

Graduation guide for thesis work within the track Water Management, MSc Civil Engineering (old programme)

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Introduction

The final educational activity when doing an MSc in Civil Engineering is the graduation project. The graduation project is 40 EC. Graduation projects can be conducted entirely within the university or with an external host organisation, such as a consultancy, a research institute or a water management body. The MSc thesis should in principle be in English. Under some circumstances, e.g. if the host organisation requires this, it can be in Dutch, subject to permission by the Board of Examiners. In any case, there must be a summary in English.

There are a number of administrative requirements for the graduation project. Failure to meet these requirements may result in delays in obtaining your degree! The most important requirements can be found in the Teaching and Exam Regulations (TER), in particular the Annex for Civil Engineering, and in the Rules and Guidelines (R&G) of the Board of Examiner, especially art. 23. Both regulations are located at the TU Delft website on the student portal :

<https://www.tudelft.nl/en/student/faculties/ceg-student-portal/education/educationinformation/educational-rules-and-regulation>

Please note that the TER and R&G are adapted every year. In both cases the most recent version, for 2022-2023, apply. However, a few details on graduating in the old civil engineering programme are different from graduating under the new programme, and for these details the TER 2021-2022 should be consulted. They concern for instance the rules on admission to the MSc thesis project. As to your individual study programme, the TER of the year you started with your MSc applies, with some changes if some courses are no longer taught (see art. 30.3 TER 2022-2023).

For the administrative procedures to follow, you should check form CIE-0 on <https://www.tudelft.nl/en/student/ceg-student-portal/education/master/forms-master>. Here you can also find the other forms you need.

This graduation guide does not replace the TER and the R&G. What you can expect in this guide is an overview of the graduation process for the track Water Management. The administrative procedures are summarized in a separate checklist. The checklist also mentions the different forms that have to be filled in and give some further details.

Starting the graduation process

You may start your graduation project only when you have gained at least 65 EC in the MSc programme. The Department recommends at least 70 EC. Before you start work on your graduation project, you must complete the form CIE-1.

The overall graduation process for the thesis work can be divided into the following phases:

- A. Orientation
- B. Start
- C. Execution
- D. Completion

A. Orientation

You should start thinking about the topic of your master graduation project well in time. To get ideas, you can look at MSc theses produced by former students on the central library's repository or the water management website www.watermanagement.tudelft.nl. Almost all available topics are presented twice a year on a "Thesis Market" organized and announced by the department and the dispuut W&E. These topics are listed on the Brightspace page for the "Master Programme Civil Engineering and Geosciences" under MSC AES & CE /track Water Management".

Sometimes external organisations propose interesting topics. However, the topic of your master graduation project must be approved by the chair of your thesis committee, so you should not make any firm agreements before the topic has been formally approved. In addition, if you wish to execute your graduation project at an external organisation, a graduation agreement with this organisation is required before you can start. Information on this can be found on the "forms" page on the student portal, under "general forms":

<https://www.tudelft.nl/en/student/ceg-student-portal/education/master/forms-master>.

The thesis committee

During the graduation process you will be guided and assessed by a thesis committee. The composition of this committee is described in art. 23 R&G. In practice, students first get into contact with a potential thesis supervisor, and he or she will then help with the composition of the thesis committee.

Completing your master's thesis project abroad

It is possible to complete your thesis project at a host organisation abroad. This requires careful preparation and often takes more time than a project in the Netherlands. The rules are the same: the project must be approved by the chair of your thesis committee and a graduation agreement may be needed. In addition, the TU Delft rules on travelling abroad apply.

B. Start

In this phase, you are expected to deliver the first actual product: the work plan. You will draw up your work plan in close consultation with your thesis supervisor. Your work plan should include at least:

- a problem statement, including the societal and scientific relevance of your research
- a research question or questions

- the planned activities to answer the research questions (“methods”)
- a realistic time schedule with firm deadlines that makes allowance for holidays, examination periods, etc.

