

Education and Examination Regulations
Programme specific appendix Bachelor's programme Civil
Engineering

2020-2021

Introduction

This document is the Students' Charter CE, hereinafter referred to as SC-CE, and consists of the following:

- Study Guide Civil Engineering
- The programme-specific appendix for the Bachelor's programme Civil Engineering, consisting of:
 - o Programme-specific appendix to the Education and Examination Regulations
 - o Rules and Regulations of the Examination Board

Rights can be derived from the SC-CE by the faculty as well as by the students of the programme for which the student has enrolled. This does not apply with respect to all other written and electronic publications, such as:

- The information on the website: www.utwente.nl/ce (except the SC-CE)
- The study catalogue of the UT: <http://osiris.utwente.nl/student/OnderwijsCatalogus.do>
- Brochures and manuals

The SC-CE is published on the website of the programme. A printed version will be made available free of charge upon request.

In situations not covered by the SC-CE, a decision will be made by the dean or by the Examination Board, depending on the responsibilities defined by law. The same applies in the event of (alleged) ambiguity, inconsistencies, differences in interpretation and/or (apparently) conflicting texts. The dean or the Examination Board will inform the involved examiner(s) and/or the student(s) of the decision.

In cases in which strict application of the SC-CE would cause clearly unintended or unreasonable situations, the Examination Board, the dean or the programme director can deviate from the regulations, provided that this does not have any negative effects for the student. This decision must be motivated in writing and must be communicated to the student, the Examination Board, the dean, the programme director and Bureau of Educational Affairs (BOZ).

Articles in this regulation refer to this SC-CE. If an article refers to legislation, the reference is to the Higher Education and Research Act (WHW), unless stated otherwise.

Reference:

Enschede, 11 June 2020

Prof. dr. ir. H.F.J.M. Koopman

Dean of the Faculty of Engineering Technology

Contents

Introduction	2
Definition of terms for Civil Engineering	5
Practical Information	9
<i>Programme committee (OLC)</i>	9
<i>Examination Board</i>	9
<i>Study Association</i>	9
<i>Facilities</i>	10
<i>Timetables</i>	11
<i>Education Systems</i>	11
<i>Quality Assurance</i>	11
<i>Student Counselling</i>	12
<i>Practical Realization of Counselling</i>	12
<i>Complaints</i>	13
Programme-specific appendix to the Education and Examination Regulations for the Bachelor's Civil Engineering programme	14
1. <i>Content of the programme and associated examination</i>	14
1.1 Objectives of the programme	14
1.2 Teaching methods	14
1.3 Examination	15
2. <i>TOM</i>	17
2.1 TOM2.0	17
2.2 Coherence of study units	17
2.3 Validity of results	18
3. <i>Binding Recommendation on continuation of studies (BSA)</i>	19
4. <i>Organization of the programme</i>	20
4.1 Study load of the programme and each of its components	20
4.2 Practical Exercises	20
4.3 Period of validity of passed examinations	20
4.4 Order requirements	21
4.5 Requirements for the composition of the profiling track (minor)	21
4.6 Master programmes	22
5. <i>Transition regulations</i>	23
6. <i>Language</i>	23
<i>Appendix 1. Final Qualifications</i>	24
Examination Board Rules and Regulations Civil Engineering	26

Definition of terms for Civil Engineering

The terms used in this Programme specific attachment should be interpreted as follows:

- Academic Year:** The period beginning on 1 September and ending on 31 August of the following year.
- Assessment plan:** A plan indicating how the testing of a module is organised. At first, it states the grading of the study units of the module, and secondly, the conditions for passing the entire module (including possible compensation rules within the module and compensation rules for study units or parts of study units of different modules).
- BSA:** Binding Recommendation on continuation of studies. Student progress evaluation as referred to in Article(b), paragraphs 1 and 2 of the Higher Education and Research Act involving expulsion from the programme in accordance with Article 7.8 (b), paragraph 3 of the Higher Education and Research Act. A BSA is issued by the Programme Board on behalf of the institutional administration.
- Canvas:** University of Twente's digital learning environment.
- Colstruction:** Combination between a lecture and a tutorial.
- Compulsory holiday:** Required day off from work.
- Curriculum:** The aggregate of required and elective study units constituting a degree programme as laid down in the programme specific appendix.
- Degree programme:** Bachelor's degree programme as referred to in the programme specific appendix to these Education and Examination Regulations.
- European Credit (EC):** A unit of 28 study load hours, in accordance with the European Credit Transfer System. A full-time academic year consists of 60 credits, equal to 1680 hours of study (Article 7.4 of the Higher Education and Research Act).

