

TEACHING AND EXAMINATION REGULATIONS (TER)

2019-2020

In accordance with article 7.13 of the [Dutch] Higher Education and Research Act
[WHW]

MASTER DEGREE PROGRAMME CIVIL ENGINEERING & MASTER DEGREE PROGRAMME APPLIED EARTH SCIENCES & 4TU MASTER DEGREE PROGRAMME CONSTRUCTION MANAGEMENT AND ENGINEERING

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Paragraph 1 - General

Article 1 – Applicability of the regulations¹

1. These regulations including the programme specific annexes, apply to the teaching and the examinations of the Master degree programme in Civil engineering, the Master degree programme in Applied Earth Sciences and the Interfaculty 4TU Master degree programme Construction Management and Engineering, hereinafter referred to as 'the programme' or 'programmes'.
2. The programmes are provided under the responsibility of the Faculty of Civil Engineering and Geosciences at Delft University of Technology, hereinafter referred to as the 'faculty'.

Article 2 – Definitions of terms used

The following concepts apply in this Regulation:

- a. Act: the Higher Education and Scientific Research Act (in Dutch, the WHW), Dutch Bulletin of Acts, Orders and Decrees, number 593 and as amended since;
- b. academic year: the period from 1 September till 31 August of the following calendar year;
- c. annex (former: IR): the appendix which forms part of these Teaching and Examination Regulations;
- d. Board of Examiners: the programme's Board of Examiners, which has been installed in accordance with Article 7.12 of the Act;
- e. bridging programme: a deficiency rectifying programme aimed at moving up to a Master degree programme, while enrolled in a Bachelor degree programme, but without obtaining a Bachelor degree, as stipulated in Article 7.30e or Article 7.57i of the Act;
- f. cohort: the group of students who have registered for a degree programme for the first time in a given academic year;
- g. course (or: 'subject'): a teaching unit within the programme as intended in Article 7.3, sections 2 and 3 of the Act; a subject can consist of a number of components;
- h. credit: a European Credit (EC) awarded in line with the European Credit Transfer System (ECTS); one credit denotes a study load of 28 hours;
- i. (component) partial examination: an assessment of the knowledge, insight and skills of a student in relation to a component within a subject, as well as the marking of that assessment by at least one examiner, appointed for that purpose by the Board of Examiners;
- j. degree: an academic title conferred by universities and colleges as an indication of the completion of a course of study, or as an honorary recognition of achievement (here: MSc in Civil Engineering);
- k. degree audit: the evaluation, in which, in accordance with Article 7.10 of the Act, the Board of Examiners determines whether all examinations in the subjects of the degree programme have been successfully completed;
- l. disability: all conditions which are (at least for the specified period) chronic or lasting in nature and which form a structural limitation for the student in receiving education and/or sitting examinations or taking part in practicals;
- m. education registration system: the current education registration system is Osiris;
- n. examination: an assessment of the knowledge, insight and skills of a student in relation to a subject, as well as the marking of that assessment by at least one examiner, appointed for that purpose by the Board of Examiners;
- o. examiner: the individual who, in line with Article 7.12, Subsection 3 of the Act, has been appointed by the Board of Examiners to set the examinations;
- p. institute: Delft University of Technology;
- q. interim examination: the assessment of the examinee's knowledge, insight and skills and the results of the assessment as referred to in Section 7.10, first subsection of the WHW;
- r. learning management platform: the current learning management platform is Brightspace;
- s. practical exercise: subject or component of a subject aimed at the acquisition of particular skills. The following can be understood as practical exercises:
 - writing a thesis,

¹ These Teaching and Examination Regulations (TER) are drafted per academic year and are valid as of the first day of the relevant academic year. This TER replaces all previous versions of the TER.

- conducting a project or experimental design,
 - carrying out a project or a design/research assignment,
 - conducting a literature review,
 - completing an internship,
 - participating in fieldwork or an excursion,
 - conducting tests and experiments, or
 - participating in other educational activities that are considered essential and that are aimed at enabling participants to attain certain skills;
- t. programme: the Master degree courses (Civil Engineering) as stipulated in Article 7.3a Paragraph 1, Subsection b of the Act;
- u. programme duration: the duration starting from the enrolment of the student up and to including the last examination;
- v. student: a person enrolled at Delft University of Technology in order to receive education and take the examinations and the degree audit in the degree programme;
- w. study guide: a digital guide to the programme containing specific information pertaining to the various subjects;
- x. teaching period: half a semester;
- y. track: major, as stipulated in Article 7.13, Paragraph 2, Subsection b of the Act;
- z. virtual learning environment: the electronic system designed for the exchanging of teaching information;
- aa. working day: Monday to Friday with the exception of recognised national public holidays and the collective closure days.
2. The other concepts in these regulations are used in the sense in which they appear in the Act.
3. In these regulations, the term 'examination' also refers to 'interim or partial examination', with the exception of
Articles 19, section 1, first complete sentence and 22.

Paragraph 2 - Admission and prior education

Article 3a – Admissions to the Master degree programme

1. Individuals holding one of the following degrees have access to the education of the Master degree programme in Civil Engineering (under a) or Applied Earth Sciences (under b) or Construction Management Engineering (under c) on the condition that all of the stated requirements have been met.
- a. Civil Engineering
- Bachelor degree from Delft University of Technology or from University of Twente.
- b. Applied Earth Sciences
- Bachelor degree "Technische Aardwetenschappen" or "Applied Earth Sciences" from Delft University of Technology.
- c. Construction Management and Engineering
- Bachelor degree Bouwkunde/Architecture from Delft University of Technology or from Eindhoven University of Technology,
 - Bachelor degree Civiele Techniek/Civil Engineering from Delft University of Technology or University of Twente,
 - Bachelor degree Technische Bedrijfskunde from Eindhoven University of Technology or from University of Twente,
 - Bachelor degree Technische Bestuurskunde/Systems Engineering, Policy Analysis and Management from Delft University of Technology,
 - Bachelor degree in Innovation Sciences from Eindhoven University of Technology.
- Depending on the Bachelor degree, certain synchronisation courses are mandatory according to the annex of the programme.
2. Students who do not possess the degree mentioned in section 1 are required to obtain proof of admission to the programme from the dean, who will seek the advice of the admission committee on this matter:
- a. Other university Bachelor degree (not including those listed in section 1)
The following applies to this category:

Successful completion of the stated bridging programme for admission to the Master degree programme:

For Civil Engineering and Applied Earth Sciences:

- University Bachelor degree

Bridging programme to be followed: to be specified upon application.

For Construction Management and Engineering:

- University Bachelor degree: students who do not possess any of the degrees mentioned in section 1 may be eligible for, and should therefore seek advice on, a possible tailor-made bridging program.

b. Higher professional education degree

The following applies to this category:

Successful completion of the stated bridging programme for admission to the Master degree programme and, if applicable, the language requirement

- higher professional education degree [Dutch higher vocational institute (HBO)]

For Civil Engineering and Applied Earth Sciences:

Bridging programme to be followed: Transitional programme for students with a Dutch higher vocational institute Bachelor degree ("HBO") as stipulated in the annex.

