

BACHELOR PROGRAMME MECHANICAL
ENGINEERING

EDUCATION AND EXAMINATION
REGULATIONS (EER) (UT GUIDELINE EER &
PROGRAMME-SPECIFIC ANNEX)

RULES AND REGULATIONS EXAMINATION
BOARD

2021 – 2022

PREFACE

This document contains rules and regulations for the Mechanical Engineering bachelor programme of the University of Twente taught at the location of the University of Twente in Enschede (referred to as UT ME) as well as for the programme taught at the bilocation at the Vrije Universiteit in Amsterdam (referred to as UT/VU ME). This document is referred to as EER-BSc ME. It contains a description of the rights and obligations of the students on the one hand and the University of Twente on the other. The document consists of several sections:

- The institutional section, which contains the rights and obligations that apply to all UT students. The institutional section can be found at: www.utwente.nl/en/ces/sacc/regulations/charter. Students enrolled at bilocation Amsterdam also have rights and obligations that apply to the study-time at the Vrije Universiteit Amsterdam (VU). This VU section can be found at: <https://vu.nl/en>.
- The programme-specific part, called the Education and Examination Regulations (EER). These regulations consists of:
 - The Guideline for Education and Examination Regulations for UT Bachelor Programmes
 - The programme-specific annex
 - Rules and regulations of the Examination Board

Rights can be derived from the Mechanical Engineering student charter by both the Engineering Technology Faculty (ET) and students enrolled in the Mechanical Engineering bachelor's programme. This is not the case concerning all other written and electronic publications such as:

- Information on the website of the Mechanical Engineering programme: www.utwente.nl/bscme
- UT education catalogue: Osiris.utwente.nl
- Brochures and/or manuals

The Mechanical Engineering EER is open to all for inspection at the Office of Educational Affairs. It will also be published on the website of the educational programme.

In cases not covered by the EER-BSc ME, the Faculty Board respectively the examination board will issue a ruling depending on the legally stipulated authorizations. This is also the case in the event of any (supposed) inaccuracies, inconsistencies, differences of interpretation and/or (seemingly) conflicting texts. The Faculty Board or the examination board will notify the examiner(s) and/or the student(s) of their decision.

In cases in which the strict application of the EER-BSc ME leads to clearly unintended or unfair situations, the examination board, the Faculty Board or the programme director may deviate from its stipulations, provided that doing so does not negatively affect the student. This decision must be motivated and announced in writing to the student, the examination board, the Faculty Board, the programme director and the Bureau of Educational Affairs (BOZ).

When reference is made to an Article, Section or Rule in this regulation, this document is meant. When reference is made to the law in an Article, the Higher Education and Research Act (WHW) is meant, unless stated otherwise.

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

Dean of the faculty Engineering Technology Faculty

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UT GUIDELINE FOR EDUCATION AND EXAMINATION REGULATIONS FOR UT BACHELOR PROGRAMMES

BSC MECHANICAL ENGINEERING

2021 - 2022

The Dean of the faculty,

in view of the articles 9.5, 9.15, first paragraph (a), 7.13 first and second paragraphs, 9.38 (b), and 9.18, first paragraph (a), and 7.59 of the Higher Education and Research Act (WHW), and

in due consideration of the recommendations of the Programme Committee, as well as the approval by, or advice of, the Faculty Council,

hereby adopts the Education and Examination Regulations of the following degree programme:
BSc Mechanical Engineering

SECTION 1 – GENERAL PROVISIONS

ARTICLE 1.1 APPLICABILITY OF THESE REGULATIONS

1. This general section of the education and examination regulations applies to all students enrolled in the bachelor programme Mechanical Engineering.
2. For students who follow a study unit from another programme¹, the rules for testing apply that are laid down in the assessment plan of the study unit concerned, in the education and examination regulations and in the rules and regulations of the examination board of the programme that offers the study unit concerned. Special facilities² according to Article 6.2.5 can only be granted by the examination board of the programme for which the student is enrolled.
3. Each degree programme has its own programme-specific annex.
4. For each programme, this general section and the programme-specific appendix together form the education and examination regulations for the bachelor's programme concerned.
5. The general section and the programme-specific appendix of the education and examination regulations are determined by the faculty board.
6. The institutional part of the students' charter includes a definition of what the UT considers as fraud. The rules of the examination board of the bachelor's programme concerned has additional regulations about fraud, for instance about what action the examination board is entitled to take when they have detected a case of fraud (see rule 8).
7. The rules of the Examination Board of the bachelor's programme concerned include regulations about the rules of order during tests and rules in case of calamities (see rule 6 & 7).
8. The following rules about the language of the general section and the programme-specific appendix of the education and examination regulations and the rules of the examination board apply:
 - a. In the event of discrepancy, the Dutch version of this general section is binding.
 - b. For English-taught bachelor's programmes, English versions of the programme-specific appendix of the education and examination regulations and the rules of the examination board of the bachelor's programme must be available.
 - c. If both English and Dutch versions of the programme-specific appendix of the education and examination regulations and the rules of the examination board of the bachelor's programme concerned are available, both versions must include a rule about which version is binding in the event of discrepancy.
9. Requests for exceptions to provisions laid down in the education and examination regulations should be submitted to the examination board or the programme board, The guiding principle here is which body has the authority to make a decision on - or to make an exception to - a provision of these regulations.. These regulations have been drawn up using the masculine personal pronouns 'he' and 'him' and 'his'. In these cases, 'she' 'her' and 'hers' may be substituted.

¹ This applies for example for a minor module, for an elective study unit from the study programme of a student and for a study unit which is not included in the standard study programme of the student. This does not apply, unless otherwise agreed, for units that are supplied from other programmes to Mechanical Engineering..

² Under Article 6.2.5 this is about providing special facilities with regard to testing to a student with functional impairments. All other matters are handled by the examination board of the programme that offers the study unit.

ARTICLE 1.2 DEFINITION OF TERMS

The following terms and definitions apply to this regulation:

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|---|---|
| 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/course is organised. At first, it states the grading of the study units of the module/course, and secondly, the conditions for passing the entire module/course (including possible compensation rules within the module/course and compensation rules for study units or parts of study units of different modules/courses). |
| Binding Recommendation on continuation of studies (BSA): | Student progress evaluation as referred to in Article 7.8 (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. |
| Course: | A study unit in an UT/VU semester. |
| 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). |
| Curriculum: | The aggregate of required and elective study units constituting a degree programme as laid down in the programme-specific annex. |
| Education Period: | The period in which the study unit is offered. This period starts in the first week in which the study unit has any educational activity and ends in the last week in which the study unit has an educational activity and/or a test. Resits are not part of the education period. This period is not always the same as a quartile/semester. |
| 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. |
| 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. |
| Faculty board: | Head of the faculty (Section 9.12 of the Higher Education and Research Act). |
| Final examination: | A programme concludes with a final examination. A final examination is deemed successfully completed if the study units belonging to a programme have been completed successfully. |
| Higher Education and Research Act: | The Higher Education and Research Act (abbreviated in Dutch to WHW), Bulletin of Acts and Decrees 1992, 593, and its subsequent amendments. |
| Honours Programme: | Institution-wide Bachelor's Honours programme |
| Institution: | University of Twente |

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| Institutional board: | The Executive Board of the University of Twente, except as otherwise specified |
| Module: | For UT ME 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 UT ME programme board with organising the module. |
| Module examiner: | In case the module consists of one study unit, the individual designated by the examination board to determine the result of the module |
| Osiris: | System designated by the institutional administration for registration and for providing information on all relevant data related to the students and the programme, as described in the Higher Education and Research Act. |
| Part of a study unit: | A part of a study unit (UT ME). |
| PCC (CPO): | Personal Circumstances Committee. A committee convened by the institutional administration to advise the institutional administration in individual cases regarding the validity, duration and severity of a specific student's extenuating personal circumstances. |
| Practical exercise: | 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: <ol style="list-style-type: none"> 1. 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; 2. carrying out a design or research assignment, doing tests and experiments, participating in practicals, practising skills; 3. work placement, fieldwork or excursions; 4. 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 programme referred to in the programme-specific appendix of these education and examination regulations. |
| Programme Board: | The body appointed by the Dean to administer the degree programme. |
| Programme Committee: | Programme Committee as referred to in Art. 9.18 of the Higher Education and Research Act. |
| Quartile: | A quarter of an academic year corresponding to a total of 15 EC ³ . |
| Semester: | A half of an academic year corresponding to a total of 30 EC. |
| Semester UT/VU ME: | Each semester consists of three blocks in which disciplinary knowledge, skills and attitude are developed and assessed in an as integrated and/or coherent way as possible. Study units (courses) can be spread over several blocks within a semester. |
| Semester coordinator: | The individual charged by the UT/VU ME programme board with organising a semester. |
| 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 of the faculty (Engineering Technology at UT or beta faculty at VU) who acts as contact between the student and the university, and in this role represents the interests of the students, and also fulfils an advisory role. |

³ <https://www.utwente.nl/en/ces/planning-schedules/frequently-asked-questions/>

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| 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. For the UT/VU programme a study unit is also called a course. |
| Study workload: | The study workload is expressed in course credits according to the European Credit Transfer System. The study workload for one academic year is 60 credits, abbreviated EC. 60 credits is equal to 1680 hours of studying. |
| Test: | An evaluation of the knowledge, understanding and skills of the student, as well as the assessment of the results of this evaluation. A test is a part of an exam. If a study unit has only one test, this coincides with the exam for the unit in question. A test can be split into components and administered during multiple sessions. |
| UT: | University of Twente located in Enschede. |
| UT ME: | The degree programme Mechanical Engineering offered at location 'Enschede'. |
| UT/VU ME: | The degree programme Mechanical Engineering offered, in cooperation with the BETA faculty of the 'Vrije Universiteit', at location 'Amsterdam'. |
| VU: | Vrije Universiteit located in Amsterdam. |
| Working day: | Any day from Monday to Friday with the exception of official Dutch holidays and the prearranged compulsory holidays (compulsory days free of work) on which the staff are off. |
| WHW: | The Higher Education and Research Act (WHW) ⁴ , in the Dutch Bulletin of Acts and Decrees 1992, number 593, and as amended since. |

The definition of all other terms used in these regulations is in accordance with the definition accorded by statute.

At some aspects, the Education and Examination Regulations and the Examination Board's rules and guidelines for location 'Enschede' differ from the Education and Examination Regulations, the Examination Board's rules and guidelines for location 'Amsterdam'. The location 'Enschede' is referred to as 'UT ME' while the location 'Amsterdam' is referred to as 'UT/VU ME'.

Switching from the ME UT/VU to the ME UT programme, or vice versa, is not possible without a massive loss of study time, due to different structures of the programmes.

SECTION 2 - ADMISSION

ARTICLE 2.1 EDUCATIONAL PREREQUISITES

Admission to the programme is granted if the requirements with regard to prior education for enrolment in university education are met, in accordance with the WHW, Articles 7.24, 7.25 and 7.28. The conditions pertaining to this can be found on the University of Twente's website⁵.