ET Faculty:	Faculty of Engineering Technology of the University of Twente, one of the five faculties at the University of Twente. ET combines Mechanical Engineering, Civil Engineering and Industrial Design Engineering. The faculty has approximately 1800 bachelor's and master's students, 300 employees and 150 PhD candidates.
Exam:	An investigation into the knowledge, insight, or skills of the student, as well as the assessment of the results of that investigation (Article 7.10 of the Higher Education and Research Act); an exam may consist of a number of tests.
Examination Board:	The Examination Board is the body that objectively and professionally assesses whether a student meets the conditions laid down in the Education and Examination Regulations regarding the knowledge, understanding and skills required to obtain a degree.
Examiner:	The individual appointed by the Examination Board to administer examinations and tests and to determine the results, in accordance with Article 7.12 (c) of the Higher Education and Research Act.
Exemption:	Establishing by the Examination Board that a student has acquired competences, i.e. on account of exams or final examinations in the higher education domain passed earlier, or knowledge or skills acquired outside the higher education domain, that are comparable in content, size and level to one or more study units or parts thereof.
Faculty Board:	Head of the faculty (Article 9.12 of the Higher Education and Research Act).
HERA:	The Higher Education and Research Act (abbreviated in Dutch to WHW), Bulletin of Acts and Decrees 1992, 593, and its subsequent amendments.
Institution:	University of Twente.

Institutional administration:	The Executive Board, except as otherwise specified.
Module:	A total of 15 EC of one or more study units in which disciplinary knowledge, skills and attitude are developed and assessed in an as integrated and/or coherent way as possible
Module coordinator:	The individual charged by the Programme Board with organising the module.
Module examiner:	The individual appointed by the Examination Board to determine the results of the module in accordance with Article 7.12c of the Higher Education and Research Act.
Osiris:	System designated by the institutional administration for registration and for providing information on all relevant data related to the students and the university, as described in the Higher Education and Research Act.
Panel discussion:	Panel discussions are held after each module of every academic year (B1, B2) with students who participated in the programme in that module.
Practical exercise:	<p>A practical exercise as referred to in Article 7.13, paragraph 2 (d) of the Higher Education and Research Act is a study unit or a study unit component emphasizing an activity that the student engages in, such as:</p> <ul style="list-style-type: none"> • carrying out literature research, completing an assignment or preparing a preliminary design, writing a thesis, article or position paper, or giving a presentation in public; • carrying out a design or research assignment, doing tests and experiments, participating in practicals, practising skills; • work placement, fieldwork or excursions; • participating in other educational activities deemed necessary and aimed at achieving the required skills, such as targeted practice of clinical skills in a specifically equipped skills lab.
Programme:	The Bachelor's programme referred to in the programme-specific appendix of these education and examination regulations.

Programme Board:	The committee charged by the Faculty Board with managing the programme. This may also be an individual person. In which case the term programme director is used.
Programme Committee:	Programme Committee as referred to in Art. 9.18 of the Higher Education and Research Act.
Student:	Anyone enrolled in a programme in accordance with article 7.34 and 7.37 of the Higher Education and Research Act.
Study Adviser:	Person appointed by the Faculty Board who acts as contact between the student and the programme, and in this role represents the interests of the students, as well as fulfilling an advisory role.
Study unit:	A programme component as defined in Article 7.3, paragraphs 2 and 3 of the Higher Education and Research Act. Each study unit is concluded with an exam.
Test:	Part of an exam. If the exam for a study unit consists of a single test, then the result of that test will count as the result of the exam. A test can be split into components and administered during multiple sessions.
Test result:	A result that is part of the final result for a module.
UT:	The University of Twente.
Working day:	Any day from Monday to Friday with the exception of official holidays and the prearranged compulsory holidays ('brugdagen') on which the staff are free.

Practical Information

Dean of the faculty	<i>Prof. dr. ir.</i> H.F.J.M. Koopman
Programme director	<i>Dr. ir.</i> D.C.M. Augustijn
Programme coordinator	M. Hamhuis
Study Adviser	<i>Ir.</i> J. Roos – Krabbenbos
Pre-Master coordinator	J.G.M. Kemna
Bureau of Educational Affairs (BOZ)	BOZ-CE-CES@utwente.nl

Programme committee (OLC)

The programme committee (OLC) is responsible for monitoring and approving the content and the quality of the Civil Engineering programmes. Employees, scientific staff and the students are equally represented in the programme committee.

Chair: *Prof. dr. ing.* K.T. Geurs

Bureau of Educational Affairs (BOZ) is the secretariat of the programme committee.

Examination Board

The Examination Board makes objective and well-grounded decisions on whether the student meets the requirements in terms of his or her end level, and guards the standards for the end level.