The Kickoff Meeting is the first official meeting of the thesis committee. This should ideally be attended by all members. At this meeting, you present your work plan for the committee's approval. Please note that major changes to the work plan in later stages will need to be approved by the committee.

Please note too that if your research involves human research subjects (ie: human participants are the source your research data), your research plans needs to be approved by the Human Research Ethics Committee of the TU Delft. See their website for more details: <https://www.tudelft.nl/en/about-tu-delft/strategy/integrity-policy/human-research-ethics>.

At this stage, it is high time to get your MSc examination programme approved if this has not yet been done. If you started before 1 September 2020, you have to complete form CIE-2. If the full thesis committee is not yet established, this can be done in a later stage through a CIE-2a form, but before the green light meeting. CIE-2a should also be used if you change your programme.

If you started your MSc on or after 1 September 2020, your programme can be approved via MSP and you do not need to fill in the CIE-2 and CIE-2a forms. To get your graduation committee approved, you need to fill in the CIE-2b form.

C. Execution

In this phase you implement the planned activities listed in your work plan. In this phase there will be at least one and usually more interim meetings with the thesis committee to discuss progress. Unless otherwise agreed, it is your responsibility to submit at least one week in advance the documents to be discussed and to write up a report of the meeting afterwards. This report should be e-mailed to each committee member for approval.

The meetings and further supervision you receive may take different forms. When you graduate at the water resources section, you will be asked to present your research at least once at the Thursday afternoon colloquia.

If your graduation project takes longer than one year, the thesis coordinator is required to investigate the causes for this delay. He will contact both you and the chair of your thesis committee. If it seems likely that the delay will be further protracted, the thesis coordinator will notify the Board of Examiners. The Board of Examiners may decide that the current version of the Master thesis be considered as the “greenlight version” (see below). If this version cannot be approved, the student must start anew and make a new thesis proposal.

D. Completion

Green light meeting

The final phase of the graduation process begins with the so-called 'green light meeting'. Prior to this meeting, you must submit a complete draft of your thesis, including a summary and the conclusions, to

each member of the thesis committee. The exact date of submission is agreed with the committee members, but is usually at least a week prior to the meeting. At the meeting, the committee will decide whether you can present and defend the final version of your thesis. If so, a date will be set for the final presentation and defense. Moreover, the committee will decide on any changes that have to be made to the draft thesis.

Once you have got the green light, you should submit form CIE3 as soon as possible, but at least 20 working days before the date of the final presentation and assessment. Logically, this means there should be at least four full weeks between the green light meeting and the graduation date.

Graduation

It is only possible to graduate if you have fulfilled all other obligations for graduation! You must have completed all your courses successfully. If you take an exam shortly before the final presentation and you fail, the graduation date has to be postponed. The final exam result, thesis project excluded, must be submitted ultimately five working days before the graduation date.

Graduation consists of the final presentation and the defense (answering questions from the committee members and the audience), followed by the final assessment. The presentation and defense are public. The presentation is given to an audience made up of your family and friends, professionals from the field and TU Delft staff and students. It should be understandable for an (intelligent) lay person, but should also be interesting for the experts. You should reserve a room for the final presentation (see the checklist).

The final assessment is made by the thesis committee behind closed doors. You must ensure that all members of the committee have a hard copy of the final version of your thesis well in advance. In addition, you should also upload your thesis onto the repository of the TU Delft library. The only exception is if the host organisation requests an embargo on publication, for example because the thesis contains confidential business information. In such cases, a period may be agreed after which the thesis can be published. Please check the graduation agreement and the general conditions to which this agreement refers!

For assessing the graduation project, a rubric is used containing five general criteria:

- Scientific approach (25%)
- Quality of result (25%)
- Behavioural skills, such as independence, initiative and communication (20%)
- Quality of written presentation (15%)
- Quality of oral presentation and defence (15%)

The final mark is rounded off to the nearest full or half mark on a scale from 1 to 10. When the final mark is a 6 or more, you will get your diploma immediately after the final assessment, provided you meet all the other requirements and applied for graduation in time. The Diploma Supplement with all the marks will be sent to you afterwards, generally within 20 working days.