ARTICLE 2.2 BACHELOR PROGRAMME LANGUAGE REQUIREMENT FOR HOLDERS OF A NON-DUTCH QUALIFICATION

Holders of diplomas from outside the Netherlands can only enrol in the following cases⁵.

- a. if the programme is offered in the Dutch language: after it has been shown that the requirement for adequate proficiency in the Dutch language to the level of the Dutch pre-university (vwo) examination has been met. The UT Admission Office provides a complete overview of the language requirements and certificates that show evidence of meeting these requirements⁶.

⁴ <https://wetten.overheid.nl/BWBR0005682/2013-07-04>

⁵ <http://www.utwente.nl/en/education/bachelor/admission/>

⁶ <https://www.utwente.nl/en/education/bachelor/admission/language-requirements/>

- b. if the programme is offered in the English language: after it has been shown that the requirement for adequate proficiency in the English language to the level of the Dutch pre-university (vwo) examination has been met. The UT Admission Office provides a complete overview of the language requirements and certificates that show evidence of meeting these requirements⁶.
- c. The provisions in paragraphs a and b relate to the entry requirements for incoming students. They involve only the formal aspects of language such as spelling and grammar: not academic language proficiency⁷. Acquiring academic language proficiency should be part of the programmes vision.

ARTICLE 2.3 ADMISSION TEST OR COLLOQUIUM DOCTUM

If the conditions referred to in Articles 2.1 and 2.2 are not met, the institution can grant an exemption on the grounds of a positive result of an admission test (colloquium doctum), in accordance with Article 7.29 of the WHW. The conditions pertaining to this can be found on the University of Twente's website⁴.

SECTION 3 – CONTENTS AND STRUCTURE OF THE PROGRAMME

ARTICLE 3.1 PROGRAMME OBJECTIVES AND INTENDED LEARNING OUTCOMES

The qualities regarding the knowledge, insight and skills a student must have acquired upon completion of the programme (objectives and intended learning outcomes, Article 7.13, paragraph 2c of the WHW) are described in the programme-specific appendices (see section A, B, C, D).

ARTICLE 3.2 STRUCTURE OF THE PROGRAMME

1. The programme consists of 180 credits.
 - a. The curriculum always needs to contain a core programme of a maximum of 120 EC, a minor of 30 EC and a graduation phase of a minimum of 15 EC. Exceptions are the programmes Advanced Technology and Technical Medicine which have electives instead of a minor or do not have a minor but a core programme of more than 120 EC.
 - b. The programme-specific appendix describes the core programme of the programme (see section G).
 - c. The UT ME degree programme consists of coherent modules. The UT/VU ME degree programme consists of coherent semesters.
 - d. An UT module is a total of 15 credits of one or more study units. A UT/VU Semester is a total of study units of 30 credits. In both modules and semesters programme-specific knowledge, skills and attitudes are developed and assessed in an as integrated and/or coherent way as possible.
 - e. Before the start of a study unit, the student must meet the prior knowledge prerequisites for that study unit, as described in the education catalogue.
 - f. Students generally take their minors in the first semester of the third year of studies.
 - g. The programme offering the minor module may set prerequisites for prior knowledge of the student for admission to the minor modules. These prerequisites must be included in Osiris.
 - h. The study programme in which the students is enrolled may set prerequisites for the number of EC's required for admission to the minor modules. These prerequisites have been included in the programme-specific appendix concerned.
 - i. The student is limited in his choice of minor by the provisions of (g) and (h). The range of programmes can be consulted on the website⁸.

⁷ Language Code of Conduct, January 2020 <https://www.utwente.nl/en/ces/language-centre/organisation/language-policy/ut-language-policy-documents/>

⁸ <https://www.utwente.nl/en/education/electives/minor/>

- j. Generally speaking, the second semester of the third year of studies is devoted to the graduation phase (which comprises a minimum of 15 credits).
 - k. To be admitted to the graduation phase the student is required to have at least completed the core programme of the bachelor's programme.
 - l. The Examination Board⁹ is authorised to deviate from the Article 3.2.1e, 3.2.1h, 3.2.1j and 3.2.1k in individual cases, if strict application of those terms would result in an unreasonable delay in study progress. In consultation with the study adviser, the student can submit a proposal to the examination board.
2. The programme-specific annex to these Education and Examination Regulations describes the degree Programme in accordance with Article 7.13, paragraph 2 (a through e, g, i, l, s, t, and v) of the Higher Education and Research Act.

ARTICLE 3.3 THE PROGRAMME'S LANGUAGE OF TUITION

1. The official language of tuition is the language in which the education is given, in which teaching material is provided and in which tests and exams are held.
2. The choice of the official language for the programme or a part of the programme lies with the programme board, for which the programme committee has the right of approval. The programme-specific appendix, which is established by the faculty board, specifies the language of tuition for the programme (see section F).
3. If there are deviations from this official language of tuition for components of the programme, this occurs in accordance with the UT Language Code of Conduct (Gedragscode Voertalen) and Article 7.2 of the WHW.

ARTICLE 3.4 EXEMPTION

1. The Examination Board may grant an exemption to a student at his request for one or more full study units. To this end, the student must demonstrate completion of a component of a higher education programme that is equivalent in content, scope and level, or that he has acquired expertise and skills through work or professional experience with regard to the relevant study unit.
2. The Examination Board has the authority to make exceptions to the provision in paragraph 1 and to grant an exemption to a student from parts of a study unit (UT ME).
3. Students cannot be forced to take extra study units or parts of study units in their curriculum instead of the granted exemption.
4. An exemption granted by the examination board will be registered in Osiris with the concerning study unit or parts thereof with an EX (exemption).
5. A student may also be exempted from educational activities if he can demonstrate that a required activity will likely give rise to a moral dilemma. In such cases the Examination Board will decide whether the component can be completed in another manner to be determined by the Examination Board.

ARTICLE 3.5 ELECTIVE PROGRAMME

The Examination Board of the programme decides on requests for permission to take an elective programme as referred to in Article 7.3 (h) of the Higher Education and Research Act. The Examination Board assesses whether an elective programme is appropriate and consistent within the domain of the degree programme and whether the level is high enough in light of the final attainment targets of the programme.

⁹ It is important that the student is still able to achieve the attainment targets of the programme. In light of this consideration, this authorization has been formally conferred to the Examination Board, as they are the ones to ensure that only students who achieve the attainment targets are able to graduate. It is conceivable that a programme / faculty may opt to confer the authorization referred to in (j) to the Programme Board.

SECTION 4 - TEACHING AND ASSESSMENT

ARTICLE 4.1 GENERAL

1. The institutional board is responsible for the practical organisation of the exams and the final examinations.
2. A study unit is completed with an exam.
3. An exam consists of one or more tests.
4. Exams and test can have various forms¹⁰. Tests or exams can be scheduled online only by the teachers in consultation with the examination board.
5. A test can be taken in multiple sessions or components, spread over time.
6. When a test or exam is held online by means of online surveillance¹¹ or online proctoring¹², the examination board may lay down further rules and conditions for online (proctored) testing.
7. These further rules and conditions must comply with the General Data Protection Regulation (GDPR¹³), the Data Protection Impact Assessment (DPIA¹⁴) on proctoring and the EER.
8. Pursuant to Articles 12-14 of the GDPR, students must be informed before the use of online surveillance or online proctoring about the processing of their personal data.
9. Pursuant the DPIA
 - a) in the event where no alternative exam method is reasonably possible, online surveillance or online proctoring can be used¹⁵.
 - b) the retention period of the data is 30 days unless the examination board decides that the data needs to be maintained longer for a fraud investigation.
10. Results of exams, tests or components of tests have to be announced to the students, in any case via Osiris or via the Grade Centre of Canvas. Osiris is used for the registration of grades.
11. The student has the right to refer to recent model test questions or trial tests or representative older tests and the related answers and the standard of the related assessment.
12. A written test has a maximum duration of 3 hours .

If the examiner wishes to use a form of testing which takes more than 3 hours, they may request permission from the examination board to deviate from this provision. This request must be submitted not later than 4 weeks prior to the start of the period when a study unit is offered, to be able to meet the provisions in paragraph 19.
13. Test results are expressed in a grade from 1 to 10, with one decimal place, or as 'pass / fail'.

¹⁰ A test may take the following forms: a written test, an assignment, an oral test, presentation, the assessment of practical exercises.

¹¹ Camera-surveillance of student(s) during exams without recording via e.g. Canvas, Teams

¹² Surveillance of student(s) using special proctoring software e.g. Proctorio.

¹³ The text of the GDPR can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679>

¹⁴ The DPIA is an instrument to point out privacy risks of a processing operation to be able to take measures to mitigate those risks. In this case it is done for proctoring. Among a lot of other things, it describes the rights of the data subjects (in this case: the students) and the context in which proctoring can be used. <https://www.utwente.nl/remote-exams/students/proctoring/dpia-proctoring.pdf>

¹⁵ This means online proctoring can be used for a few students as well as for all students.

14. Exam results of a study unit, as determined by the examiner, are expressed in half grades from 1.0 up to and including 5.0 and from 6.0 up to and including 10.0 whereby:
- Grades will only be rounded in the last phase of the assessment of the study unit.
 - The rounding is done in accordance with the following scheme:

| In case n ≠ 5 | |
|-----------------------------|-----------|
| Grade ≥ n.00 and < n.25 | → n.0 |
| Grade ≥ n.25 and < n.75 | → n.5 |
| Grade ≥ n.75 and < (n+1).00 | → (n+1).0 |
| In case n = 5: | |
| Grade ≥ 5.00 and < 5.50 | → 5.0 |
| Grade ≥ 5.50 and < 6.00 | → 6.0 |

15. Exam results of 6 or higher are a pass.
16. Exam results, if passed, obtained at foreign universities will be registered as a P (Pass). Exam results obtained at Dutch universities will be adopted one-to-one in compliance with paragraph 14.
17. The ECs for a study unit will only be awarded if the exam has been successfully completed. No ECs will be awarded for parts of a study unit that have not been completed successfully.
18. If a student receives more than one result for the exam in the same study unit, the highest grade will apply. This also applies for the results of tests and components of tests within the same academic year and for the results of tests and components of tests that remain valid after the academic year in which they were obtained.
19. Through the education catalogue of Osiris the programme board will announce at least the following aspects: size, course objectives and content of the module, language, required prior knowledge, mandatory and recommended study materials, design of the education (teaching methods) and testing.

ARTICLE 4.2 MODULES / SEMESTERS

1. Each module (UT ME) or semester (UT/VU ME) has a module/semester coordinator.
2. When a module/semester comprises of one study unit, the examiner of this study unit is also module/semester- examiner.
3. The examination board assigns the examiners for the study units and/or parts of study units.

ARTICLE 4.3 REGISTERING FOR A STUDY UNIT AND TESTS

1. Registration in Osiris by the student is required prior to participating in the study unit.
2. Upon registering for the study unit, the student will automatically be registered for the regular assessments associated with the study unit.
3. Information on resits, the applicable conditions and the registration procedure will be published in in the assessment plan.

