

Information sheet master thesis

(Only applies to the research field of operating technology („Betriebstechnik“), system planning (“Systemplanung”) and human-machine interaction („Mensch-Maschine-Interaktion“))

Due to the Data Protection Regulation (DSGVO), which was introduced on the 25th of May 2018, you are obliged to use the TU-Wien email address (eXXXXXX@student.tuwien.ac.at) exclusively for communication between you and the IMW staff. The IMW reserves the right to not respond to email requests from external addresses.

A master thesis means the independent analysis of a scientific problem in a coherent, written form. The submission of the thesis, which is recognised by the supervisor, together with the defence of the thesis (diploma examination) in front of the examination board leads to the award of the academic degree of Master of Science or Diplomingenieurs. For writing a diploma thesis, we require familiarity with the topic (completion of relevant courses/in-depth studies in our field) as well as good grades in the courses of our institute. We try to offer thesis supervision to as many students as possible, but we reserve the right to cancel due to capacity. The planned duration of a diploma thesis is approx. 9 months at 20h/week. The Department of Operations Engineering and Systems Planning ("Fachbereich Betriebstechnik und Systemplanung") reserves the right to cancel the diploma thesis if it is not completed and evaluated within 12 months. There is no minimum number of pages for the diploma thesis. The essential criterion is the scientific structure, the content, and the answer to the scientific question.

The diploma examination or the defence of the master thesis is the presentation of the content of the diploma thesis in a scientific presentation with a duration of max. 25 minutes (strict time limit) as well as answering questions on the content of the diploma thesis and on related specialist topics. The total duration of the diploma examination is approx. 1 hour. The examination board consists of a first examiner (always Prof. Sihl), a second examiner (chosen and organised by the student) and a chair (assigned by the dean's office).

Master Thesis Options:

Option 1:

Master thesis at our institute: Working on a topic assigned by the institute.

The topic comes from us, and the thesis is also written at our institute. Here, the student writes the entire paper with our formal, scientific, and content-related support. There are no costs here.

Option 2:

„Student-only“- company master thesis: Work on a topic assigned by the company with formal supervision by TU Wien.

The topic is provided by an external company, i.e., the diploma student writes the entire thesis at this company. Here, the diploma student writes the thesis with the formal and scientific support of the TU Vienna (ensuring scientific standards). The company is responsible for the content of the thesis. With this option, the company must make a compensation payment of EUR 2,000.00 to the TU Vienna. This option of the thesis is defined in a separate cooperation agreement between the TU Vienna and the company at the beginning of the thesis.

Cost justification: the compensation payment is a compensation for the effort of the TU Vienna by supervising diploma theses whose content does not serve the research agenda of the TU Vienna (topic not published by the TU Vienna), but which should help to generate a competitive advantage for the company.

Note: this compensation payment is a cooperation agreement between the company and the TU Vienna and is not related to the usual payment of the diploma student for writing the diploma thesis.

Option 3:

Cooperation master thesis: Working on a topic assigned by a company with formal supervision and content-related support from TU Wien or FhA (cooperation master thesis).

The topic is set by an external company, i.e., the diploma student writes the entire thesis at this company. If the company would like to be supervised and involved in the content in addition to the formal and scientific supervision, this can be done through a cooperation project with the TU Vienna or FhA (Fraunhofer Austria). The costs for such a project amount to at least EUR 5,000.00 for approx. 4 person-days of an employee (details can be obtained from the content supervisor). This implementation option is determined with a separate cooperation agreement between the TU Vienna or FhA and the company at the beginning of the thesis.

Cost justification: the compensation payment is a compensation for the expenses of the TU Vienna due to the supervision of diploma theses, the content of which does not serve the research agenda of the TU Vienna, but which should help to generate a competitive advantage for the company. In addition, approx. 4 person-days of a staff member are provided for content-related support and project management during the diploma thesis.