For Construction Management Engineering:

- University Bachelor degree: students who do not possess any of the degrees mentioned in section 1 may be eligible for, and should therefore seek advice on, a possible tailor-made bridging program.

c. Foreign degree

This category is subject to the general selection requirements of Delft University of Technology with regard to prior foreign education, based on a Cumulative Grade Point Average of at least 75% of the maximum number of points that could be earned, included in the table of countries (see website) and meeting the requirements for satisfactory linguistic mastery of English, as stated in the annex of art. 3.

3. For admission in accordance with section 2, the following additional condition apply:
Access to the education of the Master degree programme in Civil Engineering, Applied Earth Sciences and Construction Management Engineering is open to individuals who have demonstrated to the admissions committee that they possess knowledge, insight and skills at the level of the Bachelor degree mentioned in section 1.
4. All students are also subject to the following qualitative admission requirements:
In order to obtain proof of admission, the student must meet or, as the case may be, possess:
 - a. the general relevant criteria set by the Executive Board, laid down in the "Policy on fees and enrolment", laid down in Annex 1 of the Student Charter (central part), and clarified in Part 1.2 "Entrance and admission" of the mentioned Student Charter.
 - b. a certificate, together with the accompanying list of marks, proving that he/she possesses knowledge of a sufficiently high level and broad scope to successfully complete the programme within the allotted period.

Article 3b – Admission to the bridging programme

1. In order to be admitted to the bridging programme, the student must satisfy the general relevant criteria set by the Executive Board in the "Policy on fees and enrolment", laid down as annex 1 of the Student Charter (main part), and clarified in Chapter 2 "Entrance and admission" of the mentioned Student Charter.
2. The criteria mentioned in section 1 are elaborated further in the annex of the specific programme.

Article 3c – Completion of bridging programme prior to the degree programme

1. A student who is enrolled in a Bachelor degree programme for a bridging programme with the aim of being admitted to the Master degree programme at TU Delft, must complete this bridging programme within two academic years. Deviations from the bridging programme are not allowed.
2. After the programme duration of the bridging programme the enrolment of the student will be cancelled. Under exceptional circumstances the student can submit a well-founded request for an extension of the course duration for a period of at most twelve months.

3. The Executive Board will set the tuition fee to be charged, as denoted in Article 7.57i of the Act, for the enrolment as student in a bridging programme and for the extension thereof, as denoted in Subsection 2 of this article.
4. A well-founded request for extension must be submitted to the Board of Examiners. The Board of Examiners can decide to grant extension of the programme duration when a student is experiencing or has experienced a study delay due to circumstances that are beyond the student's control.

Article 4 – Not applicable

Paragraph 3 - Content and composition of the programme

Article 5 – Goal of the programme

1. The programmes intend to educate students to earn a Master of Science in Civil Engineering respectively in Applied Earth Sciences or Construction Management and Engineering, whereby the final attainment levels described below must be achieved, providing them with such a level of knowledge, insight and skills in the area of Civil Engineering, Applied Earth Sciences or Construction Management and Engineering, that graduates can fulfil positions on the labour market at the Master's level.
2. Graduates must also meet the specific final attainment levels for each degree programme as listed below:
 1. be capable of being analytical in their work, on the basis of a broad and deep scientific knowledge;
 2. be able to synthesise knowledge and to solve problems in a creative way when dealing with complex issues;
 3. possess the qualities needed for employment in circumstances requiring sound judgement, personal responsibility and initiative, in complex and unpredictable professional environments;
 4. be able to assume leading roles, including management roles, in companies and research organisations, and be able to contribute to innovation;
 5. be able to work in an international environment, helped by their social and cultural sensitivity and language and communication abilities, partly acquired through experience of team work and any study periods abroad;
 6. possess an awareness of possible ethical, social, environmental, aesthetic and economic implications of their work and the insight to act accordingly;
 7. possess an awareness of the need to update their knowledge and skills.

In addition, Master of Science graduates should possess the following competences:

1. required core knowledge and understanding in their field of study;
2. knowledge of methods and technical practice in their field of study;
3. training in theoretical knowledge and methods, including in modelling;
4. advanced knowledge of specific areas in their field of study;
5. specific attitude and way of thinking expected in a particular subject;
6. awareness of connections with other disciplines and ability to engage in interdisciplinary work.

The programme-specific requirements are listed in the annex to article 5 of the specific programmes.

Article 6 – Track and annotations

1. The Master degree programme in Civil Engineering has the following tracks, with the stated content in the annex:
 - Building Engineering
 - Environmental Engineering
 - Geo-engineering
 - Geoscience and Remote Sensing
 - Hydraulic Engineering
 - Structural Engineering
 - Transport & Planning
 - Water Management

Double track

A student can opt to study two tracks within the Master Degree Programme in Civil Engineering, for which the criteria are stipulated in the annex.

Within a track or within a specialisation the student may (partly) opt for the annotations, mentioned in the annex:

- Technology in Sustainable Development
 - Entrepreneurship
 - Urban Planning and Engineering
 - Integral Design and Management
 - Railway Systems
 - Dynamics of Structures
2. The Master degree programme in Applied Earth Sciences has the following tracks, with the stated content in the annex:
- Geo-Energy Engineering
 - Geo Engineering
 - Geoscience and Remote Sensing
 - Environmental Engineering
 - Applied Geophysics
 - European Mining, Minerals and Environment
 - *specialisation*: European Mining Course (EMC)

Within a track or within a specialisation the student may opt for the annotations, mentioned [here](#) and [here](#) (or see the annex of the MSc Civil Engineering):

- Technology in Sustainable Development
 - Entrepreneurship
3. The Master Degree Programme CME has no tracks.
Within the Master degree programme in Construction Management and Engineering students may choose the annotation of which the specifics can be found in the annex of the MSc Civil Engineering:
- Integral Design and Management
 - Entrepreneurship
 - Urban Planning and Engineering

Article 7 – Composition of the programme and degree audits

1. The programme includes the Master degree audit, with a study load of 120 credits.
2. Following approval from the two Boards of Examiners concerned, a student may take an individual double degree programme in which two Master programmes are combined simultaneously to create a programme of at least 180 credits. Upon completion the student is awarded two Master diplomas. The student must earn at least 60 unique credits for each Master degree programme.
3. Courses that were part of the Bachelor degree programme that qualified a student for admission to the Master degree programme may not be included in the Master degree programme. If a compulsory component has already been completed in the aforementioned Bachelor degree programme, the Board of Examiners will designate an alternative course. If an elective course of the degree programme has already been completed in the aforementioned Bachelor degree programme, the student will select an alternative elective course.
4. The Master degree audit is concluded with an MSc thesis, a final test or assignment. The MSc thesis, final test or assignment demonstrates that the student possesses and is able to apply the knowledge, insight and skills acquired in the degree programme.
5. The degree programme is described in the annex of the specific MSc programme, along with the courses and subjects, including the study load, number of contact hours and form of examination of each course, as well as the programming of the examination and the language.
6. The actual design of the education is elaborated in greater detail in the study guide.