ARTICLE 4.4 MODULE/SEMESTER DESCRIPTION & SCHEDULE

1. In the programme-specific annex to these regulations, a module description for each module/semester is given (see section G).
2. The module/semester description defines at least:
 - a. if applicable, the study units that are part of the module/semester and their related ECs;
 - b. if applicable, the number of ECs and the weighting factors of the parts of the study units;
 - c. the language of tuition and testing.

Learning goals of the module and/or study units that are part of the module or semester courses will be published in time on Osiris and Canvas.

3. The assessment plan of a module/semester is determined by the programme board after the module/semester coordinator and/or the examiners of the study units that are part of the module/semester have drawn up the assessment plan. The examination board advises on the assessment plan.
4. At least two weeks prior to the start of the module/semester, the assessment plan for the module/semester courses is published on Canvas.
5. The assessment plan states at least:
 - a. when the module has been passed;
 - b. how the learning goals of the study units of the module/semester are assessed;
 - c. when tests will be administered;
 - d. any required minimum grade per test; a minimum grade for a test may not be set higher than 5.5;
 - e. resits for each test and – if applicable - any conditions for participating in the resit;
 - f. for each study unit at least one resit has to be offered within the same academic year without any conditions for participating¹⁶. An exception may be made for projects and practical exercises;
 - g. if applicable, any options to compensate test results within a study unit;
 - h. if applicable, any options to compensate test results with results from tests in other study units in the same module and/or results from tests in study units in other modules;
 - i. the grading period of each test is a maximum of 10 working days in compliance with Article 4.6.9 of these regulations¹⁷.
6. The Programme Board may modify the assessment plan during the course of the study unit.
 - a. The assessment plan may only be changed in consultation with the module/semester coordinator and the examiners of the study unit or study units of the module/semester.
 - b. The programme board consults the examination board beforehand in case of changes in the form or the method of administering of a test or tests. If the change involves nothing more than moving tests or test components to a timeslot other than as shown in the schedule, the programme board must inform the examination board of the decision to make the change at latest before the next meeting of the examination board.
7. Changes to the assessment plan may, in reasonable expectation, not put students at a disadvantage. Examination Boards may provide special facilities in individual cases.

ARTICLE 4.5 ORAL EXAMINATIONS

1. Oral examinations will be public unless decided otherwise by the Examination Board in exceptional cases, whether or not at the request of the examiner or the student.
2. If the student or the examiner actually wishes a third party to be present when administering the oral examination, then a request to this end must be submitted to the Programme Board at least fifteen days prior to the examination. The student and the examiner are notified of the Programme Board's decision not later than 5 working days in advance. The Programme Board must inform the Examination Board of the decision at the next examination meeting. Public graduation symposia, public presentations and group tests are excluded from this provision.
3. If the Examination Board has decided that members of the Examination Board or an observer on behalf of the Examination Board is to be present during the administration of an oral examination, then the Examination Board is to make this known to the examiner and the student at least one working days prior to the oral examination.

¹⁶ A resit may also fall within the quartile with due observance of the provision in Article 4.6.9. If the result of a unit of study is determined by more than one test, there must be a resit for each test or part of a test. Combining several tests or parts of tests into one resit is allowed.

¹⁷ For resits of M4 scheduled in the resit week of Q4, the grading period is shortened to 5 working days.

ARTICLE 4.6 ASSESSMENT DEADLINE AND DATE OF EXAM OR TEST

1. The examiner will inform the student of the result within at most 1 working day after conducting the oral test.
2. The provisions of paragraph 1 do not apply if the oral test is part of a series of oral tests for the same study unit, which take place on more than one working day. In that case, the examiner determines the result within one working day after the conclusion of the series of oral tests.
3. The deadline for determining and publication of the result of a written exam or an exam taken in some other way will be included in the assessment plan for the module.
4. The result of a test or part of a test will be made known to the student within 10 working days in compliance with paragraph 9 of this Article.
5. The exam result of a study unit, will be made known to the student within 10 working days after the end of the education period in which the unity of study is offered. If the exam result is insufficient, and a resit is possible outside the education period in which the study unit is offered, and the examiner has determined that, in case of a project or practical, the student meets the terms and conditions to participate in the resit (in accordance with Article 4.4, paragraph 5f) this decision will also be made known to the students within 10 working days after the end of the education period in which the study unit is offered.
6. The date of exam is the date on which the last test for a study unit was passed.
7. The date of a test is the date on which a test is taken.
8. If the assessment of a test is based on the completion of one or more assignments, a paper or a thesis, the deadline for submission of the final part will count as the test date.
9. If a resit is planned shortly after the first test, the results of the first test will be published at a time that provides the student with at least 5 working days to prepare for the resit.
10. Should an examiner not be able to meet the deadlines as described in paragraphs 1, 2, 4,5 and 9 due to special circumstances, they will report this with reasons to the examination board. The students involved will be informed of the delay as soon as possible including the new deadline when the result will be announced. If the examination board feels that the examiner has not met their responsibility, they can order a different examiner to determine the grade.

ARTICLE 4.7 PERIOD OF VALIDITY

1. The period of validity for the results of an exam that has been passed is unlimited. The validity of an exam result can only be restricted if the tested knowledge, insight or skills are proven to be out of date.
2. A study unit that was not passed, has to be repeated completely in the next academic year. Results or parts of a study unit expire after the academic year. Exceptions are listed in the programme-specific appendix (Section G) and in the assessment plan of the module/semester.

ARTICLE 4.8 RIGHT OF INSPECTION AND DISCUSSION

1. The student is entitled to inspect and discuss his test together with the examiner, and the examiner is to explain the assessment.
2. If the examiner holds a group discussion of the assessment, the student must use that opportunity as his right to discussion as referred to in paragraph 1. If the student cannot attend the group discussion or if the student is not given the opportunity at the group discussion to discuss the reasons for the examiner's assessment of his test with the examiner, the student may submit a request for individual discussion with the examiner within 5 working days after the group discussion. The individual discussion must take place no later than three working days prior to the next test opportunity.
3. If there is no collective discussion of the test, then a student may submit a request to the examiner for an individual discussion within 10 days after publication of the results. The individual discussion must take place no later than 3 working days prior to the next test opportunity.
4. Individual and group discussion must take place no later than 5 weeks after the publication of the test results, but at least 3 working days prior to the next test opportunity, in the presence of the examiner or a designated substitute.
5. The student has a right to inspect his assessed written work for a period of two years following the assessment.

ARTICLE 4.9 RETENTION PERIOD FOR TESTS

1. The retention period for test assignments, keys and the assessments of written tests is two years.
2. De retention period for final Bachelor's projects is at least seven years.

ARTICLE 4.10 EVALUATION OF EDUCATION

1. The programme board is responsible for safeguarding the quality of the programme
2. The programme board is responsible for evaluating the quality of the programme.
3. The way evaluation and safeguarding is organized is described in the programme specific annex (see section N).

SECTION 5 – FINAL EXAMINATION

ARTICLE 5.1 EXAMINATION BOARD

1. The faculty board appoints an examination board for each programme or group of programmes.
2. The faculty board establishes the examination board and appoints the members of the examination board based on their expertise in the domain of the relevant programme or group of programmes.
3. The faculty board ensures that the independent and expert operation of the examination board is adequate.
4. Under their own authority, an examination board define rules and regulations for examiners, exams and tests and the final examination (WHW Article 7.12b).

ARTICLE 5.2 FINAL EXAMINATION

1. In accordance with Article 7.10, paragraph 2 of the WHW, the bachelor's final examination is deemed successfully completed if the exams of the study units of the bachelor's programme have been taken successfully.
2. As proof that the final examination has been completed successfully, the examination board issues a certificate, after the institutional board has declared that the procedural requirements have been met. The date recorded on the certificate, i.e. the graduation date, is the date on which the student successfully completed the last remaining study unit (Article 7.11 WHW).
3. If so desired, the student has the right to submit a substantiated request in writing to the examination board to delay declaring the final examination as successfully completed and consequently the presentation of the certificate (WHW Article 7.11 paragraph 3). In principle the maximum duration of the delay that may be granted is 12 months. In exceptional cases the student may have justifiable reasons to submit a request to delay the presentation of the certificate for more than 12 months.
4. If the student requests a delay on the basis of paragraph 3, the graduation date will be the date after the delay on which the examination board has decided to declare the student to have successfully completed the final examination.

ARTICLE 5.3 DEGREE

1. Participants who have successfully met all requirements for the bachelor's final examination are awarded a Bachelor of Science degree.
2. The awarded degree will be stated on the certificate.

ARTICLE 5.4 DEGREE CERTIFICATE

1. The Examination Board will award a degree certificate as evidence that the student has met all of the requirements of the Bachelor's final degree audit. The degree certificate will be signed by the Chair of the Examination Board. If the Chair is absent, one of the members of the Examination Board may also sign the degree certificate.

2. The following information to be mentioned on the certificate (in accordance with Article 7.11 of the Higher Education and Research Act):
 - a. the student's name and date of birth;
 - b. the name of the institution and the degree programme as stated in the relevant register as referred to in Article 6.3 of the Higher Education and Research Act;
 - c. the date on which the examination was completed;
 - d. the components¹⁸ of the Bachelor's examination;
 - e. the degree conferred (in accordance with Article 7.10 (a) of the Higher Education and Research Act).
 - f. where appropriate, the specific qualifications associated with the degree (with due consideration for Article 7.6, paragraph 1 of the Higher Education and Research Act);
 - g. the date on which the programme was last accredited or the date on which the programme passed the new programme assessment as referred to in Article 5a.11, paragraph 2.
3. An International Diploma Supplement is to be appended to the degree certificate (Article 7.11, paragraph 4 of the Higher Education and Research Act). This supplement is intended to provide insight into the nature and content of the degree programme to promote the international recognition of the programme, among other aspects. The supplement is to include the following information:
 - a. the name of the programme and the name of the University;
 - b. the fact that it is a programme in academic education;
 - c. a description of the content of the programme, where applicable also stating the specialization and/or minor taken;
 - d. the study load of the programme;
 - e. the components of the final examination and their assessment, based on the registration of grades in Osiris;
 - f. exams that were passed by the student, which are not part of the final examination;
 - g. If the student successfully completed an honours programme during the bachelors programme, this will be recorded on the diploma supplement as an extracurricular programme;
 - h. the average grade (Grade Point Average, GPA). The manner in which the GPA is calculated is stated on the diploma supplement.
4. If the Examination Board has awarded a specific distinction (e.g. cum laude) to the student, then this is to be mentioned on the degree certificate.
5. Students who have successfully completed more than one exam but cannot be awarded a degree certificate as referred to in paragraph 1, will receive, at their own request, a statement prepared by the Examination Board which in any case will state the results of the exams the student has passed (Article 7.11, paragraph 5 of the Higher Education and Research Act).

¹⁸ Components' in the Act means the study units of which the Bachelor's examination consists. At the University of Twente these are almost always the modules/semester and their study units of which Bachelor's programme consists.