Note: If a company wishes to be involved in the content of the thesis (cooperation thesis), the EUR 2,000.00 for formal and scientific supervision by the TU Vienna is already included in the EUR 5,000.00.

Overview:

About the services provided by TU Wien or FhA for implementation options 2 and 3:

| „Student-only “- company master thesis | Cooperation master thesis |
|--|---|
| <p>Information... ... whether a topic is worthy of a diploma thesis and whether formal supervision by our department can be assured or forwarded if the topic does not fit into our department.</p> | <p>Information... ... whether a topic is worthy of a diploma thesis and whether a cooperation with the TU Vienna or FhA can be assured or forwarded if the topic does not fit into our department.</p> |
| <p>Define topic</p> <ul style="list-style-type: none"> ➤ Coordinate the task with the diploma candidate ➤ Define the scientific goals of the thesis ➤ Correcting and approving the exposé <p>Services not included</p> <ul style="list-style-type: none"> • Coordination with the company • Checking the practical relevance and feasibility in the company | <p>Define topic</p> <ul style="list-style-type: none"> ➤ Coordinate the task with the diploma candidate ➤ Define the scientific goals of the thesis ➤ Correcting and approving the exposé ➤ Coordination with or at the company ➤ Checking the practical relevance and feasibility in the company ➤ Define project goals and participate in project planning |
| <p>Execution and writing</p> <ul style="list-style-type: none"> ➤ Ensuring the scientifically correct writing of the of the diploma thesis ➤ Coordinating interim results with the diploma candidate ➤ Ensuring the "red thread" of the thesis <p>Services not included</p> <ul style="list-style-type: none"> • Analysis, evaluation, and improvement of the practical interim results • Coordination with the company | <p>Execution and writing</p> <ul style="list-style-type: none"> ➤ Ensuring the scientifically correct writing of the of the diploma thesis ➤ Coordinating interim results with the diploma candidate ➤ Ensuring the "red thread" of the thesis ➤ Contribution of experience and relevant documentation ➤ Analysis, evaluation, and improvement of the practical interim results ➤ Contribution to project planning and project management ➤ Methodological and technical support in the drafting ➤ Coordination with the company |
| <p>Correction and grading</p> <ul style="list-style-type: none"> ➤ Reconciliation of the scientific results of the diploma thesis ➤ Correction of the diploma thesis ➤ Support in the preparation for the diploma examination <p>Services not included</p> <ul style="list-style-type: none"> • Contribution at the conclusion of the project in the company • Evaluation and reconciliation of the practical results of the thesis | <p>Project completion, Correction, and grading</p> <ul style="list-style-type: none"> ➤ Reconciliation of the scientific results of the diploma thesis ➤ Correction of the diploma thesis ➤ Support in the preparation for the diploma examination ➤ Contribution at the conclusion of the project in the company ➤ Evaluation and reconciliation of the practical results of the thesis |
| <p>Costs: EUR 2.000,00 excl. VAT</p> | <p>Costs: min. EUR 5.000,00 excl. VAT</p> |

Master thesis procedure

1. At the beginning of the master thesis:

Before starting the Bachelor thesis, the student is recommended to attend the seminar "Scientific Work" („Wissenschaftliches Arbeiten“). The dates of the seminar can be found under the course itself:

- 330.175 – Industrial Engineering SE (3 ECTS)
- 330.180 – Logistics Management SE (3 ECTS)
- 330.182 – Project Work Production and und Logistics Management PR (5 ECTS)

After that, the students must decide between the options for the realisation of the thesis. Depending on the outcome of this decision, two different paths emerge for the students.

Option 1: Master thesis at our institute:

The students select a vacant master's thesis on the IMW homepage and send an e-mail request to wiss.arbeitenBTSP@tuwien.ac.at to get in contact with the supervising person in terms of administration and content. The students then contact this supervisor on their own and arrange an appointment for a kick-off meeting.