Assessment is an important subject in this. Assessment refers to all sorts of assessments: oral and written exams, papers, bachelor- and master theses and so on. The composition of the Examination Board for Civil Engineering can be found on the [website](#) of the CE/CEM/CME Examination Board.

Study Association

ConcepT (www.concept.utwente.nl)

Facilities

1. For all communications in connection with the programme as well as all administrative procedures internet or intranet will be used. The University of Twente uses an electronic learning environment. In the organization of the Bachelor Civil Engineering (CE) programme the assumption is that students are in possession of a laptop. Engineering Technology (ET) students can use the offer of the Notebook Service centre (NSC) for this purpose. Via their laptop, students can use the network of the university, which provides access to the internet and intranet.
2. Use of computer and network facilities for other purposes than study may be regarded as misuse.
3. When they first enrol with the University of Twente, each student will be provided with an individual student email account.
4. The programme Civil Engineering employs a site on the electronic learning environment. All electronic communications by the programme will be executed via this site. All students are requested to enrol for this programme site from the start of their study.
5. The university has lecture rooms and tutorial rooms, accommodations for guided and independent self-study, a library, and research facilities for educational purposes. The university offers limited facilities for free computer access.
6. The programme will provide accommodation to the study association for their activities.
7. Misuse of or damage to facilities of the University of Twente, or misconduct can, in addition to leading to claims for compensation, lead to a decision by the dean to temporarily exclude the student from participation in the programme, tests, exams and examinations.
8. Books and journals relevant to B-CE can be found in the Central Library of the UT. Regulations concerning the quantity of books on loan, the lending period and fines are determined by the University Library.
9. If excursions, work visits, field work, etc. are a part of the programme (either compulsory or optional) that students are expected to take part in, the maximum contribution to the costs per student per excursion will be 10 euro, for a maximum of 4 excursions per year. Any costs exceeding this will be for the account of the university. If the above activities take more than one day, the programme will take care of proper accommodation.

Timetables

- Within reason, the parts of the programme will be spread evenly over the year, ensuring that the study load (including assignments, projects, practical exercises, etc.) is spread evenly over the weeks of the programme.
- The timetable for each year consists of two semesters or four quarters. The last two weeks of each quarter are usually reserved for exams/resits and/or finishing assignments and/or projects. The teaching of the minor in year B3 covers two quarters. The study load of these subjects is distributed over an entire semester.

Education Systems

- The University of Twente uses an electronic learning environment (Canvas, <http://canvas.utwente.nl>). In principle, Canvas contains detailed information for each subject and the related assignments, etc.
- The University of Twente uses an electronic student information system (Osiris, <http://osiris.utwente.nl/student>). Osiris contains information about the programme and general course information. It is used to enrol for modules (a component of the study programme) and for the registration of grades.

Quality Assurance

Quality Assurance involves at least the following annual activities:

- Surveys carried out at the end of each quarter
These surveys may be conducted among the participating students, at the end of each quarter.
- Comprehensive evaluation of a component of the study programme
Upon the request of the OLC, the Civil Engineering Evaluation Committee performs evaluation reports each quarter which are discussed in the OLC meeting.
- Panel discussion
Panel discussions are held after each module of every academic year (B1, B2. If desired a panel discussion could also be organised in B3) with students who participated in the programme in that module.
- Data on performance and transition
Every year, the CES (Centre for Educational Support) produces standardized overviews of performance and transition.
- Yearly analysis of the results of the NSE (national student survey) and the NAE (national alumni survey)

- Performance appraisals
Results of activities stated in the first three items are brought to the attention of chair holders, to allow them to address these issues in their annual performance appraisals with all employees.
- Educational Professionalization
Members of the scientific staff must have a university teaching qualification (Basis Kwalificatie Onderwijs) or given the opportunity to acquire/maintain this qualification.
- Occasional activities
If necessary, in addition to the activities mentioned above, further assessments are carried out (such as assessment of facilities, how time is spent, exit evaluations, surveys among alumni, etc.)

Student Counselling

- The Study Adviser is responsible, among other things, for the coordination and the quality of counselling.
- Each first-year student is assigned a mentor at the start of their Bachelor CE programme. The mentor is an employee of the faculty. In consultation with the Study Adviser, a student may be assigned another mentor in their first year. The mentor will provide guidance and advice to the student in their first year.
- The Study Adviser signals, gives reports and helps in finding solutions. Additionally, he or she gives - solicited or unsolicited - advice to the Examination Board, to the programme director, to individual lecturers/examiners. He or she also provides advice to students in connection with identified bottlenecks in the study load and study progress of individual students or groups of students.