Article 8 – Form of the programme

The degree programmes are offered exclusively on a full-time basis.

Article 9 – Language

1. The teaching is in English, and the examinations, practical exercises and degree audits are administered in English.
2. Under exceptional circumstances only, a student can apply for an exemption with the Board of Examiners from taking the examination in Dutch, if it can be demonstrated that this would be to the benefit of the student.

Article 10 – Honours Programme

1. Based on the criteria referred to in the Master's Honours Programme, students will be selected and admitted to the Master's Honours Programme by the Director of Studies/an Honours Coordinator or an Honours Committee established by the Director of Studies.
2. The Master's Honours Programme comprises at least 20 credits.
 - a. At least five credits must be completed in the institution-wide component of the Master's Honours Programme: the subject 'Critical Reflection on Technology' (UD2010),
 - b. At least 15 credits must be completed in the faculty component of the Master's Honours Programme, the composition of which (including its content and options) is described in the Honours Programme.
3. All students selected for participation in the Honours Programme must submit their options for the faculty component to the director of studies, the Honours coordinator or Honours committee for approval.
4. The Board of Examiners will be responsible for assessing whether all the requirements of the Master's Honours Programme have been met.
5. Any student who has successfully completed the Master's Honours Programme will be awarded a certificate signed by the chair of the Board of Examiners and the Rector Magnificus.

Article 11 – (Compulsory) participation in the programme

1. All students are expected to have participated actively in the courses for which they are examined.
2. If necessary, there will be an obligation to participate in practical exercises, with a view to admission to the related examination. The Board of Examiners has the authority to grant an exemption from this obligation, and can require a substitute requirement.
3. Any supplementary obligations are described by component in the study guide.

Article 12 - Programme evaluation

1. The Director of Studies is responsible for the evaluation of the education.
2. The manner in which the education in the programme is evaluated is documented in a separate document, that is presented to the Faculty Student Council and the Board of Studies.
3. The Director of Studies informs the Board of Studies concerning the outcomes of the evaluation, the intended adjustments based on these outcomes and the effects of the actual adjustments.

Paragraph 4 – Registration and withdrawal for courses and examinations ²

Article 12a – Compulsory registration for courses

1. All students must register each semester for every course that they wish to or are obliged to take, subject to the further provisions of this article. Students must register for each course in the education registration system (Osiris).

² Please note: articles 12a and 12b will be applicable to students CEG and CME from September 2020 onwards.
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2. Students who have not registered for a course according to the prescribed procedure are excluded from participation in that course.
3. Students who are participating for the first time in the first year of a Bachelor, Master or Bridging programme will be registered by the faculty for all compulsory courses in the first semester of the first academic year of the programme. The procedure for registering for electives for these students who are registering for the first time is described in the study guide.
4. Registration for courses takes place each semester during the registration period described below. Note that the registration period for a course with limited capacity as referred to in Section 6 of this article is one week shorter.
 - a. The registration period for courses in the first semester is
 - from Monday (9:00) of teaching week 4.6 up to and including Sunday (23:59) of teaching week 4.7, and
 - from Monday (9:00) up to and including Sunday (23:59) of teaching week 4.2 for a course as referred to in Section 6 of this article.
 - b. The registration period for all courses in the second semester is
 - from Monday (9:00) of teaching week 2.3 up to and including Sunday (23:59) of teaching week 2.4, and
 - from Monday (9:00) up to and including Sunday (23:59) of teaching week 2.1 for a course as referred to in Section 6 of this article.

Two weeks after the closing of the registration period a first check will take place based on the entry requirements described in the study guide. The registration for students who fulfil the entry requirements at the time of the check is finalised. If students do not meet the entry requirements at that time, they will be given the opportunity to meet the entry requirements if possible.

One week before the start of the semester, a second and final check will take place. The registration for students who fulfil the admission requirements at the time of this check is finalised. Students who do not fulfil the admission requirements at the time of this check will not be permitted to participate in the course.

5. Students may register for courses with a total maximum study load of 40 credits per semester. A student who wishes to take more courses must submit a written request for this, giving their reasons, to the Director of Education of the faculty before the registration period as referred to in subsection a or b in section 4 of this Article, after first seeking advice from the academic counsellor. If permission for this is granted, the programme will arrange the registration for the extra course(s).
6. Before the start of the registration period the study guide will show which courses or parts of courses are a compulsory part of the programme. The Programme Director may restrict participation in a course within a programme in the following cases:
 - a. for a course with a maximum number of participants, admission is based on the criteria stated in the study guide, on the understanding that priority will be given to students for whom the course is a compulsory part of their programme.
 - b. for a course with an admission requirement, registration for the course is seen as a pre-admission which will be checked against the admission requirements stated in the prospectus before being finalised.
 - c. if participation in an elective is subject to further requirements as stated in the course description in the study guide.
7. Students who wish to register for a course outside of the official registration period on the grounds of exceptional personal circumstances may send a written request to Director of Education up to two weeks before the start of the semester, giving their reasons for this.
8. If a student has taken a course (or part of a course) for which an assessment will be given, without having registered for this course correctly or on time, any given assessment is invalid. The student may submit a written request to the Board of Examiners asking for a valid assessment and explaining their reasons. The Board of Examiners will only honour such a request in the event of exceptional circumstances.
9. Registration for a course does not count as registration for an examination. Students must register for examinations separately in accordance with the relevant provisions.

Article 12b – withdrawal from a course

1. Students may withdraw from a course at any time, via the education registration system (Osiris). Such a withdrawal is final.
2. A student who has withdrawn from a course and wishes to take it at a following opportunity must re-register for the course in accordance with the provisions of Article 12a.