SECTION 6 – STUDENT GUIDANCE AND RECOMMENDATION ON CONTINUATION OF STUDIES

ARTICLE 6.1 STUDY PROGRESS REPORT

1. If needed, the student can request a certified study progress report from the Student Services desk.

ARTICLE 6.2 STUDENT GUIDANCE

1. The Faculty Board of the UT Faculty Engineering Technology is responsible for UT ME student guidance, including informing students of opportunities for academic endeavour within the programme and via extracurricular avenues. The Dean of the VU BETA Faculty is responsible for UT/VU ME student guidance, including informing students of opportunities for academic endeavour within the programme and via extracurricular avenues.
2. Each student is appointed a study adviser.
3. The study adviser supervises the student and advises him on study-related matters, as well as personal problems that may be affecting the student's studies.
4. If students wish to make use of their right to specific supervision or special facilities, they must contact the study adviser. The study adviser records the agreements made with the student.
5. The following applies to the entitlement to special facilities:
 - a. demonstrable circumstances beyond the student's control or extenuating personal circumstances;
 - b. if necessary and where possible, dispensation from participation in exams or tests and/or the availability of special facilities for exams and tests. Such dispensation and additional opportunities for tests may only be granted by the Examination Board.
6. An introductory interview will be held with each student before 1 November of the first year of enrolment on the programme.
7. Each student will receive a preliminary recommendation on continuation of studies in week 52 of the calendar year at the latest of his first year of enrolment on the programme. This also applies to students in their second year of enrolment in the degree programme whose binding recommendation on continuation of studies has been postponed. This preliminary recommendation is not binding.
8. Each student will receive a second preliminary recommendation on continuation of studies in week 10 of the calendar year at the latest of his first year of enrolment on the programme. This also applies to students in their second year of enrolment in the degree programme whose binding recommendation on continuation of studies has been postponed. This preliminary recommendation is not binding.
9. Students who receive a negative preliminary recommendation on continuation of studies will be invited for an interview with the Study adviser to discuss their study methods and a review of their choice of degree programme.

ARTICLE 6.3 BINDING RECOMMENDATION ON CONTINUATION OF STUDIES (BSA)

1. Students receive a written binding recommendation on continuation of studies at the end of the first year of enrolment in the programme about continuing their studies within the programme, notwithstanding Article 6.4. This progress evaluation is based on the student's results. The student may be allowed to continue on the programme, or may be required to leave the programme, with due regard to Articles 6.4 and 6.5.
2. The issuing of the recommendation on continuation of studies as referred to in paragraph 1 is by the institutional board to the programme board.
3. Results of completed parts of a study unit that remain valid beyond the current academic year are counted when issuing the recommendation on continuation of studies.
 - a. Only the credits from study units and parts of study units in the first year of the programme count toward the threshold for the binding recommendation on continuation of studies.
 - b. The exemptions for study units and parts of study units of the first year awarded to the student count towards determining the number of credits.

- c. The programme board may set programme-specific requirements that must be met. These requirements are included in the programme-specific appendix (see section J). Programme-specific requirements may not state that all study units or parts of a study unit of a certain educational curriculum must be completed¹⁹.
4. The binding recommendation on continuation of studies as referred to in paragraph 1 may include a rejection, if the student in the opinion of the Programme Board is not deemed suitable for the degree programme because
- a. the student has passed in total less than 45EC of study load in the first year of the programme, or
 - b. the student has passed 45EC or more of the study load of the first year but does not meet the programme-specific requirements (as referred to in paragraph 3 (c) of this Article).

A final recommendation on continuation of studies that involves expulsion is referred to as a binding recommendation on continuation of studies (BSA).

5. When considering a BSA involving expulsion, the Programme Board will take the student's personal circumstances into account at the student's request.
- a. Personal circumstances include illness, physical, sensory or other functional disability or pregnancy of the student involved, extenuating family circumstances, participation in elite sports and membership on the University Council, Faculty Council, Programme Committee or a Category 3 or 4 board in accordance with the FOBOS Regulations.
 - b. In consultation with the study adviser, the personal circumstances are to be reported to the Personal Circumstances Committee (PCC) and accompanied by supporting documentation.
 - c. The PCC will assess the validity and severity of the personal circumstances and report its findings to the Programme Board and the relevant study adviser.
 - d. The Programme Board will take the PCC's findings into account when assessing the student's request. The programme board takes the judgement of the PCC into account in its handling of the student's request. The programme board will only take into account in its deliberations personal circumstances that have been reported to the study adviser by the student as soon as can reasonably be expected after they arose.
6. Before issuing a rejection, the programme board must first issue a warning to the student, while giving them a reasonable term to improve their study results, to the programme board's satisfaction. Moreover, the student has the right to be heard by the programme board before the issue of a binding recommendation (WHW Article 7.8b, paragraph 4).
7. The decision of the programme board with respect to the binding recommendation on the continuation of studies mentions the possibility of filing an appeal. Objections are only possible for a recommendation on continuation of studies involving rejection and the student may lodge an appeal within 6 weeks with the Board of Appeal for Examinations.
8. If a binding recommendation on continuation of studies has been issued to the student, they may not enrol in the same programme for a period of 3 subsequent academic years.
9. If a student re-enrols in the programme concerned after the period referred to in paragraph 8 of this Article, this enrolment is designated as their first-year enrolment and the relevant provisions of this paragraph apply in full.

ARTICLE 6.4 DISCONTINUATION OF THE PROGRAMME

1. The programme is considered to be discontinued if the student stops taking courses or any form of tests of the programme and:
- a. Submits a request for termination of enrolment to the UT, or
 - b. De-enrols for the programme at the UT, while they enrol in another programme at the UT and thus transfer to the other UT programme, or
 - c. Starts a study at another institution of higher education with a 'proof of paid tuition fee'.

¹⁹ For example: 'The student must have passed all mathematics study units from the B1 programme' is not permitted, whereas 'The student must have passed not less than 3 of the 4 mathematics study units from the B1 programme' is permitted.

2. If in their first year of enrolment for the programme, a student submits a request to terminate enrolment through Studielink not later than 31 January and they are de-enrolled before or on 1 February and they do not re-enrol for the same programme in that same academic year, a study recommendation as referred to in paragraph 1 of Article 6.3 will not be issued. If this student does re-enrol in the relevant programme, this enrolment is designated as their first-year enrolment.
3. Students who are de-enrolled after 1 February for the programme at the UT, will receive a recommendation on continuation of studies as referred to in Article 6.3 paragraph 1 from the programme they discontinued.

ARTICLE 6.5 POSTPONEMENT OF THE BINDING RECOMMENDATION ON CONTINUATION OF STUDIES

1. The recommendation on continuation of studies as referred to in Article 6.3 paragraph 1 may be postponed if:
 - a. the student is enrolled in the programme on or after 1 October of the relevant academic year, whether or not this is due to a transfer as outlined in Article 6.4 paragraph 1b, and on 31 August at the latest has not met the requirements set in Article 6.3, paragraph 4, or
 - b. if personal circumstances preclude rendering an opinion on a student's academic capacities at the end of the first year of enrolment in the programme.
2. If the student whose recommendation on continuation of studies as referred to in Article 6.3, paragraph 1 has been postponed based on Article 6.5, paragraph 1, re-enrols in a subsequent academic year for the relevant programme, the end of the second year of enrolment in the relevant programme applies as the new deadline for the final recommendation. Within 6 weeks after the enrolment date the student will be notified in writing when the programme will issue the final recommendation. The same requirement as set out in Article 6.3, paragraph 3 applies to this recommendation.

In case of postponement based on paragraph 1a the recommendation on continuation of studies is issued by the programme in which the student is newly enrolled.
3. For students who transfer to a different programme within the UT before 1 October, the recommendation on continuation of studies will not be postponed on the basis of transfer and thus there will be no adjustment of the requirements as stipulated in Article 6.3 paragraph 4.

SECTION 7 – STUDYING WITH A FUNCTIONAL IMPAIRMENT

ARTICLE 7.1 STUDYING WITH A FUNCTIONAL IMPAIRMENT

1. A functional impairment is a physical, sensory or other functional disorder that might limit the student's academic progress.
2. The study adviser and the student will discuss the most effective facilities for the student as referred to in Article 2 of the Equal Treatment of Disabled and Chronically Ill People Act (WGB h/cz).
3. Facilities are to be aimed at removing specific barriers in the teaching programme or when it comes to taking exams. Where necessary, these facilities may be related to access to infrastructure (buildings, classrooms and furnishings) and study materials, adjustments to the form of assessment, alternative learning pathways or a customized study plan. The facilities are to ensure the student's chances of achieving the final attainment targets.
4. Based on the interview referred to in paragraph 2, the student is to submit a request for facilities to the Faculty Board, preferably three months before the student is to participate in classes, exams and practical exercises for which the facilities are required.
5. The request is to be submitted along with supporting documentation that is reasonably necessary for assessing the request (such as a letter from a doctor or psychologist registered in the BIG register, or in the case of dyslexia from a healthcare psychologist or special education needs expert, also registered in the BIG register).
6. The Faculty Board will decide on the admissibility of the request as referred to in paragraph 4 and will inform the student and the study adviser of the decision within 20 working days after receipt of the request, or sooner as the urgency of the request dictates.
7. The study adviser will ensure that the relevant parties are informed in good time about the facilities granted to a student with a functional impairment.

8. Should the Faculty Board reject the request in full or in part, the Faculty Board is to inform the student of the justification for the rejection and the possibilities for lodging an objection and an appeal. An objection must be submitted in writing within six weeks after the decision has been communicated to the student. The objection is to be submitted to the objections, appeals and complaints office via the Complaints Desk at Student Services.
9. Should extra facilities be granted, the period of validity will also be indicated. The applicant and the study adviser will evaluate the facilities before the end of this period. During this evaluation, parties will discuss the effectiveness of the facilities provided and whether they should be continued.
10. If a student is dyslexic, he will be granted a maximum of 15 extra minutes for each hour that a test or exam is officially scheduled.

SECTION 8 – AMENDMENTS, TRANSITIONAL ARRANGEMENTS, APPEALS AND OBJECTIONS

ARTICLE 8.1 CONFLICTS WITH THE REGULATIONS

If other additional regulations and/or provisions pertaining to education and/or examinations conflict with these Education and Examination Regulations, the provisions in these Education and Examination Regulations will prevail.

ARTICLE 8.2 ADMINISTRATIVE ERRORS

If, following the publication of an exam result, a marks sheet, or a student's progress report, an alleged error is discovered, the discoverer, be it the university or the student, is required to make this known to the other party immediately upon finding the error and to cooperate with rectification of the error.

ARTICLE 8.3 AMENDMENTS TO THE REGULATIONS

1. Amendments to these Education and Examination Regulations are enacted by the Faculty Board in a separate decree.
2. In principle, amendments to these regulations do not apply to the current academic year. Amendments to these regulations may apply to the current academic year if the interests of the student are not prejudiced within reasonable bounds, or in situations of force majeure.
3. Amendments to these regulations have no effect on earlier decisions by the Examination Board.

