.7. Formulas

Important formulas belong to a separate line and should be segregated from the text through double-spacing. If the formula will be referred to later in the text it has to be numbered. The formula and important abbreviations should be explained next to the formula.

5.8. Appendix

The appendix is the place for texts, illustrations, and tables, that do not originate from the author himself, e.g. forms, extracts from catalogs or codes, calculations, and formal derivations. Parts of the treatise, which could disturb the flow of argumentation, should be placed here, too. Under no circumstances should the appendix be used to circumvent the page limit.

6. Questions and Answers

Q: What is the background for a Master's Thesis?

A: The Master Thesis is supposed to be the final exam in your studies in GPE. The Master Thesis should show the ability of the student to work on a topic with scientific methods and find a solution within the limited time of three months.

The topic has to be given by a lecturer in the GPE program and agreed upon by the responsible person for the module. The content of the topic has to be related to a module in the GPE-Program. It has to be done in a field related to a module that you once had selected.

Q: Which language is required for the Master Thesis?

A: The Master Thesis shall be written in English or German.

If you have the assent of your supervisor and the examination board, it is possible to write the Master Thesis in other languages as well. In that case, there has to be a summary in German as an enclosure of the Master Thesis.

Q: When can I register for the Master's Thesis?

A: Since the Master Thesis is the final exam in your studies, it can only be registered upon completion of all modules and submission of the internship report.

Q: Can I resign from the given topic?

A: Yes. You can resign from a given topic only once and only in the first six weeks of process time.

Q: Do I have to keep the status as a student while I am writing the Master's Thesis?

A: As soon as you have registered for the last examination (mostly the Master Thesis) you can fill in the form and ex-matriculate yourself from being a Student at TU Berlin. We recommend doing it personally and bringing the application with its enclosures to the Campus Center.

Nevertheless, you have to be aware with this action you are changing your legal status for your stay in Germany. Before taking any action, we recommend informing yourself at the foreigner's registration office.

Q: Do I have to re-register for the next semester when I will finish my Master's Thesis?

A: If the Master Thesis is your last examination which you have to pass, you are not required to re-register for the next semester. Although you do not have to be re-registered when you finish the thesis, you must re-register when you register for the master thesis.

Q: When can I submit the Master's Thesis at the earliest?

A: The earliest date to submit the Master's Thesis is 2 months after the start date. The start date is confirmed with the registration form of your Master Thesis.

Q: Is an extension of the deadline possible?

A: If there is an important reason for which the student is not responsible, the examination board will grant an extension for the duration of the reason. The documentation has to be submitted to the examination board proving the reason for the prolongation of the processing time.

Q: Is an oral defense required?

A: The supervising institute or the cooperating company might demand a presentation on-site or by video conference. You are asked to clarify it with your supervisor(s) before registering for the Master Thesis.

Q: What shall I do with the original abstract?

A: Please hand in the original abstract when you come to the GPE Office to register your master thesis. The original will be kept in your student file. Please make two copies as it is mandatory to include them on the printed copies of your thesis to be submitted to the GPE office before the deadline.

Q: When do I have to submit my thesis, in case the submission deadline is on a weekend or holiday?

A: Then the thesis has to be handed in at the latest on the working day before.

Q: What shall I do if I cannot submit the thesis during the GPE office opening hours?

A: You may use the postbox outside of the GPE student office or you may ask the person at the PTZ reception desk to accept the thesis submission and ask him/her to confirm its receipt. In both cases make sure you have the envelope addressed to the GPE student office.

Q: If I cannot hand in personally my master's thesis, to which address should I ship it?

A: TU Berlin, IWF
Global Production Engineering
PTZ 2 – GPE Examination Office
Pascalstr. 8-9
10587 Berlin GERMANY

Q: Is the shipping/stamp date of the postal service accepted as the submission date?

A: No – the date of arrival at the GPE office is the submission date.

However, for overseas shipments, the shipment date can be accepted, provided that it is not older than 2 days before the deadline.

Example: "My deadline is January 29. To be accepted by the GPE Examination Office, I cannot ship my thesis later than January 27".

To confirm this shipment, the shipping receipt has to be scanned and sent to the GPE examination office. The examination office will not consider the shipping details on the package slip, since this is often not readable.



- Q:** What do I need to do to receive a preliminary certificate with a temporary 4.0 grade?
- A:** You must submit your master's thesis within the deadline (two hardcopies and one softcopy) and you must request a written confirmation from your supervisor, stating that you will pass your master's thesis with a grade of at least 4.0.
-
- Q:** Do I have to ex-matriculate myself?
- A:** No – once the master's degree certificate is ready for handover you will be informed by email. Two months after that date you will be ex-matriculated ex officio with all resulting legal consequences (e.g. loss of student status about your residence permit).
-
- Q:** May I receive my GPE master's degree certificate at the GPE Farewell Party?
- A:** As the preparation of the final certificates takes months, we advise the students who wish to receive it at the GPE Farewell Party, to hand it in no later than 31st March.
-
- Q:** How to proceed to have my master's degree certificate certified with an apostille
- A:** For future job or Ph.D. applications, we recommend that you have your master's degree certified with an apostille. If you are still in Berlin, please proceed as follows:
1. Go to TU Koordinierungsbüro (H2129) in the TU main department and let them get you some copies;
 2. They are authorized to confirm the authenticity of your certificate
 3. Should you still be in Germany when you receive your final master's degree certificate, please go to Landesamt für Bürger- und Ordnungsangelegenheiten – LABO II A - Zentrale Einwohnerangelegenheiten - Friedrichstr. 219, 10969 Berlin
- Should you be in your home country when you receive your final master's degree certificate, please go to a German consular representation and inform yourself of how to proceed.