Article 13 – Registration for written examinations

1. Registration to participate in a written examination is compulsory and is done by entering the requested data into the education registration system (Osiris) no later than 14 calendar days before the examination. Students receive examination tickets by email as confirmation of their registration.
2. Students who have not registered within the term specified in Section 1 may request registration for that examination after this term until no later than three calendar days before the examination by entering the requested data into the education registration system (Osiris). The request will be honoured providing that places are available in the room or rooms where the examination is scheduled to take place. Students receive examination tickets by email as confirmation of their registration.
3. In the event of circumstances beyond a student's control resulting in the student being unable to register for an examination, the Board of Examiners may nevertheless permit the student to participate in the examination.
4. Students who have not registered for the examination and are therefore not included on the list of examinees can report on the day of the examination to the invigilator beginning 15 minutes before the start of the examination until the actual start. They will be admitted to the examination room, in the order that they reported to the invigilator, 30 minutes after the start of the examination, if sufficient places are available. The loss of 30 minutes of examination time cannot be compensated. Students who have been granted late access to the examination will be added to the list of examinees. The student participates in the examination subject to the validation of entitlement to participate in the examination.
5. In the situation described in the previous section, if it is found that a student was not entitled to participate in the examination, the examination work will be deemed invalid, it will not be marked and it will not count towards a result. The student may subsequently submit an appeal to the Board of Examiners, accompanied by reasons, requesting that the examination work that has been deemed invalid be declared valid and to have it assessed. The Board of Examiners will approve the request only in case of extenuating circumstances.

Article 14 – Registering for other examinations and practicals

1. Registration for participation in an examination other than a written examination and/or practicals is compulsory, and will take place in the manner and by the deadline indicated in the study guide or for additional information on the virtual learning environment (Brightspace) or in the annex of the TER for the relevant examination.
2. In special cases, the Board of Examiners may deviate from the period of registration referred to in section 1, however only in favour of the student.
3. Students who have not registered on time will not be allowed to participate in the examination and/or practicals. In exceptional circumstances the Board of Examiners may allow the student to participate in the examination and/or practicals.
4. In the event of unauthorised participation in an examination and/or practicals, the Board of Examiners may declare the result invalid.

Article 15 – Withdrawal

1. Students can withdraw from an examination through the education registration system (Osiris) up to three calendar days before the examination.

2. Any student who has withdrawn from an examination should re-register on a subsequent occasion, in accordance with the provisions of Articles 13 and 14.

Paragraph 5 – Examinations

Article 16 – Form of the examinations and the manner of testing in general

1. Examinations are taken in the manner (oral, written or otherwise) described in the study guide.
2. The study guide of the specific programmes contains a description of the moments at which and the numbers of times that examinations can be taken, along with their frequency, without prejudice to the provisions of these regulations concerning written and oral examinations.
3. A student may participate in an examination for a course no more than twice in one academic year.
4. In special cases, the Board of Examiners may deviate from the provisions of the above sections in favour of the student.
5. Ultimately two weeks before a written examination, the examiner will give the students the opportunity to familiarise themselves with examples of examination questions and answers.

Article 17 – Times and number of written examinations

1. Two opportunities to take written examinations will be offered each academic year:
 - the first opportunity is during or at the end of the teaching period in which the course is taught,
 - the second opportunity is in the fifth week or at the end of the next teaching period, except for courses taught in the fourth and last quarter of the academic year for which the second opportunity is during the resit period in the months July and August, unless otherwise stated in the study guide. Both opportunities need to be offered in the same academic year the course is taught in.
2. A timetable of all the opportunities for sitting written examinations is drawn up on an annual basis and distributed before the start of the relevant semester.
3. If there is no indication as to the number of times a particular examination can be taken in any one academic year because it relates to a course not taught by the programme itself, the relevant stipulations in the Teaching and Examination Regulations of the other programme will apply. The Board of Examiners reserves the right to make decisions that deviate from the norm regarding this matter.
4. Contrary to the provisions of section 1, for discontinued courses two opportunities to sit an examination will be offered after the academic year in which the course was last taught. Both opportunities are in the academic year following the one in which the course was last taught
5. In exceptional cases, the Board of Examiners may permit more than two opportunities in a year for certain examinations.

Article 18 – Oral examinations

1. For oral examinations, no more than one student shall be tested at a time, unless determined otherwise by the examiner.
2. Oral examinations shall be public, except in special cases in which the Board of Examiners has decided otherwise, or if the student has filed an objection to the public nature of the examination.
3. The oral examination is administered by at least two examiners.
4. Prior to an oral examination, the examiner must ask the student(s) to provide proof of identity.

Article 19 – Determination and announcement of results

1. The examiner determines the result of a written examination as quickly as possible but by no later than 15 working days after the examination. The results of written interim examinations shall be announced no later than five working days before the next written interim examination.
2. The examiner determines the result of an oral examination immediately after it is administered and issues the student with a written statement of this result.
3. The examiner records the results of the assessment of a practical exercise as quickly as possible, but in principle no later than 15 working days after the completion of the practical exercise at the designated time. In the education registration system (Osiris), the result will be dated on the date of completion of the practical exercise. With regard to a series of practical exercises in which the knowledge acquired in a previous practical exercise is important to the subsequent practical exercise, the result of the previous practical exercise shall be announced before the subsequent practical exercise. If this is not possible, the examiner shall schedule a timely discussion of the previous practical exercise.
4. The examiner is responsible for the registration and publication of the results in the education registration system (Osiris), with observance of the student's privacy. When the result of an examination is announced, the student is informed about the right of perusal as stipulated in Article 20 as well as about the possibility of appealing to the Examinations Appeals Board.
5. Contrary to the previous provisions, results achieved in the resit period in August shall be registered and published no later than the last working day of the week following the examination week in August.
6. If special circumstances prevent the examiner from registering the results on time, the examiner will report this to the Board of Examiners, accompanied by reasons, and notify the students and student administration as quickly as possible.

Article 20 – Right to inspect the results

1. Upon request, students will have the right to inspect their assessed work during a period of 20 working days after the announcement of the results of a written examination or the assessment of a practical exercise. Students intending to appeal against the assessment of their work will be issued with a copy of the assessed work.
2. During the period mentioned in section 1, all students who have participated in the examination can become acquainted with the questions and assignments of the relevant examination, as well as with the standards that form the basis of the assessment.
3. The examiner can determine that the inspection intended in sections 1 and 2 will take place at a pre-established place and at a pre-established time.
4. Students proving that they were unable to appear at such an established place and time because of circumstances outside of their control will be offered another possibility, if possible within the period mentioned in section 1. The place and times mentioned in the first sentence will be made known in good time.

Article 21 – Discussion of the results of examinations

1. Students who have taken a written examination or who have received the assessment of a practical exercise can ask the relevant examiner for a discussion of the results during a period of 20 working days after the announcement of the results. The discussion will take place within a reasonable period, at a place and time to be determined by the examiner.
2. At the request of the student or at the initiative of the examiner, a discussion justifying the assessment will take place between the examiner and the student as soon as possible after the announcement of the result of an oral examination.
3. If a collective discussion is organised by the examiner, students may submit requests as referred to in the last section only if they have been present at the collective discussion, or if they were unable to be present at the collective discussion because of circumstances outside their control.