ARTICLE 8.4 TRANSITIONAL ARRANGEMENT

1. In the case of amendment of these Education and Examination Regulations, the Faculty Board is to enact a transitional arrangement as necessary.
2. The transitional arrangement is to be published on the degree programme's website.
3. General principles for the transitional arrangement in the case of changes to the curriculum:
 - a. Changes to the curriculum are to be announced prior to the academic year in which the changes take effect.
 - c. No guarantee can be made that all programme study units that were part of the curriculum when a student enrolled in a programme will continue to be part of the curriculum. The final Bachelor's degree assessment is to be based on the curriculum most recently adopted by the Faculty Board.
4. The transitional arrangement will always include:
 - a. which lapsed study units or parts of study units are equivalent to (part of) study units thereof in the current curriculum included in the programme-specific appendix;
 - b. that if a study unit or part of a study unit without practical exercises is removed from the curriculum, there will be at least 2 opportunities in the subsequent academic year to take a written or oral exam or to obtain an assessment by some other means;
 - c. that if a study unit or part of a study unit that involves practical exercises is removed from the curriculum, and during the subsequent academic year no opportunities are offered to carry out these practical exercises, at least one study unit is designated as a suitable replacement for the lapsed study unit;
 - d. the period of validity of the transitional arrangement.

5. The transitional arrangement must be approved by the Examination Board with regard to the provisions of paragraph 4.
6. In exceptional cases and to the student's benefit, the Examination Board may deviate from the prescribed number of opportunities to sit exams related to study units that have been dropped from the curriculum.

ARTICLE 8.5 ASSESSMENT OF THE EDUCATION AND EXAMINATION REGULATIONS

1. The Faculty Board is responsible for the regular assessment of the Education and Examination Regulations and is to take into account the time involved for the student for the purposes of monitoring and adjusting the study load, if necessary.
2. In accordance with article 9.18 of the Higher Education and Research Act, parts on the Education and Examination Regulations need the approval of the Programme Committee. On other parts the Programme Committee can advise.
3. The Programme Committee annual assesses the way in which the Education and Examination Regulations are implemented.

ARTICLE 8.6 APPEALS AND OBJECTIONS

An objection against a decision by the Examination Board or by an examiner or an appeal against a decision by the Faculty Board based on these Regulations must be submitted in writing within six weeks after the decision has been communicated to the student. The objection is to be submitted to the objections, appeals and complaints desk via the Student Services.

ARTICLE 8.7 HARDSHIP CLAUSE

The Examination Board or the Programme Board may allow derogation from the provisions of these Regulations in the event of demonstrably compelling unreasonableness or unfairness. These Regulations define which Board has the authority to derogate.

ARTICLE 8.8 PUBLICATION

The Education and Examination Regulations and the rules and regulations of the Examination Board are to be published on the degree programme's website.

ARTICLE 8.9 ENTRY INTO FORCE

These regulations enter into force on 1 September 2021 and replace the regulations of 1 September 2020.

EDUCATION AND EXAMINATION REGULATIONS PROGRAMME-SPECIFIC ANNEX

BSC MECHANICAL ENGINEERING

2021-2022

The regulations in this annex are part of the programme-specific component of the students' charter, including the Education and Examination Regulations (EER), of the Mechanical Engineering bachelor programme (CROHO number 56966) of the University of Twente's Engineering Technology faculty.

SECTION A - PROGRAMME OBJECTIVE

This programme educates bachelors to a junior-academic level of working and thinking and instils an attitude and skills directed towards solving problems and designing new products, processes and systems.

The development of the communication and social skills that are necessary to perform satisfactorily as a bachelor in a multidisciplinary team is an integral part of the programme. The programme covers the foundations of the broad field of mechanical engineering, with an emphasis on practical applications of knowledge, the generalisation of specific knowledge into universal solutions or methods, and the development of the student's learning capacity.

SECTION B – ATTAINMENT TARGETS AND OBJECTIVES OF THE BSC PROGRAMME (ARTICLE 7.13 PARAGRAPH 2B, WHW)

The objective of the programme is to educate bachelors with a particular focus on attaining the following competences:

- a. Comprehensive and thorough technical and scientific knowledge of the various fields of mechanical engineering (mechanics, fluid mechanics, heat transfer, energy, systems and control, dynamic systems, design and construction) and the skills to use this knowledge effectively.
- b. Thorough knowledge of methods, paradigms and tools to analyse and interpret data.
- c. The ability to contribute to the solution of technological problems using a systematic approach that includes analysis, the formulation of subproblems and the evaluation of the implementation.
- d. The ability to integrate theory and practice from various subdisciplines.
- e. The ability to apply techniques, skills and modern “engineering tools” when these are relevant to the engineer’s practice.
- f. The ability to design a system, component or process that meets the set requirements and prerequisites.
- g. The ability to effectively communicate with professionals about one’s own work and its relevance and impact in various contexts.
- h. The ability to operate as part of a (interdisciplinary and international) team, to take initiative, and to recognise and fill gaps in one’s knowledge.
- i. The ability and attitude to evaluate the impact of one’s own work from a technological, social and ethical perspective and take professional responsibility for one’s decisions.
- j. The ability to continue one’s education in a subsequent master’s programme.
- k. The attitude and ability to maintain and continuously improve one’s academic and professional skills (life-long learning).

SECTION C - OPERATIONALISATION OF THE ATTAINMENT TARGETS

The programme uses the following methods to achieve its attainment targets:

- a. Comprehensive and thorough technical and scientific knowledge of the various fields of mechanical engineering (mechanics, fluid mechanics, heat transfer, energy, systems and control, dynamic systems, design and construction) and the skills to use this knowledge effectively.
 - In the theoretical components, students receive basic and more in-depth knowledge of mechanics, fluid mechanics, heat transfer, production technology and systems and control.
 - Knowledge from these components is applied during projects in a direct and integrated manner.
- b. Thorough knowledge of methods, paradigms and tools to analyse and interpret data.
 - Particularly during projects and mathematical units (statistics), the acquisition and processing of data are covered in a variety of ways.
 - The ability to contribute to the solution of technological problems using a systematic approach that includes analysis, the formulation of subproblems and the evaluation of the implementation.
 - As part of the first-year projects, systematic problem-solving skills are taught.
 - During the projects, students go through every step of the project approach, with a particular focus on generating alternatives and making a substantiated choice for a given solution.
- c. The ability to integrate theory and practice from various subdisciplines.
 - For each project, the focus is on one particular aspect of the product or system cycle, without losing sight of the other aspects.

- During projects, knowledge and skills from various fields must be applied in an integrated manner in order to design a solution to a complex problem.
- d. The ability to apply techniques, skills and modern “engineering tools” when these are relevant to the engineer’s practice.
- The project assignments are designed to represent a realistic practical situation. Some of these assignments are taken directly out of professional practice.
 - The techniques and skills acquired during theoretical components must be applied during these projects.
- e. The ability to design a system, component or process that meets the set requirements and prerequisites.
- During projects, the problems at hand must be thoroughly analysed within the context of the project.
 - The final result of the project is evaluated based on the project’s prerequisites.
- f. The ability to effectively communicate with professionals about one’s own work and its relevance and impact in various contexts.
- During projects, verbal and written professional communication is covered in a variety of ways.
 - Particularly in relation to the final bachelor assignment, the societal embedding assignment and Academic Research & Skills, the students must communicate about their work with colleagues and professionals in a clear and proper manner. The final bachelor assignment combined with the societal embedding assignment are concluded with a conference.
- g. The ability to operate as part of a (multidisciplinary and international) team, to take initiative and to recognise and fill gaps in one’s knowledge.
- During projects, the workload is divided and teams are formed. These teams are formed in advance during some projects. Filling gaps in one’s knowledge is part of project-led education.
 - During two projects, there is an explicit focus on the optimisation of the teamwork and reflection on the student’s own role in the team.
- h. The ability and attitude to evaluate the impact of one’s own work from a technological, social and ethical perspective and take professional responsibility for one’s decisions.
- Taking responsibility for the entire project result within which the partial solutions are integrated.
 - A “Chain Management” unit is part of the project related to Energy and Sustainability.
 - The minor gives students the opportunity to delve deeper into the discipline’s social context.
- i. The ability to continue one’s education in a subsequent master programme.
- During the bachelor third academic year, several meetings are scheduled to discuss the choice of a master’s programme. During all three of the programme’s academic years, various self-reflection assignments are completed.
- j. The attitude and ability to maintain and continuously improve one’s academic and professional skills (life-long learning).
- Starting with the second project, there will be a focus on feedback and self-reflection. The goal is to ensure that these aspects are automatically part of all subsequent projects.

SECTION D - ACADEMIC SKILLS

In the UT ME programme, during the first and second year of the programme, academic competences are taught as part of the “Academic skills” study line. During the third year, these competences are part of Academic Research & Skills and the Bachelor and Societal Embedding Assignment.

In the UT/VU ME programme, during the whole programme, academic and professional skills are taught as part of the “Project & Academic skills” study line. Parallel to the BSc assignment in the third year the academic skills are part of Research Skills.

Academic competences include e.g. teamwork, self-reflection/feedback, ethics for engineers, academic English, conducting scientific research and orientation and information regarding further education.

SECTION E - TEACHING METHODS USED

1. **lecture:** a plenary (on Campus or online) gathering for students, intended for the presentation of information.
2. **tutorial:** a (online or on Campus) gathering for a (sub) group of the population in order to allow students to process the subject matter (also known as guided independent learning).
3. **assignment:** the execution of a design or research assignment.

4. **practical:** a practical assignment (online or on Campus) as referred to in Article 7.13, paragraph 2 (d) WHW. This refers to participation in an educational activity designed to acquire certain skills, such as the completion of an assignment or a technological design, the execution of tests and experiments and participation in field work or an excursion. For practicals, there is a participation obligation. In the event of force majeure (e.g. illness), the student must immediately contact the lecturer and the student adviser.
5. **project:** working as a team of students to carry out a design or research assignment.
6. **integrated education:** a gathering combining elements of lectures, tutorials and other teaching methods
7. **thesis:** written report on a theoretical or practical assignment.
8. **internship:** being in a professional or scientific environment and conducting activities in order to increase knowledge of and insight into business and research processes.

SECTION F - INSTRUCTION LANGUAGE AND THE LANGUAGE OF THE EXAMS

The instruction language of the Mechanical Engineering bachelor programme and the examination units is English.

SECTION G – STRUCTURE OF THE BACHELOR PROGRAMME

The UT ME / UT/VU ME programme is a 3-year full-time programme. The total study load is 180 EC, 150 EC for the major and 30 EC for the minor. The major consists of ten coherent modules²⁰ / 6 semesters in which disciplinary knowledge, skills and attitude are developed and assessed in the most coherent way possible. These modules / semesters are made up of multiple study units with varying ECs counting up to 15 EC / 30 EC. A study unit may consist of multiple 'parts of a study unit'.