Practical Realization of Counselling

Starting points for counselling of Bachelor students:

- Aimed at all students during their entire programme;
- Both reactive and pro-active (focused on career and study progress);
- Pro-active;
 - Information meetings in B1 on B2, in B2 on B3, information on BSc-thesis assignment and the master programmes of Civil Engineering
 - Invitation of first-year students by lecturer/mentor (introduction conversation and during the first year based on the progress)

- Invitation of second-year students by Study Adviser (1 time)
 - Invitation of students without progress by Study Adviser
 - Invitation by the Study Adviser following a report (e.g. by a teacher or by a fellow student)
- The Study Adviser holds final responsibility for the student counselling within a programme.

Complaints

Complaints about the (organization of the) programme can be sent to the programme director, the programme coordinator, or the study association. Complaints about the (organization of) tests, exams and examinations can be sent to the Examination Board. Appeals, complaints and objections are possible via the Complaints Desk, located on the second floor of the Vrijhof building.

Programme-specific appendix to the Education and Examination Regulations for the Bachelor's Civil Engineering programme

The rules set out in this appendix are part of the programme-specific part of the Students' Charter, including the education and examination regulations, of the Civil Engineering Bachelor's programme (B-CE, CROHO number 56952) of the Faculty of Engineering Technology of the University of Twente. Any references in this appendix to the articles in 'OER2020' refer to the Education and Examination regulations for the Bachelor's Programmes 2020-2021.

1. Content of the programme and associated examination

1.1 Objectives of the programme

The programme aims to offer such knowledge, skills and understanding in the area of Civil Engineering, as well as the subareas Business Administration and Public Administration, that graduates are qualified to enter into an independent profession at the Bachelor level, and for the master's programme.

1.2 Teaching methods

- Lecture: A plenary meeting for students intended for the transfer of information.
- Tutorial: A meeting (for a subgroup of the population) intended to enable students to process the subject matter
- Colstruction: Combination between a lecture and a tutorial.
- Assignment: The execution of a design or research assignment.
- Practical: A practical training in the sense of art. 7.13, section 2 item d of the WHW. This concerns the participation in an educational activity aimed at the acquisition of skills, such as making an assignment or a test design, carrying out tests and experiments, and taking part in field work or an excursion.
- Project: Executing a design or research assignment as a team.

1.3 Examination

The B-CE programme has one examination: the final Bachelor examination.

The Civil Engineering programme consists of the following components:

- The core programme, consisting of 8 modules
- The differentiation programme, consisting of:
 - Two elective modules (Minor)
 - A graduation semester (modules 11 and 12)

In the table below, an overview of the programmes' modules including study units is given.

The course descriptions, including testing methods as referred to in art. 4.4 section 1 of the OER2020, can be found in the Osiris catalogue:

<https://osiris.utwente.nl/student/OnderwijsCatalogus.do>. For the number and order of tests and practical exercises see the test schedule of the module, which is published on the Canvas site of that module (OER2020 article 4.4 section 4).

Module	Course	Name	EC
Module 1:	202000041	Introduction to Civil Engineering	15
Introduction to	202000042	Fundamentals of Civil Engineering	2
Civil	202000043	Structural Mechanics 1	4
Engineering	202000044	Project Civil Engineering Design	5
	202001189	Introduction to Mathematics and Calculus 1A	4
Module 2:	202000048	M2 B-CE: Water Management	15
Water	202000049	Fluid Mechanics 1	2
Management	202000050	M2 B-CE: Measurements in Fluid Mechanics	1
	202000051	M2 B-CE:Water	2.5
	202000052	M2 B-CE:Policy Processes	1.5
	202000053	M2 B-CE: Matlab	1
	202000054	M2 B-CE:Project Blue Nile	4
	202001196	Calculus 1B	3
Module 3:	202000056	M3 B-CE: Traffic and Transport	15
Traffic and	202000057	M3 B-CE:Theory Traffic & Transport	5
Transport	202000058	M3 B-CE: Project Traffic & Transport	7
	202001204	Linear Algebra	3
Module 4:	202000060	M4 B-CE: Designing Constructions	15
Designing	202000061	M4 B-CE:Structural Mechanics	3
Constructions	202000062	M4 B-CE: Project and Integrated test	9
	202001220	Calculus 2	3