During the initial meeting with the supervisor, the general framework, content, objectives, and timeline of the master thesis are discussed. If the student has decided to write the thesis, he/she must inform wiss.arbeitenBTSP@tuwien.ac.at immediately. Now the students must draft an exposé. The PDF template for the exposé can be found on the IMW homepage at: <https://www.tuwien.at/index.php?eID=dumpFile&t=f&f=129815&token=a62a8e6f65ce6cb0118e0bd7f235ec3dafd9f9d6>. Different exposés will not be accepted. The student then sends the completed exposé to the supervising person by e-mail and asks for review and signature. The supervising person confirms the formal correctness and completeness of the content with his/her signature.

After the exposé has been signed, the students fill out the form TISS entry ("TISS Eintrag") based on the contents of the exposé. The PDF template for the TISS entry form can be found on the IMW homepage at: <https://www.tuwien.at/mwbw/im/bt/lehre/bachelorarbeiten>. In the last step, the student forwards the signed exposé and the TISS entry to wiss.arbeitenBTSP@tuwien.ac.at and requests an entry in TISS. After one week, the master thesis can be viewed in TISS under "my work" and the selected master thesis disappears from the announcements on the IMW homepage. Now the students can start with the master thesis.

Option 2: „Student-only “- company master thesis or Cooperation master thesis:

First, the student must submit this document to the supervising person in the company for review and have the operational supervising person in the company verbally confirm that the costs for the thesis will be paid.

The student then prepares an exposé in consultation with the person in charge of operations in the company. The PDF template for the exposé can be found on the IMW homepage at: <https://www.tuwien.at/index.php?eID=dumpFile&t=f&f=129815&token=a62a8e6f65ce6cb0118e0bd7f235ec3dafd9f9d6>. Other exposés will not be accepted. The student then sends the completed exposé to the operational supervisor in the company by e-mail and asks for a review and signature. The person in charge of operations in the company confirms the formal correctness and completeness of the content by signing it.

To initiate the process at the TU Vienna, the student sends the signed exposé by e-mail to wiss.arbeitenBTSP@tuwien.ac.at together with the request for the assignment of a supervisor on the part of the TU Vienna or FhA. wiss.arbeitenBTSP@tuwien.ac.at will then enquire with colleagues about the supervision of the thesis and forward the exposé. As soon as the supervisor has been determined, wiss.arbeitenBTSP@tuwien.ac.at will establish contact between the supervisor and the student. The student must then send the supervisor an email requesting an appointment for an initial interview to clarify any further details.

After the supervisor has given his/her OK on the part of the TU Vienna or FhA, wiss.arbeitenBTSP@tuwien.ac.at sends the empty cooperation agreement to the student. The student then fills out the cooperation agreement and submits the current exposé to the operational supervisor in the company for review. After the supervisor in the company has read the cooperation agreement and reviewed the current exposé, he/she signs the cooperation agreement. The student then sends the cooperation agreement and the current exposé together with the request for signature from the main examiner to wiss.arbeitenBTSP@tuwien.ac.at.

Once the main examiner has signed, the supervisor in the company receives the cooperation agreement and the exposé back by e-mail. The TU Vienna now issues the invoice. When the invoice has been paid by the company, the student can start with the diploma thesis.

Finally, the student fills out the TISS entry form based on the contents of the exposé. The PDF template for the "TISS entry" form can be found on the IMW homepage at: <https://www.tuwien.at/mwbw/im/bt/lehre/diplomarbeiten>. In the last step, the student forwards the current exposé and the form for the TISS entry to wiss.arbeitenBTSP@tuwien.ac.at and requests an entry in the TISS. After 1 week, the thesis can be viewed in TISS under "my work" and the selected thesis disappears from the announcements on the IMW homepage.

Additional information for option 1 and option 2:

The possibility of a non-disclosure notice of the thesis must be agreed at the beginning. It lasts 3 years or in exceptional cases 5 years. (Explanation: In some cases, companies require that the contents of the thesis are not accessible to the public due to company secrets).