Table 1 lists the UT ME coherent modules, the study units, the parts of the study units and the corresponding study load (EC) for study units or the weight (%) for parts of study units of the UT ME programme. If applicable the final exam grade of the study unit is the weighted average of the test grades of the parts of the study units. The grades of all study units and parts of study units mentioned in table 1 are registered in Osiris and remain valid indefinitely. Table 2 lists the UT/VU ME semesters, the study units and the corresponding study load (EC) for study units

The descriptions of the study units referenced in article 4.4 paragraph 1 of the Guideline EER are available in Osiris. Upon successful completion of all study units the student passes the Final Exam of the UT ME / UT/VU ME BSc programme²¹.

The minor consists of several study units worth a total of 30 credits which contribute to the students' general academic competences or to the enrichment of their knowledge and skills in a specialist field. Qualifying for a certain master programme or specialisation can be taken into account. Students can compose their own minor programme. The UT minors from which students may choose are outlined in the minor admission matrix, which is available on the UT's minor website²². Furthermore, students can compose their own minor for which they must acquire permission from the ME examination board before the start of the minor. For each minor, the programme in question may set substantive admission requirements. Students can also choose to take a minor at another Dutch University or abroad²³. Students must submit their choice of minor in the semester prior to the start of the minor.

For the standard UT minors, students must apply for the minor via Osiris before the date set by the minor's organisation AND enrol in the minor in question via Osiris before the start of the minor. A minor abroad should be arranged in the first semester of the second year. For some combinations of the programme itself and the minor, scheduling conflicts (being unable to participate in all scheduled activities or an uneven division of the study workload) are unavoidable.

²⁰ **Coherent** education means that the education consists of different parts which are related. A coherent module consists of different separate study units. These study units are assessed separately with an exam and registered in Osiris as separate study units with their own grades expressed in half grades, rounded by the Osiris system (see Article 4.1.9). Successfully passed exams remain valid (see article 4.7.1). The exam may consist of one or multiple tests. Results of tests are expressed in a grade from 1 to 10 with one decimal grade or as pass/fail (Article 4.1.8). All test results registered in Osiris (see table 1) remain valid, others expire. The coherent module itself is not graded.

²¹ The bachelor is assessed with a Final Exam. A study unit is assessed with an exam. Parts of a study unit are assessed with tests.

²² <https://www.utwente.nl/en/education/electives/minor/>

²³ <https://www.utwente.nl/en/education/electives/minor/offer/minor-elsewhere/>

| Year | Module, study units and parts of study units (UT ME) | Weight (%) | EC |
|--------------|--|-----------------|-----------|
| BSc 1 | Module 1: ME - 1 - Design and Manufacturing | | 15 |
| | TIME & Calculus 1A | | 4.0 |
| | - TIME * | 38 | |
| | - Calculus 1A | 62 | |
| | Statics & Modelling and Programming 1 | | 3.0 |
| | - Statics | 67 | |
| | - Modelling and Programming 1 | 33 | |
| | Manufacturing Systems & Technical Drawing * | | 4.0 |
| | - Manufacturing Systems | 62 | |
| | - Technical Drawing | 38 | |
| | - Practicals Manufacturing Systems | pass/fail | |
| | Project Design of a Mechanical Tool & Academic Skills 1 * | | 4.0 |
| BSc 1 | Module 2: ME - 2 - Energy and Materials | | 15 |
| | Calculus 1B | | 3.0 |
| | Eng. Thermodynamics 1 & Modelling and Programming 2 | | 4.0 |
| | - Engineering Thermodynamics 1 | 100 | |
| | - Modelling & Programming 2 | pass/fail/bonus | |
| | Materials Science 1 | | 3.0 |
| | - Materials Science 1 | 100 | |
| | - Practicals Materials Science 1 | pass/fail | |
| | Project Analysis of an Energy System & Academic Skills 2 * | | 4.0 |
| | Project Design of a Mechanical Tool & Academic Skills 1 * | | 1.0 |
| BSc 1 | Module 3: ME - 3 - Energy and Sustainability | | 15 |
| | Calculus 2 | | 3.0 |
| | Eng. Thermodynamics 2 & Modelling and Programming 3 | | 3.0 |
| | - Engineering Thermodynamics 2 | 50 | |
| | - Modelling & Programming 3 | 50 | |
| | Materials Science 2 | | 2.0 |
| | - Materials Science 2 | 100 | |
| | - Practical Materials Science 2 | pass/fail | |
| | Introduction to Life Cycle Analysis * | | 2.0 |
| | Project Design of an Energy System & Academic Skills 3 * | | 5.0 |
| BSc 1 | Module 4: ME - 4 - Design and Mechanics | | 15 |
| | Linear Algebra | | 3.0 |
| | Mechanics of Materials & Modelling and Programming 4 | | 4.5 |
| | - Mechanics of Materials | 100 | |
| | - Modelling & Programming 4 | pass/fail/bonus | |
| | Machine Elements * | | 4.0 |
| | Project Design of a Construction & Academic Skills 4 * | | 3.5 |
| BSc 2 | Module 5: ME - 5 - Dynamic Systems | | 15 |
| | Vector Calculus | | 2.0 |
| | Dynamics 1 | | 4.0 |
| | System Analysis | | 4.0 |
| | Project Design Principles & Academic Skills 5 | | 5.0 |

Continued on the next page

| Year | Module, study units and parts of study units (UT ME) | Weight (%) | EC |
|--|---|---------------|-----------|
| BSc 2 | Module 6: ME - 6 - Product Design | | 15 |
| | Elasticity Theory | | 2.0 |
| | Processing & Properties of Polymers | | 3.0 |
| | Tribology | | 2.0 |
| | Project Consumer Product & Academic Skills 6 * | | 8.0 |
| BSc 2 | Module 7: ME - 7 - Fluid Mechanics & Heat Transfer | | 15 |
| | Fluid Mechanics 1 | | 3.5 |
| | Heat Transfer | | 3.5 |
| | Project Fluids Engineering & Academic Skills 7 | | 8.0 |
| BSc 2 | Module 8: ME - 8 - Mechatronic Design | | 15 |
| | Dynamics 2 | | 4.5 |
| | Systems and Control Engineering | | 4.0 |
| | Project Mechatronics & Academic Skills 8 * | | 6.5 |
| BSc 3 | Module 9: Minor | | 15 |
| | Free choice | | |
| BSc 3 | Module 10: Minor | | 15 |
| | Free choice | | |
| BSc 3 | Module 11: ME - 11 - Production Systems Engineering | | 15 |
| | Statistics | | 2.5 |
| | Introduction Finite Element Method | | 3.5 |
| | Academic Research & Skills * | | 3.5 |
| | - Research proposal | 70 | |
| | - Societal embedding proposal | 30 | |
| | Project Production Systems Engineering * | | 5.5 |
| BSc 3 | Module 12: ME - 12- ME Bachelor Assignment | | 15 |
| | ME Bachelor Research Assignment * | | 12.0 |
| | ME Bachelor Societal Embedding Assignment * | | 3.0 |
| Legend | | | |
| BSc X | Module Y: ME -Y - Name coherent module | Weight | 15 |
| | Study unit 1 | | 3.0 |
| | Study unit 2 | | 3.0 |
| | - Part a of study unit 2 | 50 | |
| | - Part b of study unit 2 | 50 | |
| | Study unit 3 | | 2.0 |
| | - Part a of study unit 3 | 100 | |
| | - Part b of study unit 3 | pass/fail | |
| | Study unit 4 | | 2.0 |
| | Study unit 5 | | 5.0 |
| * Cannot be followed by students from other programmes and/or exchange students. | | | |
| Note: grades of all mentioned study units and parts of study units remain valid indefinitely, all grades need to be minimal 5.5 or pass | | | |

Table 1: UT ME programme showing the coherent modules, study units, parts of the study units and the study load (EC) for study units or the weight (%) for parts of study units.

| Year | Semester and its study units (UT/VU ME) | EC |
|-------|---|------|
| BSc 1 | Semester 1: Manufacturing | 30 |
| | Mathematics: Linear Algebra | 3 |
| | Statics | 4 |
| | Mechanics of Materials | 4 |
| | Materials Science: Metals & Alloys | 4 |
| | Manufacturing 1 | 5 |
| | Academic & Professional Skills (APS) – TIME | 1 |
| | Project & Academic Skills 1: Manufacturing | 8,5 |
| | Continuous Assessment | 0,5 |
| BSc 1 | Semester 2: Energy Transition & Sustainability | 30 |
| | Mathematics: Calculus 1 | 4 |
| | Project & Academic Skills 2: Energy Transition & Sustainability | 9 |
| | Thermodynamics 1 & 2 | 7,5 |
| | Renewable Engineering Technology | 2,5 |
| | Design Engineering | 1,5 |
| | Manufacturing Systems | 2 |
| | Life Cycle Analysis | 3 |
| | Continuous Assessment | 0,5 |
| BSc 2 | Semester 3: Maintenance | 30 |
| | Mathematics: Differential Equations | 4 |
| | Dynamics | 3,5 |
| | Mechanical Vibrations | 3,5 |
| | Materials Science: Polymers | 2 |
| | Tribology | 2 |
| | Signal Analysis | 2 |
| | Manufacturing 2 | 3,5 |
| | Project & Academic Skills 3: Maintenance | 9 |
| | Continuous Assessment 3 | 0,5 |
| BSc 2 | Semester 4: Technology for Healthcare | 30 |
| | Mathematics: Statistics & Probability | 2 |
| | System Analysis | 3 |
| | Control Engineering | 4 |
| | Precision Engineering | 2 |
| | Elasticity Theory + FEM | 3,5 |
| | Smart Industry | 2,5 |
| | Project & Academic Skills 4: Technology for Healthcare | 10,5 |
| | Continuous Assessment 4 | 0,5 |
| BSc 3 | Minor | 30 |
| | Free Choice | 30 |
| BSc 3 | Semester 6: Thermal & Fluid Engineering and BSc Assignment | 30 |
| | Mathematics: Vector Calculus | 2 |
| | Fluid Mechanics | 3,5 |
| | Heat transfer | 3,5 |
| | Project & Academic skills 5: Thermal & Fluid Engineering | 3 |
| | BSc Assignment | 12 |
| | Research Skills | 5 |
| | Continuous Assessment 5 | 1 |

Table 2: UT/VU ME programme showing the first two years, the semesters, study units (courses) and the study load (EC).

SECTION H - SPECIFIC CHARACTERISTICS OF THE PROGRAMME

The Mechanical Engineering bachelor's programme has several specific characteristics:

- a. There are safety requirements for working in UT and/or VU workshops and laboratories. Students are expected to be familiar with and comply with these requirements²⁴.
- b. For some study units, it is not possible to achieve the learning objectives without the use of a laptop.
- c. The ultimate responsibility for the prevention of RSI lies with the students themselves. Via the Notebook Service Centre, information is distributed and tools are made available for the prevention of RSI.
- d. A student may only participate in the education if they are aware of and act in accordance with the safety and ARBO (occupational health and safety) regulations. This includes the specific regulations that apply to the ET faculty, e.g. the locker regulations.
- e. Agreements with the company concerning the public access to the results, the final report and the duration and extent of confidentiality should be confirmed beforehand by the board of the faculty Engineering Technology'

SECTION I - ADMISSION REQUIREMENTS

Programme: students who are granted an exemption for first-years study units for more than 15 EC receive an extracurricular additional assignment to show that they are able to study 45 EC a year.