7. Appendix

7.1. List of authorized examiners for Intake 2020/2021/2022/2023

According to §6 of the GPE Examination Regulations, the following examiners/lecturers are authorized to undertake the supervision of master thesis for GPE students.

MODULE GROUP A – PRODUCTION

Manufacturing and Factory Planning	Prof. Dr.-Ing. G. Seliger, Dr.-Ing. J. Palacios Neffke, Dr.-Ing. Jan Menn, Dr.-Ing. B. Muschard
Production Technology	Prof. Dr. h. c. Dr.-Ing. E. Uhlmann
Additive Manufacturing	Prof. Dr.-Ing. H. Kohl, Prof. Dr.-Ing. G. Seliger, Dr.-Ing. B. Muschard

MODULE GROUP B - ENGINEERING

Engineering Design and CAD Modelling	Prof. Dr.-Ing. R. Stark, Prof. Dr.-Ing. D. Göhlich, Dr.-Ing. S. Werner
Systematic Product Development	Prof. Dr.-Ing. D. Göhlich, Dr.-Ing. B. Gries, Dr.-Ing. T. Fay
Energy Engineering	Prof. Dr.-Ing. T. Morozyuk, Prof. Dr.-Ing. Prof. e.h. Dr. h.c. G. Tsatsaronis
Mathematical Tools for Engineering Management	Dr.-Ing. F. D'Andreagiovanni
PV Systems / Solar Cells	PD Dr. T. Dittrich
PV Systems Components	Prof. Dr.-Ing. R. Hanitsch
Renewable Power Technologies	Dr. E. Tingwey, M.Sc. U. Zähringer
Utilization of Wind Energy	Prof. Dr.-Ing. P. U. Thamsen, Dipl.-Ing. J. Liersch, Dipl.-Ing. S. Wiens
Advanced Recycling Technologies	Prof. Dr.-Ing. S. Rotter

MODULE GROUP C - MANAGEMENT

Global Production Management	Prof. Dr.-Ing. H. Kohl
Quality Management	Prof. Dr.-Ing. R. Jochem, Dr.-Ing. P. Käser, M.Sc. Turgut Caglar
Environmental Management	Dr.-Ing. E. Strecker
Environmental Management Tools	Dr.-Ing. E. Strecker
Business Administration	Prof. Dr.-Ing. H. Kohl, Dr. von Hülsen, Dr. M. Warsitzka
Project Management	Dr. W. Glitscher



7.1. List of authorized examiners for Intake 2020/2021/2022/2023

According to §6 of the GPE Examination Regulations, the following examiners/lecturers are authorized to undertake the supervision of master thesis for GPE students.

MODULE GROUP D - INTERCULTURAL COMMUNICATION

Technology and Innovation Management	Prof. Dr. H. Send, Dr. G. von Richthofen, Dr. C. Schminder, Prof. Soren
International and Intercultural Project Management	Dr. W. Glitscher
Sustainability Approaches and Tools	Dr.-Ing. E. Strecker
Global Integrated Management Systems	Prof. Dr.-Ing. R. Jochem, Dr.-Ing. P. Käser

MODULE GROUP E - SPECIAL PROFILE

Simulation of Production Systems	Prof. Dr.-Ing. G. Seliger, Dr.-Ing. B. Schumacher
Lean Management	Prof. Dr.-Ing. H. Kohl, Dipl.-Kfm. J. Fischer
Lean Production	Prof. Dr.-Ing. H. Kohl, Dr.-Ing. J. Palacios Neffke
Enterprise Architecture and IT in the Automotive Industry	Prof. Dr.-Ing. D. Schacher
Stationary Energy Storage Systems	Prof. Dr.-Ing. J. Kowal
Methods-Time-Measurement	Prof. Dr.-Ing. G. Seliger, Dr.-Ing. J. Menn
Business Models and Entrepreneurship	Dr. A. P. Bezerra Barquet, Dipl.-Ing. M. Amendt
Resource Efficiency Strategies	Prof. Dr.-Ing. H. Kohl, Dr.-Ing. P. Bilge

TUB professors, research assistants, or external professors other than those listed here require approval by the GPE Examination Board.

For further information, please contact the GPE Admin Team by email using the reference line followed by “request for approval of MT supervisor” including the topic and the name of the inquired supervisor.



7.2. Checklist before Printing

Before handing in your Master's Thesis at the GPE office make sure you do everything according to the rules:

- Does the thesis format comply with the rules above?
- Is the "Cover Sheet" included?
- Is the "Affirmation in lieu of oath"
 - Printed?
 - Included?
- Is the copy of the fully signed "Abstract of the Thesis" included?

7.3. Checklist for Submission

- Is the "Affirmation in lieu of oath" originally (hand-written) signed?*
- *SCANNED SIGNATURE IS NOT ACCEPTED

Submit at the GPE examination office

- 2 hardcopies and
- 1 softcopy (CD)

My personal deadline is: _____

Make sure that you meet the deadline. Not meeting the deadline results in failure!

We hope this guide will prove to be a useful tool during this last phase of your studies before very soon becoming a Master of Science.