4. The Board of Examiners may allow deviation from the provisions of sections 2 and 3.

Article 22 – Period of validity of examinations

1. The period of validity of the results of an examination is indefinite. The dean can restrict the period of validity of a successfully completed examination only if the knowledge or insight that was examined has become outdated or if the skills that were examined have become outdated.
2. In cases involving a limited period of validity based on section 1, the period of validity shall be extended at least by the duration of the acknowledged delay in studies, based on the TU Delft Profiling Fund Scheme.
3. In individual cases involving special circumstances, the Board of Examiners can extend periods of validity that have been limited based on section 1 or further extend periods of validity that have been extended based on section 2.
4. The provisions of section 1 likewise apply to partial examinations, unless the validity of the partial examination is linked to a time period stated in the study guide.

Article 23 – Exemption from an examination or obligation to participate in a practical exercise

1. After having obtained recommendations from the relevant examiner, the Board of Examiners may grant exemptions to students:
 - a. who have successfully completed an examination or degree audit in a system of higher education within or outside the Netherlands that corresponds to the examination for which the exemption has been requested in terms of content and level, or
 - b. who demonstrate that they possess sufficient knowledge and skills that have been acquired outside the system of higher education.
2. After having obtained recommendations from the relevant examiner, the Board of Examiners may grant exemption from the requirement to participate in a practical exercise with a view to admission to the related examination, possibly subject to alternative requirements.

Article 24a – Periods and frequency of degree audits

In principle, the opportunity to take the Master's degree audit will be offered once each month. The dates for the meetings of the Board of Examiners shall be published before the beginning of the academic year.

Article 24b – invalidation of examinations

The Board of Examiners is authorised to declare invalid an examination or an examination component, if a correct assessment of the knowledge, insight and skills of the student has been proved reasonably impossible, based on the examination or that component. The Board of Examiners may draw up further rules for this.

Paragraph 6 - Studying with a disability

Article 25 – Adjustments to the benefit of students with disabilities or chronic illnesses

1. Upon a written and substantiated request to that effect, students with disabilities or chronic illnesses may be eligible for adjustments in teaching and examinations. These adjustments are coordinated to the situations of the students as much as possible, but they may not alter the quality or level of difficulty of a subject or the study programme. Facilities to be provided may include modifications to the form or duration of examinations and/or practical exercises to suit individual situations or the provision of practical aids.
2. Requests as mentioned in section 1 must be accompanied by a recent statement from a physician or psychologist or, in cases involving dyslexia, from a testing office registered with BIG, NIP or NVO. If possible, this statement should include an estimate of the extent to which the condition is impeding the student's academic progress.

3. Decisions concerning requests for adjustments relating to educational facilities are taken by the dean or by the Director of Studies on the dean's behalf. Decisions concerning adjustments relating to examinations are taken by the Board of Examiners.
4. Adjustments to examinations can involve the following or other matters:
 - form (e.g. replacing a written test with an oral test or vice versa, testing the required material in the form of interim examinations or granting exemptions to the attendance requirement);
 - timing (e.g. additional time for an examination, or a change to the distribution of examinations across the examination period, granting exemptions to admission requirements or extending the period within which a component must be completed);
 - aids permitted during testing (e.g. English-Dutch dictionaries for students with dyslexia);
 - location (taking the examination in a separate, low-stimulus space).
5. Adjustments in educational facilities could include:
 - providing modified furniture in teaching and examination spaces;
 - providing special equipment (e.g. magnification or Braille equipment for students with visual impairments and blindness or loop systems and individual equipment for students with hearing impairments and deafness);
 - providing more accessible course material;
 - providing special computer facilities (e.g. speech-recognition or speech-synthesising software);
 - providing a rest area.

Paragraph 7 – Study support and (binding) recommendation on the continuation of studies

Article 26 – Study support and Monitoring of student progress

1. The dean is responsible for providing individual study supervision to students registered for the degree programme, partly for their orientation towards potential study options within and outside the degree programme. He will also ensure that effective support and supervision is provided to students in making choices related to their studies.
2. The examination and study programme applying to each student is documented in the education registration system (Osiris).
3. The Student Administration is responsible for ensuring that all students are able to review and check their results in the education registration system (Osiris).

Article 27 – Not applicable.

Paragraph 8 - Final provisions

Article 28 – Conflicts with the regulations

In the case of conflict between provisions in the study guide or other document concerning the relevant teaching and examination education and study programme and these regulations, the provisions of these regulations shall take precedence.

Article 29 – Amendments to the regulations

1. Amendments to these regulations are adopted separately by the dean.
2. Amendments that are applicable to the current academic year will be made only if they would not reasonably damage the interests of students.
3. Amendments to these regulations may not lead to disadvantageous changes to any decisions that have been made with regard to individual students.

Article 30 – Transitional regulations

1. If the composition of the degree programme undergoes substantive changes, transitional measures will be established and published through the dean.
Transitional measures can be found in the (annex of the) TER of the cohort involved.
2. These transitional measures shall include at least the following:
 - a. an arrangement regarding exemptions that may be obtained based on examinations that have already been passed;
 - b. the period during which the transitional arrangement shall be valid.
3. Students shall follow the degree programme as it applied or applies during the first academic year of their enrolment, unless components of the programme are no longer offered. In such cases, students must transfer according to the applicable transitional measures. Deviations require the approval of the Board of Examiners. Before submitting a request to this end, the student must have first obtained recommendations from an academic counsellor.
4. If a course within a degree programme is cancelled, four opportunities for taking the examination in this subject shall be offered after it has been taught for the last time: the examination at the end of the teaching of the course, a resit in the same academic year and two resits in the following academic year.

Article 31 – Announcement

1. The dean is responsible for ensuring a suitable announcement of these regulations and any amendments to them.
2. In any case, the Teaching and Examination Regulations are to be posted on the programme's website.

Article 32 – Entry into force

These Regulations shall enter into force on 1 September 2019.

Adopted by the dean of the faculty on 27 June 2019.

ANNEX to Article 3 of the TER

Language level for individuals holding a higher professional education degree (c)

The English language, through the successful completion of one of the following tests:

- A TOEFL iBT (Test of English as a Foreign Language internet-Based Test) with an overall band score of at least 90 or
- an IELTS (academic version) with an overall Band score of at least 6.5 or
- a proof of completion of the 'Certificate of Proficiency in English' (CPE) or the 'Certificate in Advanced English' (CAE), both of the University of Cambridge. Only the following certificates are accepted:
 - C1 Advanced (Certificate of Advanced English) with an overall minimum score of 176.
 - C2 Proficiency (Certificate of Proficiency in English) with an overall minimum score of 180.

Certificates that are older than two years on the day you have uploaded the document and completed your application are not accepted.

Certificates must have been completed successfully before the start of the bridging programme.

The following candidates shall be exempted from the requirement to pass an English language test:

- Nationals from the USA, UK, Ireland, Australia, New Zealand or Canada
- Applicants with a Dutch Pre-university (VWO) certificate
- Applicants who have obtained a higher professional education degree in the USA, U.K., Ireland, Australia, New Zealand and Canada.