Module 5:	202000064	M5 B-CE: Safety and Risk in Deltas	15
Safety and	202000065	M5 B-CE:Soil Mechanics	2
Risk in Deltas	202000066	M5 B-CE:Fluid Mechanics 2	2
	202000067	M5 B-CE:Water Management	2.5
	202000068	M5 B-CE:Project Flood Risk	6
	202000069	M5 B-CE: Matlab	0.5
	202001226	Vector Calculus	2
Module 6:	202000070	M6 B-CE: Sustainable Civil Engineering	15
Sustainable		M6 B-CE: Project Sustainable Civil Engineering	15
Civil			
Engineering	202000071		
Module 7:	202000072	M7 B-CE: Area Development	15
Area	202000073	M7 B-CE: Practical GIS	2
Development	202000074	M3 B-CE:Economic Assessment	2
	202000075	M7 B-CE: Spatial Policy and Law	2
	202000076	M3 B-CE:Stakeholder Analysis and Management	2
	202000077	M7 B-CE: Project Area Development	7
Module 8:		M8 B-CE:Modelling and Analysis of Stochastic	15
Modelling and	202000078	Processes	
Analysis of	202000079	M8 B-CE:Multidisciplinary project	2
Stochastic	202000080	M8 B-CE: Simulation and Heuristics	3
Processes	202000081	M8 B-CE: Project Micro Simulation and Heuristics	3.5
	202000082	M8 B-CE:Project Micro Simulation of Traffic Flow	1.5
		M8 B-CE: Project Traffic Flow Dynamics and	5
	202000083	Simulation	
Module 9:			15
Multifunctional			
Flood			
Defences	202000093	Minor B-CE: Smart Cities - Multifunctional Flood	
		Defences	
Module 10:		Minor B-CE: Smart Ways To Make Smart Cities	15
Smart ways to	202000099	Smarter	
make smart	202000100	Introduction to Smart Cities	6
cities smarter	202000101	Smart City Engineering Project	9
Module 11:	202000085	M11 B-CE: Preparation BSc-thesis Civil Engineering	15
Preparation	202000086	M11 B-CE:Production of Knowledge	7
BSc-thesis			8
Civil			
Engineering	202000087	M11 B-CE:Preparation BSc Thesis	
Module 12:	202000089	M12 B-CE: Bachelor Thesis	15
Bachelor			15
Thesis	202000090	M12 B-CE:BSc Research Assignment	

2. TOM

In 2013 the UT implemented project-led education (called TOM, Twente Educational Model) in all its BSc programmes. In TOM, we work using thematic modules worth 15 EC each. Each module focuses on a particular project.

The programme Civil Engineering covers three academic years. An academic year is divided into four quarters with a schedule of ten weeks. A year consists of four thematic modules (15 EC each). A module consists of different, interconnected study units. The modules can be categorised into 3 phases:

- Module 1 till 4, provided in the first year of the programme, offers an introduction into Civil Engineering and covers the three core themes: building, water and traffic. These modules are orientating and selective modules (selective because of the Binding Recommendation at the end of the first year).
- Module 5 till 8 covers the second year of the programme and consists of modules with integrated topics. Students are provided with more in-depth knowledge.
- The third year of the programme consists of the minor (elective space, module 9 and 10) and the graduation semester (module 11 and 12).

2.1 TOM2.0

As of academic year 2020-2021, an adapted form of TOM will be implemented: TOM2.0.

TOM 2.0 holds on to the project-led education, while having the option to release the strict rule of 0 or 15 European Credits (ECs) per module. Within TOM2.0, the CE-modules will still be thematic, project-led modules consisting of several study units¹. The main difference is that in most modules, the credits of the study units will be registered separately. Compensation within a module will not be allowed anymore.

Although the study units are registered separately, the study units within a module are coherent and should be taken together. In case of retaking certain study units, students are urged to take no more than 15 EC per quartile.

2.2 Coherence of study units

The programme consist of 3 integrated modules (module 6, 9 and 12) and 9 coherent modules that have different study units. The overview of modules and study units can be found in paragraph 1.3 or

¹ A module consists of several study units. ECs are rewarded at the study unit level.

on the [programmes' website](#). For each module, a module manual will be published on the Canvas page of the module. In this manual students can find of which parts a study unit consists.

2.3 Validity of results

Results remain valid indefinitely in case a study unit is passed. Otherwise a study unit needs to be redone completely, except for practicals.

Results obtained in 2019-2020 printed bold in the table below, will remain valid in 2020-2021.

The validity of these study units is extended automatically.