The obtaining of the thesis lock is done by the student. After the thesis has been entered in TISS, the student has the possibility to fill in the form for a non-disclosure notice online (form name: "Benützungsbeschränkung"). After completing the form, the student must print it out, sign it and hand it in at the Dean's Office. The form must be handed in because the dean must sign it. The student must send a scan of this completed confirmation to wiss.arbeitenBTSP@tuwien.ac.at.

2. During the master thesis:

After going through pathway 1 or pathway 2, the student must take care of organising the kick-off. For this purpose, the student sends an e-mail request to the supervisor and makes an appointment. During the kick-off, the next steps and work packages are discussed and recorded in writing. After the kick-off, the student sends the supervisor the discussed next steps and work packages in the form of an email and asks for confirmation. After the supervisor has given the confirmation, the implementation phase begins, in which the student works through the work packages or carries out the next steps. All further coordination meetings between the student and the supervisor must take place in the same way as the kick-off.

3. To the end of the master thesis

If the diploma thesis is about 90 % completed and the end of the diploma thesis is foreseeable, the student must take care of the organisation of the diploma examination date in due time. For this purpose, the student coordinates with his/her supervisor as following: The supervisor informs the student of the next possible dates by looking in the Outlook calendar of wiss.arbeitenBTSP@tuwien.ac.at. The supervisor will then arrange the diploma examination date together with the student. Subsequently, the diploma examination date is set together, considering the correction times and times for the preparation of the diploma examination presentation. (If it turns out afterwards that the coordination has not taken place, a planned diploma examination date is automatically cancelled and postponed by several months).

At the latest 8 weeks before the set date of the diploma examination, the student must register informally by e-mail with wiss.arbeitenBTSP@tuwien.ac.at. For this purpose, the student announces the set date of the diploma examination. wiss.arbeitenBTSP@tuwien.ac.at forwards the desired date of the diploma examination to the main examiner, who in turn confirms the date. The date confirmation from the main examiner is forwarded by wiss.arbeitenBTSP@tuwien.ac.at to the student and his/her supervisor. The date of the diploma examination can then no longer be postponed. wiss.arbeitenBTSP@tuwien.ac.at will organise the examination room and the examiner. The student will be informed via e-mail as soon as possible about the outcome.

After the date of the diploma examination has been set, the student must independently look for a second examiner. The second examiner for a diploma examination can only be a professor of the TU Vienna. In TISS under "Organisation" and "Faculties" and "Faculty of Mechanical Engineering and Management Sciences" („Organisation“ then „Fakultäten“ then „Fakultät für Maschinenwesen und Betriebswissenschaften“) there is a list of the institutes of our faculty including staff and contact details. There, the student will find the necessary contact data to find a second examiner.

At the latest 6 weeks before the diploma examination date is the last possible date on which the student can send the diploma thesis to the supervisor for final evaluation, as the final evaluation takes approx. 3 weeks and afterwards a diploma thesis presentation must be prepared in consultation with the supervisor.

The student must report the submission of the thesis to the supervisor via e-mail to wiss.arbeitenBTSP@tuwien.ac.at. After the final submission to the supervisor, the student begins with

the preparation of the thesis presentation. The PDF template for the diploma thesis presentation can be found on the IMW homepage at: <https://www.tuwien.at/mwbw/im/bt/lehre/diplomarbeiten>.

The student must submit the thesis to the Dean's Office no later than 4 weeks before the date of the diploma examination, as the deadline for submission to the Dean's Office is 3 weeks before the date of the diploma examination. All necessary examinations must have been completed by then and the second examiner must have been determined. The second examiner must be announced at the Dean's Office upon submission. For further information on submission to the Dean's Office for Mechanical Engineering, see: <https://www.tuwien.at/mwbw/dekanat/studienabschluss/abschluss-eines-masterstudiums> the student must have obtained the confirmation of a professor in good time. Submission to the Dean's Office cannot be made without the consent of a second examiner.