Language level for individuals holding a foreign degree (d)

The English language, through the successful completion of one of the following tests:

- A TOEFL iBT (Test of English as a Foreign Language internet-Based Test) with an overall band score of at least 90 and a minimum score of 21 for each section, or
- an IELTS (academic version) with an overall Band score of at least 6.5 and a minimum score of 6.0 for each section, or
- a proof of completion of the 'Certificate of Proficiency in English' (CPE) or the 'Certificate in Advanced English' (CAE), both of the University of Cambridge. Only the following certificates are accepted:
 - C1 Advanced (Certificate of Advanced English) with an overall score of 176 and a minimum of 169 for each section.
 - C2 Proficiency (Certificate of Proficiency in English) with an overall score of 180 and a minimum of 169 for each section

Certificates older than two years on the day you have uploaded the document and completed your application are not accepted.

The following candidates shall be exempted from the requirement to pass an English language test:

- Nationals from the USA, UK, Ireland, Australia, New Zealand or Canada.
- Applicants who have obtained a Bachelor's degree in one of the countries mentioned.

Annex to Article 5 TER

Construction Management and Engineering

The MSc CME domain-specific requirements as specified below are based upon:

- a. the needs of the construction industry as well as on the needs emerging from the development of society and innovations as outlined in the "Introduction" to this document. Also, with regard to this domain, an important characteristic of the development and application of newly acquired knowledge is the fact that it has to be introduced in existing managing and engineering practices. In other words, students also have to become familiar with the management of transition processes and organizational changes in the construction industry;
- b. the domain-specific and internationally accepted qualifications as defined by the ABET organization (Accreditation Board for Engineering and Technology)

The domain-specific requirements have been translated into final qualifications that fit into the 3TU Academic criteria in which the academic level of the programme is indicated as well. The Master of Science Construction Management and Engineering':

1. Competent in one or more scientific principles

The graduate has knowledge on the following sub-areas of Construction Management and Engineering, is an expert in at least one of them and is able to maintain and expand his expertise in the field of Construction Management and Engineering (for instance, by consulting relevant literature but also look for connections).

- Project and Process management in the field of Construction Engineering (i.e. complex constructions, large-scale infrastructure, urban developments)
- Legal and Governance aspects in the field of Construction Engineering
- Markets and organisations in the field of Construction Engineering
- Innovations and Integral Design in Construction Engineering
- The graduate is able to combine management theory and technical knowledge. This ability covers the knowledge and application of technical process management and innovation regarding construction and engineering processes in the subareas above.

2. Competent in doing research

- The graduate has the competence to acquire new scientific knowledge through research or systematic reflection.
- He understands the potential benefits of research and is able to understand and incorporate the results of research into his own work.

3. Competent in designing

- The graduate is able to
 - o Contribute to a functional design of complex constructions or
 - o Design management processes in the field of Construction Engineering.

This means that:

- The graduate has creativity and synthetic skills with respect to design projects
- The graduate is application-oriented towards the construction industry when designing constructions or management processes
- The graduate is able to translate technological concepts and developments into appropriate process innovations for construction.
- The graduate is able to find a balance between possible solutions of complex requirements, technical possibilities, genuine interests of the parties involved and justified value creation on scientific and operational levels

4. A scientific approach

- The graduate has the habit of reflecting upon his own work and continuously uses relevant information to improve his capabilities.
- The graduate has the attitude to endorse his personal development and enhancing his expertise.

- The graduate knows that models only approximate reality and is able to develop and use them adequately whenever this is beneficial
- The graduate makes decisions based on calculated risks, costs, time, quality, stakeholders' participation, value creation, legislation and is able to evaluate these decisions
- The graduate's scientific attitude is not restricted to the boundaries of Construction Management and Engineering, and he is able to cross these where and whenever necessary

5. Basic intellectual skills

- The graduate is able to work independently
- The graduate is able to work systematically and methodically
- The graduate is able to reflect on the complete scope of Construction Management and Engineering issues, to critically analyse and to generate novel ideas
- The graduate is able to invent his own tools, theories and techniques if these are not available

6. Competent in cooperating and communicating

- The graduate is able to work effectively in the context of a multidisciplinary environment, is able to manage complex assignments and can act in different roles depending on the situation,
- The graduate knows the importance of oral and written communication, in particular in English, and can make effective use of these, this means that:
 - a. The graduate is skilled in properly documenting and presenting results of scientific and design work, including the underlying knowledge, choices and considerations, to colleagues and to a broader public.
 - b. The graduate is competent in reasoning
 - c. The graduate adheres to existing academic conventions, such as giving proper credit and referencing.

7. Takes account of the temporal and societal context

- The graduate is able to form an opinion or judgement and contribute to discussions about complex matters related to Construction Management and Engineering
- The graduate knows that compromises are unavoidable and is able to effectively deal with these
- The graduate is aware of the disadvantages for society of certain decisions and can communicate these to the relevant parties (stakeholders). He can take the purpose of the design and its context into consideration.

Annex

2019-2020

**4TU MASTER OF SCIENCE PROGRAMME
CONSTRUCTION MANAGEMENT AND ENGINEERING (CME)**

DELFT UNIVERSITY OF TECHNOLOGY

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Section 1 – Study programme

Article 1 - Study load of the degree programme and of each of the study components it comprises:

The study load of the master programme is 120 credits. These 120 credits may by no means include any credits for courses that coincide with or were included in a previously passed bachelor's examination.

Article 2 - Composition of the study programme

- The study programme is composed as follows:
 - A set of compulsory courses as described in article 3 together comprising the 'core curriculum'.
 - One compulsory 'synchronisation course' depending on the BSc background as described in article 4.
 - The graduation work, as described in section 2 of this article.
 - A set of elective courses that may be chosen from the 'specialised elective bundles' or as 'free electives', as described in article 5.
- Students perform a graduation work that is in total worth 36 credits and consists of the following two components:
 - CME2001 Master Thesis, Preparation, worth 4 credits, and
 - CME2000 Master Thesis, worth 32 credits.
- During the first semester of the MSc CME, all CME students must submit their individual study plan using My Study Planning. The individual study plan (ISP) gives an overview of all courses a student intends to follow. This includes the compulsory, synchronisation and elective courses.

Once the ISP is submitted by a student, the ISP will be assessed by the MSc coordinator. Upon approval by the MSc coordinator, the ISP is forwarded to the Board of Examiners. Approval by the Board of Examiners is granted when, in the judgement of the Board of Examiners, it is plausible that the proposed programme leads to the achievement of the objectives of the programme as formulated in article 4 of the Teaching and Examination Regulations. Students are informed of the ISP evaluation through My Study Planning. If an ISP is not approved, the student must adapt the ISP based on the given evaluation and resubmit. During the course of the study programme, students may request changing electives in their ISP through My Study Planning. Any requests will be assessed for approval by the Board of Examiners.