	BLOCK 1A		BLOCK 1B		BLOCK 2A		BLOCK 2B	
B1	Module 1 - 20190076	EC	Module 2 - 201800152	EC	Module 3 - 201800429	EC	Module 4 - 201800507	EC
	Introduction to Civil Eng.		Water Management		Traffic and Transport		Designing Constructions	
	Mathematics A + B1	4	Calculus 1B	3	Traffic & Transport Theory	5	Professional Skills**	0
	Construction Materials	1	Fluid Mechanics 1	2	Traffic & Transport Project	7	Calculus 2	3
	Structural Mechanics 1	3	Water	2.5	Linear Algebra	3	Structural Mechanics 2	3
	Fundamentals of Civil Eng.	1	Policy Processes	1.5			Project Design of Constructions	4.5
	Matlab	0.5	Project Water Management* - Matlab* - Project*	5			Integral Test	4.5
	Civil Eng. Design Project	5.5	Measurements in Fluid Mechanics	1				
B2	Module 5 - 201700181	EC	Module 6 - 201800169	EC	Module 7 - 201900232	EC	Module 8 - 201400147	EC
	Safety and Risk in Delta's		Sustainable Civil Eng.	15	Area Development	15	Mod. & analysis of stoch. Proc.	
	Vector Calculus	2	Design, Engineering & Materials		Project Area Development	7	Tr. Flow Dynamics and Simulation	5
	Fluid Mechanics 2	2	Engineering for Sustainable Development		Practical GIS	2	Project Micro Simulation Tr. Flow	1.5
	Soil Mechanics	2	[module 6 must be passed completely!]		Spatial Policy & Law	2	Simulation and Heuristics	3
	Water Management	3			Stakeholder Analysis & Mngt	2	Project Simulation and Heuristics	3.5
	Project Water Safety* - Matlab* - Project*	6			Spatial Economics	2	Multidisciplinary Project	2
B3	Module 9	EC	Module 10	EC	Module 11 - 201500311	EC	Module 12 - 201500312	EC
	Minor		Minor		Preparation BSc-thesis Civil Engineering		BSc-Thesis Assignment Civil Eng.	15
	Minor***		Minor***		Production of Knowledge Thesis Proposal and Evaluation	7.5 7.5	BSc-Thesis	

* Project in Module 2& 5: students can retake Matlab separately, if project is passed. Credits will be granted if both Matlab and Project are passed.

** Professional Skills (Module 4): sufficient (S)/insufficient (U). This study unit is conditional and must be sufficient.

*** Minor: validity of study units in minor modules: see rules for the minor of your choice (check course catalogue, module manual or coordinator of the minor).

For CE-minors, see FAQ.

3. Binding Recommendation on continuation of studies (BSA)

In accordance with OER2020 article 6.3, paragraph 3C, the Programme Board may set programme-specific requirements that must be met. Students who started their CE education in 2019-2020 must meet at least one of the rules below: either the 2019-2020 rule, and/or the new rule (as of 2020-2021). Students who started their CE education in 2020-2021 must meet the 2020-2021 rule.

BSA rule 2019-2020

At the end of the first year of the B1 programme Civil Engineering, the student has:

- acquired at least 45 EC in the B1 phase of the programme (passed 3 modules or a combination of coherent and separate study units that are representative of these 45 ECs; AND
- has at least a 5.5 or higher for at least 3 of the 4 mathematics elements of year 1; AND
- has at least a 5.5 or higher for at least 1 out of 2 elements of structural mechanics of year 1.

BSA rule 2020-2021

At the end of the first year of the B1 programme Civil Engineering, the student has:

- acquired at least 45 EC of B1 study units of the CE-bachelor programme (grade 6.0 or higher); AND
- 4 out of 7 technical study units² need to be passed (grade 6.0 or higher)

² The technical courses in the B1 CE-programme are: Structural Mechanics 1, Structural Mechanics 2, Fluid Mechanics 1, Introduction to Mathematics & Calculus 1A, Calculus 1B, Linear Algebra, and Calculus 2.

4. Organization of the programme

4.1 Study load of the programme and each of its components

The programme is a full-time programme. The differentiation programme of the B-CE programme consists of a minor and the Bachelor thesis.

The study load of the Civil Engineering programme is 180 EC of which:

- 120 EC for the core programme
- 30 EC for the minor (elective modules)
- 30 EC for the graduation semester

4.2 Practical Exercises

Each module of the study programme in B1 and B2 of the Civil Engineering programme has a practical exercise in the form of a project that is an integral part of the module. The graduation semester (second semester of B3) of the Civil Engineering programme also includes a number of practical exercises in the form of (individual and group) assignments. In addition, other practical exercises may be part of study units throughout the entire programme. More information on these practical exercises can be found in the descriptions of the study units of the study programme. Practical exercises or projects can, generally, only be done once per academic year.

4.3 Period of validity of passed examinations

Coherent modules consists of study units with their own grades. The coherent module itself is not graded. Each study unit is tested with an exam. Successfully passed exams remain valid (see article 4.7.2 OER2020).

The exam can consist of multiple tests. Results of parts of a study unit expire after the academic year in case the study unit was not passed (see article 4.7.2 OER2020: A study unit that was not passed, has to be repeated completely in the next academic year. Exceptions are listed in chapter 5 and in the assessment plan of the module).