NOTE: Diploma examinations can currently also be held via an online meeting. If the diploma examination is conducted online, the student must take care of the technical and organisational details or additional tasks independently. In addition, the regulations of the Dean of Studies and the Vice Dean of Studies apply, as listed in the document Information sheet on conducting online examinations ("Informationsblatt zur Durchführung von online-Prüfungen"). You can find this document on the homepage of the Dean's Office. If you have any questions about this or further questions, please contact the Dean's Office directly. We cannot help you with this.

At the latest 3 weeks before the diploma examination date, the supervising person must announce the grade, which the student must immediately send to wiss.arbeitenBTSP@tuwien.ac.at by e-mail and the supervising person must also give the student a print release. If the thesis is graded "very good", the student must present his/her thesis to the group leader and to the main examiner approx. 1-2 weeks before the date of the diploma examination. The date for the presentation (pre-presentation date) to the main examiner is set by wiss.arbeitenBTSP@tuwien.ac.at in agreement with the main examiner. The date of the pre-presentation cannot be postponed or negotiated. The thesis presentation must already be finished at the time of the preliminary presentation. The date for the presentation to the group leader (preliminary presentation) is set by the supervisor in consultation with all participants.

Note: The Department of Operating Technology and Systems Planning (Fachbereich Betriebstechnik und Systemplanung) places great importance on the presentation. Should the presentation deviate from the given structure of the template, a "very good" can be changed to a "good".

The student must also ask the chairperson and the second examiner by e-mail whether they would like an appointment where the student can briefly explain the thesis in advance. If so, the student organises this appointment independently and coordinates with the chairperson and the second examiner. If they do not wish to make an appointment, the student nevertheless sends the thesis in PDF form by e-mail for review.

At the latest 2 weeks before the diploma examination date, the student must also have the TISS entry updated. To do this, the student must download the PDF template for the TISS entry form again, fill it out again and send it to wiss.arbeitenBTSP@tuwien.ac.at by email. The PDF template for the TISS entry form can be found on the IMW homepage at: <https://www.tuwien.at/mwbw/im/bt/lehre/diplomarbeiten>.

Simultaneously, the student must also complete his/her own TISS entry. To do this, they must complete the library entry in TISS under "Abschlussarbeiten", "meine Arbeiten". The student must enter the language, the number of pages and the basic qualification online and copy the abstract in German and English. For the basic qualification, the student must look up the basic classification on the library's homepage. See: <http://www.ub.tuwien.ac.at/bksuche.html> Example: "Diploma thesis on the subject of assembly: Basic classification: 52.80". If a non-disclosure note is requested, the duration and the justification of the non-disclosure note must be indicated. For details see page 6, additional information for option 1 and option 2.

The student must have his/her diploma examination bound once at this time. This can be done in the blue TU binding (further information on the blue TU binding is available at the TU Vienna Printing Centre) or in a black binding. It is not mandatory to have the diploma thesis bound at the TU Printing Centre. If the diploma thesis is printed in another printing centre, then the diploma thesis must be printed in a black binding. The student must take the copy with him/her to the diploma examination and hand it in to the Dean's Office for Mechanical Engineering after the diploma examination.

At the latest 1 day before the diploma examination, the student must print out his/her presentation three times. The printouts serve as a handout for the chairperson, main examiner and second examiner during the diploma examination. The printouts must include the possibility to make notes on the slides. There may be a maximum of 2 slides on one page. Finally, the student must pack the printouts of the presentation, the last bound copy of the thesis and a working laptop with the presentation on it.

The diploma examination takes place

After the diploma examination, the student has the chance to register for the graduation ceremony. Registration is voluntary. Possible dates at: <https://www.tuwien.at/mwbw/dekanat/sponson> No further activities are required/possible on the part of the IMW after the diploma examination. The student must contact the Dean's Office with any further questions regarding the grading.