Minor: to participate in a minor, the student must have obtained 90 ECs from the first and second academic year.

Project Module 8 UT ME: to participate in the project of Module 8, the UT ME student must have successfully completed Dynamics 1 or System Analysis in Module 5.

Bachelor Assignment UT ME (Graduation Module 12): for UT ME students at the start of module 12 applies:

- a. Students who have passed all study units of modules 1-8 and participated in the study units of module 11 are allowed to start their final bachelor assignment at the start of Q4 without any additional requirements;
- b. Students who have passed all study units of module 1-7 and have to (re)sit no more than one study unit from module 8 and participated in the study units of module 11 are allowed to start their final bachelor assignment. These students can finish their final bachelor assignment in the second end of August.

Bachelor Assignment UT/VU ME (Graduation block 17 and 18): for UT/VU ME students at the start of block 17 applies:

- a. Students who have passed all study units (courses) of semester 1-4 and participated in the study units of block 16 are allowed to start their final bachelor assignment at the start of block 17 without any additional requirements
- b. Students who have passed all study units (courses) of blocks 1-11 and have to (re)sit no more than one study unit from block 12 and participated in the study units of block 16 are allowed to start their final bachelor assignment. These students can finish their final bachelor assignment in the second part of August.

All other students from UT ME and UT/VU ME are NOT allowed to start their final bachelor assignment unless the examination board gives them an exemption based on a motivated request from the student. When students meet the admission requirements or have obtained an exemption from the examination board, they may start their final bachelor assignment at the beginning of each of the four quarters of the academic year. These students can finish their final bachelor assignment during the mini conference at the end of each quarter.

SECTION J - (BINDING) RECOMMENDATIONS ON THE CONTINUATION OF STUDIES (BINDING STUDY ADVISE (BSA))

As formulated in the Guideline EER, Article 6.3, each student receives a (binding) written recommendation on continuation of studies at the end of the first year of enrolment on the programme. This recommendation is based on the student's results. **A negative recommendation at the end of the first year is binding.** A student who receives a negative (binding) recommendation cannot enroll in either one of the ME programmes (UT ME or UT/VU ME) the for the next three years.

²⁴ https://www.utwente.nl/nl/et/intranet/arbo_milieu_huisvesting/veiligheid/safety-regulations-et/.

A positive recommendation at the end of the first year of enrollment is given if the student has completed at least 45 EC of the study load in the first year of the programme. Results of exams and of tests that remain valid beyond the current academic year are counted to establish how much a student has completed. For UT ME as well as UT/VU ME, no subject-specific requirements are set down.

SECTION K - GRADUATION WITH DISTINCTION (CUM LAUDE)

Distinctions rules for the ME BSc programme include the following criteria:

- a. When students have demonstrated exceptional ability in their bachelor programme, this can be stated on the diploma with the words 'Cum Laude'.
- b. Displaying exceptional ability requires students to meet each of the following conditions:
 - i. The average of the exam grades for the study units of the BSc programme, excluding project grades and the study units of the first semester of the third academic year (minor), is at least 8.0.
 - ii. When calculating the aforementioned average, study units that were not evaluated with a grade or for which an exemption was given are not included.
 - iii. Exemptions were granted for no more than a third of the total bachelor programme.
 - iv. The grade for the final bachelor assignment is at least 8.5.
 - v. Any additional study units (not part of the regular ME BSc programme) are not included under the aforementioned regulations.
 - vi. The bachelor programme was completed within four years, unless exceptional circumstances, in the opinion of the examination board, justify a greater exceeding of the study duration. These exceptional circumstances include the conditions that are grounds for granting graduation support.
 - vii. No formal record of fraud is documented in the students' file.

If these guidelines are not fully met, the programme board can submit a proposal to the examination board to award the designation 'Cum Laude'. In that case, the special circumstances and the exceptionality of the achievement must be properly substantiated.

SECTION L - MASTER PROGRAMMES (WHW ARTICLE 7.4A, 8TH PARAGRAPH)

The Mechanical Engineering bachelor programme provides direct admission to the Mechanical Engineering master programme of the University of Twente. For the admission regulations of this master's programme is referred to the student charter of this programme.

For more information about this programme's alignment with other master programmes, the student may consult the website of the VNSU at <http://www.studiekeuze123.nl> or contact their study adviser or the Student Counselling Office.

SECTION M - NUMBER AND PREREQUISITES OF EXAMS, TESTS AND PRACTICAL EXERCISES

Refer to the assessment plan for an overview of the number of exams and tests and the exam periods.

Oral exams and other exam components not listed in the assessment plan will be held at a time set by the examiner(s) and the student together and, if the student so desires, within a month after the conclusion of the education for the examination unit in question.

Regarding the prerequisites for exams/tests and practical exercises, the following types of prior knowledge apply:

Desired prior knowledge: The student is expected to be familiar with the terminology and the subject matter of the study unit in question or a comparable study unit.

Compulsory prior knowledge: The student is expected to have successfully participated in the study unit in question or a comparable study unit. The lecturer expects the student to have acquired the knowledge imparted during the study unit in question.

Absence during a study period may result in the failing of tests, exams, projects, or practical exercises. Both programmes accept no responsibility for students' absenteeism. In the event of force majeure (e.g. illness), the student must immediately contact the study adviser.

SECTION N - STUDENT GUIDANCE DURING THE PROGRAMME

- a. For UT ME the study adviser is tasked with the coordination and quality assurance of the mentorship.
- b. First-year UT ME students will be assigned a mentor at the start of their programme. The mentor is connected to the programme as an employee. After consulting with the study adviser, students may be assigned a different mentor during their first year. The mentor supervises and advises students during the first year of their bachelor programme. Furthermore, the mentor will periodically discuss the students' study progress with them if their results provide reason to do so.
- c. First-year UT/VU ME students will be assigned a study adviser at the start of their programme. The study adviser is connected to the programme as an employee. The study adviser supervises and advises students during the first year of their bachelor programme. Furthermore, the study adviser will periodically discuss the students' study progress with them if their results provide reason to do so.
- d. The study adviser will – upon or without request – advise the examination board, the programme director, individual lecturers/examiners and students regarding any problems with the study workload or study progress of individual students or groups of students.

SECTION O - QUALITY ASSURANCE

The programme's quality assurance will at least include the execution of the following activities on an annual basis:

- a. **Questionnaires at the end of each quarter, module or project:** participating students are asked to fill out questionnaires at the end of each quarter (UT ME) or each block (UT/VU ME).
- b. **Study unit evaluations:** a module (UT ME) or semester (UT/VU ME) will be evaluated at least once every three years; if a study unit does not meet the criteria, it will be evaluated again the next time it is taught to determine whether appropriate measures have been taken.
- c. **Incidental activities:** if necessary, further research will be conducted in addition to the aforementioned activities (e.g. research into facilities, time usage studies, exit studies, questionnaires among alumni, etcetera).
- d. **Panel discussions:** halfway through a module (UT ME) or block (UT/VU ME), lecturers and students will engage in discussions to exchange thoughts and experiences.

SECTION P - FACILITIES

- a. The intra- or internet are used for the provision of information for and about the programme and for administrative procedures. The UT makes use of an electronic learning environment (Canvas). The design of the education of the Mechanical Engineering bachelor programme is based upon the assumption that students who enrol in this programme have access to a laptop. Students can make use of an offer from the University via the Notebook Service Centre (NSC). With their laptops, students can use the University's network and access the intra- and internet. Students from the UT/VU ME programme can also use the VUNet.
- b. Use of the computer and network facilities for non-study-related purposes may be seen as misuse.
- c. Students will be assigned their own personal e-mail address at the start of their education at the UT. This email address is used for all of the programme's electronic communication with a student.
- d. The UT features lecture and tutorial spaces, accommodations for supervised and unsupervised studying, a library and research facilities that are in service of the University's education. The University has limited facilities for free access to computers. Students from the UT/VU programme can also use the facilities of the VU.

- e. The programme makes a space available to the Isaac Newton study association for the execution of its activities at the UT. Students from the UT/VU programme can also use the facilities of the bilocation of the Isaac Newton study association at the VU via [M.E.S.A.'s Gravesande](#).
- f. Misuse of or damage to UT or VU facilities or misconduct can give the Faculty Board reason to temporarily exclude the student from participation in the education, exams and examinations, in addition to requiring reimbursement of the damages.
- g. The books and journals relevant to the Mechanical Engineering bachelor programme can be found in e.g. the UT's Central Library and with the Isaac Newton study association. For students from the UT/VU ME programme the Library is available during their regular stays at the UT. Regarding quantity, lending period, fines, etcetera, refer to the applicable regulations drawn up by the University Library and the Isaac Newton study association.

SECTION Q - ENTRY INTO FORCE

These regulations enter into force on 1 September 2021 and replace the regulations of 1 September 2020.

RULES AND REGULATIONS OF THE EXAMINATION BOARD

MECHANICAL ENGINEERING

2021-2022

DEFINITIONS MECHANICAL ENGINEERING

| | |
|----------------------------------|--|
| BSc programme: | the first (B1), the second (B2) and the third (B3) academic year of the programme that is concluded with a Final Exam. |
| BSc committee: | committee, mandated by the examination board, to evaluate whether a student has passed their bachelor phase in accordance with the regulations. |
| Bachelor coordinator: | advises the programme director on bachelor activities and conducts executive and coordinating activities. For the UT/VU programme the programme manager will take this role. |
| Subtest: | part of a test. |
| Faculty: | the Engineering Technology (ET) faculty of the University of Twente / the BETA faculty of the Vrije Universiteit Amsterdam. |
| Mentor: | staff member appointed by the programme to supervise a group of students, may advise on admission into certain study units upon or without request. |
| Module (UT ME): | the total of 15-EC consisting of several study units in which knowledge, skills and attitude are, as much as possible, logically and coherent developed, clustered and tested in the UT ME programme. |
| Module component (UT ME): | component of a TOM 1.0 module for which a test result is registered in Osiris. |
| Module part (UT ME): | coherent part of a TOM 1.0 module (consisting of one or several module components). |
| Programme director: | the programme director of the UT Mechanical Engineering (ME) programme / the location director of the UT/VU Mechanical Engineering (ME) programme. |
| Part of a study unit: | a part of a study unit. |
| 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. For the UT/VU programme a study unit is also called a course. |
| TOM 1.0 Module (UT ME): | study unit consisting of several module components worth 15 ec started before September 2020. |

RULE 1 - THE EXAMINATION BOARD

1. The Faculty Board of the faculty will establish an examination board for the purposes of holding the final bachelor exam and for the organisation and coordination of the exams of the bachelor programmes.
2. The authority of the examination board covers all study units that are part of the students' programme.
3. The examination board consists of at least four members, including two professors and a delegate from the UT/VU ME programme.
4. The examination board consists of at least three staff members who are tasked with providing the education for the programme education and at least one 'external member' not directly involved in the programme.
5. The examination board may receive assistance from staff members involved in the programme, e.g. the programme director(s), the programme coordinator(s), the study adviser(s) and/or mentors. They play an advisory role during meetings of the examination board. The examination board may decide to delegate its authorizations to the chair or secretary and to delegate the execution to the programme board, in so far as the law or these regulations allow that.
6. The meetings of the examination board are private.
7. The examination board delegates the evaluation of a student passing or failing their BSc programme to the BSc committee.
8. The examination board and the BSc committee decide based on a majority of votes. In the event of a tied vote, the chair of the examination board casts the deciding vote.