Article 3 – Core curriculum: compulsory courses

The core curriculum consists of the following compulsory courses:

<u>code</u>	<u>course</u>	<u>credits</u>
AR8003TU	Legal and Governance	5
CME2300	Financial Engineering	4
CIE4381	Engineering Asset Management	4
SPM8002	Process Management	7
CIE4130	Probabilistic Design	4
EPA1433	Intercultural relations and project management*	5
SPM8000	Project Management	7
CME1201	Collaborative Design and Engineering	5
CME2200	Dynamic Control of Projects	4
CIE4030	Methodology for Scientific Research	3
WM0312CIE	Philosophy, Technology Assessment and Ethics	4
CIE4120	Information Systems for the Construction Industry	4

* This course is offered by Leiden University at the The Hague campus.

Article 4 – Synchronisation Courses

All students in the MSc CME must follow either one of the following synchronisation courses depending on their bachelor background or equivalent study:

- Students with a Bachelor Bouwkunde/Architecture, or any equivalent Bachelor degree, must follow:

<u>code</u>	<u>course</u>	<u>credits</u>
WI2180LR-II	Probability and Statistics	4

- Students with a Bachelor Civiele Techniek/Civil Engineering or a Bachelor Technische Bestuurskunde/Systems Engineering, Policy Analysis & Management, or any equivalent Bachelor degree, must follow:

<u>code</u>	<u>course</u>	<u>credits</u>
CME1220	Integration of Architecture & Engineering	3

Article 5 – Electives

- For all elective courses chosen, the agreement of the MSc coordinator and the Board of Examiners is required on beforehand, except for the courses explicitly mentioned in this article. For approval, the students submit their individual

study plan using My Study Planning as described in article 2.3.

2. The CME degree programme has four specialised elective bundles and a set of general electives:

- a. Digital Design & Asset Management
- b. Integral & Multidisciplinary Design
- c. Management of Projects
- d. Legal and Finance
- e. General Electives

a. Specialised elective bundle Digital Design & Asset Management (DDAM)

Students who would like to graduate on the topic of Digital Design & Asset Management (DDAM) are strongly advised to choose their electives from the following list of courses:

<u>code</u>	<u>course</u>	<u>credits</u>
CME2210	Open Design & Construction Management	4
CIE4170	Construction Technology of Civil Engineering Structures	4
CIE4391	Quantitative Asset Management	4
CIE5310	Probabilistic Design in Hydraulic Engineering	3
EPA1315	Data Analytics and Visualization	5
EPA1333	Computer Engineering for Scientific Computing	4

b. Specialised elective bundle Integral & Multidisciplinary Design (IMD)

Students who would like to graduate on the topic of Integral & Multidisciplinary Design (IMD) are strongly advised to choose their electives from the following list of courses:

<u>code</u>	<u>course</u>	<u>credits</u>
CME5000-19	Procurement of Complex Projects	4
CIE5981	Forms of Collaboration in Civil Engineering	4

c. Specialised elective bundle Management of Projects (MoP)

Students who would like to graduate on the topic of Management of Projects (MoP) are strongly advised to choose their electives from the following list of courses:

<u>code</u>	<u>course</u>	<u>credits</u>
CIE5981	Forms of Collaboration in Civil Engineering	4
SPM9448	Methods of Risk Analysis and Management	5
SPM9716	Cost-Benefit Analysis: Theory and Applications	4
EPA1144	Actor and Strategy Models	5
CME5000-19	Procurement of Complex Projects	4

MSc courses in conjunction with the specialised elective bundle, conform the rules laid down in section 1.

d. Specialised elective bundle Legal and Finance (L&F)

Students who would like to graduate on the topic of Legal and Finance (L&F) are strongly advised to choose their electives from the following list of courses:

<u>code</u>	<u>course</u>	<u>credits</u>
AR0880	Real Estate Valuation	7
AR1MBE010	Management & Finance	6
AR1RO25	Real Estate Management	7
SPM9716	Cost-Benefit-Analysis: Theory and Applications	4
CME5000-19	Procurement of Complex Projects	4
CIE5981	Forms of Collaboration in Civil Engineering	4

e. General electives

Students may include any of the following courses in their elective space:

<u>code</u>	<u>course</u>	<u>credits</u>
WM0201TU-Eng	Technical Writing	2

Students may choose only 1 of the following courses in their elective space:

<u>code</u>	<u>course</u>	<u>credits</u>
CIE4061	Multidisciplinary Project	10
CIE5050-09	Additional Graduation Work	10
CME2100-11	Research Internship	10

3. A free elective course may be any Master's level course at a Dutch university or at an international university which TU Delft has an exchange-contract with, provided that the course is in conjunction with the degree programme CME.

Section 2 – Annotations

Article 6 – Annotations

After prior approval by the Board of Examiners, students can opt for the annotations mentioned in the Annex of Civil Engineering among which Integral Design and Management.

1. The examination programme for students who have opted for the annotation Integral Design and Management must include the following courses in their electives:

a. At least 14 credits from a Master track, choose from i, ii, iii, iv, or v:

i. Hydraulic Engineering

<u>code</u>	<u>course</u>	<u>credits</u>
CIE3330	Hydraulic Structures 1	4
CIE4330	Ports and Waterways	4
CIE5313-18	Hydraulic Structures 2	4
CIE5305	Bored and Immersed Tunnels	4

ii. Building Engineering

<u>code</u>	<u>course</u>	<u>credits</u>
CIE3340	Building Structures I	4
CIE4281	Building Structures II	4
CIE4210	Parametric Design	3
CIE5251	Special Structures	4

iii. Railway Engineering

<u>code</u>	<u>course</u>	<u>credits</u>
CIE4874	Elements of Railway Engineering	4
CIE5875	Railway Asset Management	4
CIE5874	Railway Assets: Performance by Design	4
CIE4870	Structural Design of Railway Track	4

iv. Offshore and Dredging Engineering

<u>code</u>	<u>course</u>	<u>credits</u>
OE44005	Introduction to Offshore Engineering	3
OE44010	Introduction to Dredging Engineering	4
OE44115	Arctic Engineering	4
OE44120	Offshore Wind Farms Design	4

v. Another Specialization – to be determined with and approved by the IDM annotation coordinator.

b. A Multidisciplinary Project (CIE4061-09/Multidisciplinary Project, Civil Engineering Consultancy Project) or a Research Internship (CME2100-11/Internship) worth 10 credits.

The Multidisciplinary Project or Internship must focus on the topic of integral design and management. The coordinator will test the hypothesis of the project and the way in which it has been tackled against the extent to which integral design and management issues have been integrated into the project.

c. A Master Thesis worth 32 credits in line with what is stipulated in article 2 section 2. The Master Thesis must partly focus on the topic of integral design management. The coordinator will test the hypothesis of the project and the way in which it has been tackled against the extent to which integral design and management issues have been integrated into the project.

d. Deviation from the list of electives may be possible, but only after the explicit approval of the IDM annotation coordinator.