In the study progress overview, coherent modules are registered with separate study units with their own grades and ECs.

4.4 Order requirements

Conditions for taking specific parts of the final examination of the Civil Engineering programme:

1. Participation in a minor is only allowed if the student has completed a minimum of 6 modules in total from B1 and B2.
2. Participation in the graduation semester (modules 11 and 12) is only allowed if the student has fully completed modules 1-8 (years B1 and B2).
3. The Examination Board may decide, in consultation with the Study Adviser, that students of cohort 2012 and earlier must be transferred to the TOM examination system.
4. For students of cohort 2012 and earlier, the programme no longer offers any possibilities to complete subjects of B1 and B2 of the examination programme applicable at that time.
5. For information on applying for exemptions, see the Rules and Regulations of the Civil Engineering Examination Board.

4.5 Requirements for the composition of the minor

In the first semester of B3 (modules 9 and 10), students can select minors for the realisation of their profiling track.

1. Students can choose (a combination of):
 - a. [High Tech Human Touch Minors \(HTHT\)](#)
 - b. [Educative Minor, Crossing Borders](#)
 - c. [More UT minors](#)
 - d. [Studying abroad](#)
 - e. [Minor at another educational institute](#)
 - f. [Transfer minor \(transfer to a master of another educational program\)](#)
2. In addition to the admission rules on the [website](#), the Examination Board has ruled that some minors cannot be selected in the differentiation programme, or can only under specific conditions. These minors are listed in the table below.

Minor	Restriction
Crossing borders	Not allowed in combination with the study tour Civil Engineering in the Bachelor programme

3. Study abroad: Students can, in consultation with and after approval of the Study Adviser, go for an exchange semester at one of the partner universities. A list of partner universities can be found on the website: <https://www.utwente.nl/en/et/student-mobility/partners/>

An exchange minor may contain foreign language courses up to a maximum of 5 EC.

For more information on the procedure for an exchange minor, see

<https://www.utwente.nl/en/et/student-mobility/outgoing/exchange-procedure/>

4. Free minor: instead of attending modules at the UT, the student can include another minor in their program, consisting of components offered outside the University of Twente. In that case a written approval of the Examination Board is required (via a mandate through the Study Adviser). Such free minors must meet the following criteria:
 - a. Contains (almost) no parts that are also part of the CE core programme;

4.6 Master programmes

The Civil Engineering Bachelor's programme gives direct access to the Master's programmes Civil Engineering and Management (CEM) and Construction Management and Engineering (CME) of the University of Twente. For the admission rules for these Master's programmes, see the Education and Examination Regulations CEM and CME.

Students can consult the website www.doorstroommatrix.nl for more information on alignment with other Master's programmes. Students can also contact the Study Adviser or Student Counselling.

5. Transition regulations

For students who started before 2012, the programme described in the Programme Specific Appendix Civil Engineering from 2012 applies, including any applicable transition regulations. The most recent transition regulations are listed in appendix B of the Programme Specific Appendix Civil Engineering 2019-2020 which can be found on the CE [website](#).

For students who started between 2012 – 2019, the transition regulations to TOM2.0 apply. This means that students have the right to retake the module or the study unit in 2020-2021 under the same conditions that were in place for the module or study unit in 2019-2020.

Practicals will be valid permanently, if passed, even though they are part of a study unit:

- Soil Mechanics practical in Module 5

The Examination Board has decided that the rules for 2020-2021 will also apply to results of 2019-2020 if this favours the individual student. If a student failed a study unit in 2018-2019, he must request the Examination Board to retake just that study unit in 2020-2021 (and prolong the validity of the other results).

For students who already have permission to extend the validity of a result with one year applies that the passed study units (which are registered with a separate course code in 2020-2021) remain valid permanently.

For a complete overview of the validity of results, please refer to paragraph 2.3.

6. Language

1. From 2019-2020 the language of instruction is English for the entire Bachelor programme.
2. If another language than English is used, it is in terms of exception and always has to be approved by the Examination Board.
3. The BSc-thesis is executed in English. If another language is preferred, this is in consultation with the supervisor and the company, however, the clear preference is English. In case the BSc-thesis is executed in another language than English, the student is obliged to provide an executive summary of the final report in English.