2. Students who complete the annotation successfully, receive an annotation Integral Design and Management with their degree certificate.

Section 3 – Transitional programme

Article 7 - Bridging Programmes

1. Students with a Bachelor degree awarded by a Dutch university of professional education (HBO) can only be admitted to the MSc CME after finalising the Bridging programme CME (Premaster) as mentioned in article 8.

1. Students with a Bachelor degree from either:

- Delft University of Technology other than Bouwkunde/Architecture, Civiele Techniek/Civil Engineering or Technische Bestuurskunde/Systems Engineering, Policy Analysis & Management,
 - Eindhoven University of Technology other than Bouwkunde/Architecture, Technische Bedrijfskunde or Innovation Sciences, or
 - University of Twente other than Civiele Techniek/Civil Engineering or Technische Bedrijfskunde,
- must follow the following minor:

<u>code</u>	<u>course</u>	<u>credits</u>
CT-MI-174	Project Management: from Nano to Mega (minor)*	30

* Alternatively, students with either aforementioned Bachelor degree may request permission to do an individually tailored program or an equivalent set of courses, pending approval of the Director of Studies.

Students with either aforementioned Bachelor degree who have not completed the above minor, or an equivalent program, must follow the Bridging Programme CME (Premaster) as described in article 8.

2. Student who have done the Bridging Programme CME (Premaster) at Eindhoven University of Technology or University of Twente, must complete the following courses:

<u>code</u>	<u>course</u>	<u>credits</u>
WI1708TH1	Analyse 1	3
WI1808TH1	Linear Algebra	3

Article 8 – Bridging programme CME (Premaster)

Students of the CME bridging programme must complete all of the following courses at TU Delft adding up to 32 credits:

<u>code</u>	<u>course</u>	<u>credits</u>
CT1730HBO	Introduction to Geotechnical Engineering	3
WI1708TH	Analysis, part 1, 2 and 3	9
WI1807TH1	Linear Algebra 1	3
WM0201TU-Eng	Technical Writing	2
WI1909TH	Differential Equations	3
CTB3420	Integral Design of Infrastructure	4
WI2031TH	Kansrekening en statistiek voor HBO-instromers	3
Choose one out of two:		
CTB2410	Waterbouwkunde	5
CTB2420-17	Hydrologie	5

Article 9 – Special requirements bridging programme

For the courses Analysis 1, 2 and 3, the weighted average must be at minimum a 6.0., in which for each part at least a 5.0 must be obtained. The parts as well as the weighted average are not rounded off.

Section 4 – Deviate from examination programme

Article 10 - Deviate from the examination programme

The board of examiners may allow students to deviate from the examination programme.

Article 11 - When the rules do not provide

Insofar as these Implementations Regulations do not provide for specific circumstances, for example when a course from an approved examination programme is no longer offered, the Board of Examiners will make a decision that is in line with the Implementation Regulations to every extent possible and the Board of Examiners will also take article 6 of the Rules & Guidelines into account.

Section 5 – Examinations and Practical Exercises

Article 12 - Number and frequency of the examinations and practical exercises

1. Written and oral (interim) examinations are taken immediately following the teaching period in which the education is provided.
2. At least one repeat opportunity is offered for each written (interim) examination. A timetable of these repeat examinations is published at the beginning of the study year.
3. Practical exercises can be done in agreement with the relevant timetables.

Article 13 - Format of examinations

1. The (interim) examinations are taken in the manner prescribed for the relevant course in the digital study guide.
2. (Interim) examinations of courses, which are given by another programme to the CME programme are taken in the manner determined in or in accordance with the Education and Examination Regulations for CME.

Article 14 - Participation in practical exercises

1. The educational programme Construction Management & Engineering consists a number of practical exercises in the form of design projects. Practical exercises can also be a part of a course, which is completed with a written exam. More information about these practical exercises can be found in the course descriptions. For the accomplishment of the master thesis, there is a digital and hardcopy guide available.³
2. Usually the opportunity to participate in a project or practical is offered only once per year. If – for reasons beyond his control – a student has not been able to participate in a project or practical in accordance with the regular schedule, the Examination Board will try – to the best of its ability – to enable the student still to carry out the project or practical.

Section 6 - Admission to the Master Thesis Project

Article 15 - Conditions for admission to the Master Thesis Project

Students may start their graduation work, or Master Thesis Project, as described in article 2.2, only if they meet the following requirements:

- a. The student has completed the synchronisation courses, as described in article 4, and
- b. The student has additionally completed the following courses:

<u>code</u>	<u>course</u>	<u>credits</u>
CIE4030	Methodology for Scientific Research	3
WM0312CIE	Philosophy, Technology Assessment and Ethics	4

- c. The student has completed at least 76 credits worth of courses out of the minimum 120 credits required for the study programme, or out of the minimum 84 credits required excluding the graduation work, or Master Thesis Project. This means that the student has at most 8 credits worth of courses to complete during the graduation work.

³ You can contact the CME secretariat for the guide.

Section 7 – Transitional rules

Article 16– Transitional ruling

1. For students of cohort 2018-2019, or earlier, with the course AR8002TU Legal and Governance (7 credits) in their compulsory program, the following transitional ruling applies:
 - In the academic year 2019-2020, two resits will be offered for AR8002TU Legal and Governance worth 7 credits.
 - Alternatively, students are allowed to follow and take the exam of the course AR8003TU Legal and Governance worth 5 credits.
 - If a student requires the 2 remaining credits to reach the minimum total of 120 credits for the MSc, these 2 credits may be addressed by any elective as described in Article 5.

2. For students of cohort 2018-2019, or earlier, with the course CME1210-14 Infrastructure Asset Management (7 credits) in their compulsory program, the following transitional ruling applies:
 - CME1210-14 is replaced by CIE4381 Engineering Asset Management worth 4 credits.
 - The remaining 3 credits may be addressed by either one of the following courses:
 - CIE4120 Information systems for the Construction Industry, 4 credits
 - CIE4170 Construction Technology of Civil Engineering Structures, 4 credits
 - CIE4391 Quantitative Asset Modelling, 4 credits
 - CIE4481 Systems Engineering Management, 4 credits
 - If, after fulfilling above requirements, a student still requires 3 additional credits to reach the minimum total of 120 credits for the MSc, these 3 credits may be addressed by any elective as described in Article 5.

3. For students of cohort 2018-2019, or earlier, with the course CME1200 Collaborative Design and Engineering (7 credits) in their compulsory program, the following transitional ruling applies:
 - Students must follow and take the exam of the course CME1201 Collaborative Design and Engineering worth 5 credits.
 - If a student requires the 2 remaining credits to reach the minimum total of 120 credits for the MSc, these 2 credits may be addressed by any elective as described in Article 5.