Appendix 1. Final Qualifications

<i>Academic Criteria (Meijers' Criteria)</i>	<i>Description of the Learning Outcomes BSc programmes CE and CE-NLDA</i>
1) Competent in one or more scientific disciplines	<p>a) The graduate understands the knowledge base of Civil Engineering^{*)} and of Technical Process Management in the field of Civil Engineering (i.e. the part of Business Administration and Public Administration relevant for Civil Engineering), is able to apply this knowledge, and is able to maintain and expand his or her knowledge in the field of Civil Engineering and Management</p> <p>^{*)} particularly in the following subfields:</p> <ul style="list-style-type: none"> - Building and Infrastructure; - Traffic and Transport systems; - Hydraulics of natural water systems. <p>This includes the required knowledge of related fields, such as Mathematics and Physics.</p> <p>b) The graduate is able to combine knowledge from Business and/or Public Administration with technical knowledge and apply this in an integral way within civil engineering systems, projects or processes of limited complexity.</p>
2) Competent in doing research	<p>a) The graduate is able to identify knowledge gaps within a subfield of Civil Engineering and Management.</p> <p>b) The graduate is able to formulate research problems and is able to produce and carry out a research plan (under supervision), by applying an appropriate methodology, analysing and discussing the results and drawing conclusions from the results.</p> <p>c) The graduate understands the potential benefits of research.</p> <p>d) The graduate is able to assess research within a subfield of Civil Engineering and Management on its usefulness.</p>
3) Competent in designing	<p>a. The graduate is able to:</p> <ul style="list-style-type: none"> - Create a functional design of civil engineering constructions of limited complexity; - Design management processes with limited complexity in the field of Civil Engineering. <p>This means that:</p> <ul style="list-style-type: none"> b. The graduate has synthetic skills with respect to design projects. c. The graduate is application-oriented towards the Civil Engineering field when designing. d. The graduate is able to find a balance between possible solutions of requirements, technical possibilities and genuine interests of the parties involved.
4) A scientific approach	<p>a) The graduate has the habit of reflecting upon his or her own work and continuously uses relevant information to improve his or her capabilities.</p> <p>b) The graduate has the attitude of encouraging his or her personal development and improving his or her expertise.</p> <p>c) The graduate makes decisions based on facts, quantified information and solid arguments and is able to evaluate these decisions.</p> <p>d) The graduate is able to judge if available tools and techniques suffice for the problem at hand, is able to apply the proper tools and techniques and is able to contribute to the development of new tools, theories and techniques if these are not available.</p> <p>e) The graduate is able to develop a model to describe/schematize parts of reality of limited complexity, i.e. the graduate is able to describe civil engineering processes and objects qualitatively (in terms of basic principles) and, where necessary and possible, is able to quantify this description in terms of mathematical relationships.</p>

	<p>f) The graduate knows that models only approximate reality and is able to use them appropriately whenever this is beneficial.</p> <p>g) The graduate's scientific attitude is not restricted to the boundaries of Civil Engineering and Management.</p>
5) Basic intellectual skills	<p>a) The graduate is able to work independently on assignments / projects of limited complexity.</p> <p>b) The graduate is able to work systematically and methodically.</p> <p>c) The graduate is able to analyse problems and information thoroughly and systematically, is aware of analogies between problems and is able to determine connections between different aspects of problems or information of limited complexity.</p> <p>d) The graduate is competent in numeracy and is aware of orders of magnitudes.</p> <p>e) The graduate is able to reflect on issues in the different subfields of Civil Engineering and Management.</p>
6) Competent in cooperating and communicating	<p>a) The graduate is able to work effectively in a multidisciplinary environment, can act in different roles depending on the situation, and can take responsibility as a team member.</p> <p>b) The graduate knows the importance of oral and written communication, and can make effective use of them, which means that:</p> <ul style="list-style-type: none"> i. The graduate is capable of collecting and selecting relevant information. ii. The graduate is skilled in properly documenting and presenting results of his or her work, including the underlying knowledge, choices and considerations, to colleagues and to a broader public. iii. The graduate is competent in reasoning. iv. The graduate adheres to existing academic conventions, such as giving proper credit and referencing.
7) Takes account of the temporal and societal context	<p>a) The graduate is able to position the field of Civil Engineering in its societal context.</p> <p>b) The graduate is able to form an opinion or judgement and contribute to discussions about matters related to Civil Engineering and Management.</p> <p>c) The graduate knows that compromises are unavoidable and is able to deal with them.</p> <p>d) The graduate is aware of the disadvantages for society of certain decisions.</p>

Examination Board

Rules and Regulations Civil Engineering

Academic year: 2020-2021

Rules of conduct and rules applicable to the exams and examinations of the Examination Board for Civil Engineering, as recommended by the deans of the faculties.

These Rules and Regulations are applicable to:

- The Bachelor program Civil Engineering
- The Master Civil Engineering and Management
- The Master Construction Management and Engineering

This document is available at the [website of the examination board CE/CEM/CME](#) and at the [programmes' website](#).