9. If members of the BSc committee cannot attend an examination meeting, they can be replaced by an authorised member. The substitute must report to the chair as such before or at the start of the meeting. The substitute will receive the voting right of the member they are filling in for, on the understanding that no more than one vote may be cast per person.
10. The BSc committee has the following composition:
 - Bachelor coordinator(s) (chair)
 - Employee of the UT ME bureau of educational affairs (secretary)

If desirable, the following persons may be asked for advice:

- Programme director
- Study adviser(s)
- Module/semester coordinators from the phase in question
- Mentors
- Lecturers responsible for study units from the phase in question

RULE 2 - GRANTING EXAMINATION AUTHORIZATIONS

The examination board draws up a list of examiners. The examination board uses the following criteria:

1. Examination authority is granted to members of the UT permanent or temporary staff who have met the education qualification requirements and are involved in the programme or experts from outside the university (article 7.12 WHW).
2. The authorization is limited to the disciplines in which the staff members are recognised as experts.
3. The authorization is limited to at most the next-lowest education level following the level at which the examiner has been educated.
4. Staff members from partner universities (such as Vrije Universiteit Amsterdam) also have examination authorization, provided that they meet the aforementioned requirements.
5. In all other cases, the examination board will decide to grant someone examination authorization. This decision will mention the authorization's period of validity and the discipline.
6. As a general rule, PhDs, post-doc students and new staff members must have assisted in the examination of a similar examination unit at least twice before they may be granted examination authorization for that unit.
7. If there are multiple examiners for one study unit, final responsibility will be assigned to one examiner. In general, the person with primary responsibility for the education
8. If (parts of) a study unit are assessed by different examiners, the examiner with final responsibility will ensure that these assessments are all based on identical standards.

RULE 3 - PRINCIPLES OF THE EXAMINATION BOARD

1. For all organisational matters pertaining study programmes, the nominal programming of the education takes precedence. The regulations for examination stimulate studying in cohorts and attempt to prevent any study delays that would disrupt the programmatic order of the study programmes.
2. The examination board has the right to derogate from the Education and Examination Regulations in certain cases in which the Education and Examination Regulations explicitly grant this right.

The examination board asks study advisers for advice regarding any decisions that concern individual students. Any information provided by the student in question will be treated confidentially. The student's study plan and any known causes of study delay will be taken into account.

3. Regarding the situations referenced in paragraph 2, the following applies:

If a student is seen as promising (pace of study at least 75%), the examination board will consider whether their decision will contribute to the students' ability to complete their bachelor programme in four years;

If the student has incurred a significant study delay (pace of study between 50% and 75%), the examination board will consider whether there are sufficient reasons to assume that – based on the student’s study plan and their most recent results – their decision will prevent the students’ pace of study from dropping any further;

If the student is seen as weak (pace of study equal to or lower than 50%), the examination board will consider whether their decision will improve the chance that the student will soon reconsider their study choice or the chance that the student successfully completes this programme.

RULE 4 - WRITING AND DESIGN OF EXAMS, TESTS AND EXAMINATION METHODS

1. Before an examiner holds an exam or test, at least one other expert lecturer will peer-review whether the exam or test in question is sufficiently representative, whether the questions are formulated unambiguously, whether the difficulty matches that of the education itself and whether the exam or test can be completed well within the available time by properly prepared students.
2. At a student’s request, the examination board may permit an exam or test to be taken in a different manner than stipulated in the first paragraph.

RULE 5 - WRITTEN AND ORAL EXAMS (ONLINE OF ON CAMPUS)

1. An individual oral exam will take no longer than 1.5 hours. An oral exam or test for a group of students will take no longer than 4 hours. The duration of a written exam or (sub)test is maximal 3 hours and is listed on the exam or test itself. The duration of an oral exam will be announced before the exam or test.
2. A written exam or test is evaluated based on predefined standards for the various questions or parts of questions that make up the exam or test.
3. The maximum number of points that can be earned per question of a written exam or test will be announced.
4. If, while the exam or test is being held, it turns out that the possibility of completing the test within the available time was incorrectly assessed, either due to the clarity of the questions or due to the difficulty of the exam or test, the examiner will immediately report this fact to the examination board. The examination board is authorised to prescribe new standards to account for this fact. These new standards may not demonstrably affect students in a negative manner.
5. At least two examiners will be present during an oral exam or test for which more than two students will be assessed at the same time.
6. Oral exams or tests that are held for an individual student or a group of students are private.
7. At all times, a member of the examination board has the right to attend an exam or test or to be represented by a substitute. The position of a substitute will be explained to the examinees.

RULE 6 - ORDER DURING EXAMS

1. During each exam or test, the examiner will appoint one or more examination supervisors to ensure that the session proceeds in an orderly fashion. At least one of the examination supervisors is familiar with the content of the study unit in question.
2. During an exam or test, students must be able to identify themselves with their proof of registration (student ID).
3. If a student is delayed, they may still participate in the session up to fifteen minutes after the start of the exam or test.
4. Students may not leave the session during the first thirty minutes following the start of the exam or test.

RULE 7 - RULES IN CASE OF EMERGENCIES

If there is an emergency or an impending emergency shortly before or during an exam or test, the following regulations apply:

1. If there is an expected emergency before the start of an exam or test, the exam or test will immediately be postponed. The examiner will set a new date and time for the exam or test together with the programme director. The new date and time for the exam or test, which will take place within a month (not including holidays), is binding. It will be announced via the usual channels within three working days after the building has been cleared.
2. If there is an emergency or an expected emergency during an exam or test, the following actions must be taken if possible:
 - a. The student has written their name and student number on all exam or test materials at the start of the exam or test;
 - b. The people present must immediately leave the room when ordered by the responsible organisation or examination supervisor;
 - c. The students leave their exam or test in the room;
 - d. If students have had a chance to begin their exam or test, the (partially) completed work will be used by the lecturer to determine the final grade, if it is reasonably possible to do so.

If the lecturer cannot determine the final grade based on the provisions of rule 8.2d, a resit opportunity will be scheduled for the affected students within a month (not including holidays) after the date of the original exam or test, provided that these students had signed up for the initial exam or test.

RULE 8 - FRAUD (ONLINE OR ON CAMPUS)

In the case of fraud, the work of the student will not be assessed and the examination board is informed. The examination board can exclude the student from participation in the relevant exam for a maximum period of 1 year. In the case of preconceived fraud, the examination board can exclude the student from participation in (any) exams for a maximum period of 1 year.

Cheating, plagiarism and fraud are defined in the general UT Students' Charter 2021-2022 in the part Academic misconduct and fraud. For written assignments, programming assignments, etcetera, the following regulations apply:

1. **Individual assignments:** there is one author who will receive an individual grade based on the assignment. If passages are included or information is used which are/is derived from other people's work, the student must clearly indicate:
 - which passages these are (e.g. by printing them in italics or between quotation marks);
 - the source of the information (by providing a clear source reference: a formal literature reference or a phrase such as "verbal information from Mrs XX").

2. **"Individual" group assignments:** different group members are responsible for different components of the assignment.

- clearly list which group member was responsible for which component of the assignment;

If passages are included or information is used which are/is derived from the components written by other group members, the student must clearly indicate:

- which passages these are (e.g. by printing them in italics or between quotation marks);
- where they come from (e.g.: "...added to the fact that measures have shown this effect to be negligible (see chapter V of this report), leads us to conclude that ...").

For anything derived from persons outside the group, the regulations for individual assignments apply.

3. **"Joint" group assignments:** the group as a whole is responsible for the entire contents of the report, even though each member wrote a different component of the assignment. In that case, it is not necessary to indicate who was responsible for each observation.

Note that when using external sources, the rules for individual assignments apply here as well. If the student does not follow these regulations and literally copies or paraphrases someone else's work without a proper source reference, they are

committing plagiarism. Both copying without a source reference and allowing one's work to be copied are considered plagiarism/fraud. During joint group assignments, the entire group can be held responsible for the fraud.

RULE 9 - PASS / FAIL REGULATIONS

The examination board will draw up pass/fail regulations for each of the exams.

1. The pass/fail regulations for
 - a. UT ME students for study units which started from September 2020 are:
A study unit during the first academic year, the second academic year and the second semester of the third academic year is successfully completed if the final exam grade is at least a 6 and all grades for the tests of parts of the study unit are ≥ 5.5 . Grades of study units and parts of study units registered in Osiris will be valid indefinitely. (Parts of) study units with insufficient results can be redone in later years.
 - b. UT ME students for study units (original TOM 1.0 modules) which started before September 2020 are:
For original TOM 1.0 modules, the pass/fail regulations of the academic year in which the first sufficient result for the TOM 1.0 module was obtained will apply. Grades of components of non-completed modules will be valid indefinitely. The insufficient results can be redone in later years²⁵.
 - c. UT/VU ME students are:
A study unit during the first academic year, the second academic year and the second semester of the third academic year is successfully completed if the final exam grade is at least a 6 and all grades for the tests of parts of the study unit are ≥ 5.5 . Grades of study units and parts of study units registered in Osiris will be valid indefinitely. (Parts of) study units with insufficient results can be redone in later years.
 - d. For all students, a study unit during the first semester of the third academic year (minor) is successfully completed if the rounded grade is at least a 6.
2. A student is allowed to have a in Osiris registered grade of 5.0 - 5.4 for one study unit or part of a study unit, not being a project, in the first year. In addition, a student is allowed to have a grade of 5.0 - 5.4 for one study unit or part of a study unit, not being a project, in the second year or for UT ME study units 'Statistics' or 'Introduction to Finite Element Method' of the third year (or for UT/VU ME, one study units of block 16.
3. Results of exams of study unit or tests of parts of a study unit that remain valid indefinitely (see table 1 and 2), are recorded in Osiris and are expressed in a grade from 1 to 10, with one decimal place, or as 'pass / fail' (see article 4.1.8 of the Guideline EER). Grades for subtests and partial assignments that are not registered in Osiris are recorded by the lecturers in their own administration. These results expire by the end of the academic year.
4. Exam results of study units are rounded to half grades (by Osiris) from 1.0 up to and including 5.0 and from 6.0 up to and including 10.0 as described in article 4.1.9 of the Guideline EER.
5. The grades and alphanumerically expressions have the following meaning:

| Grade | Definition | Special grades | Definition |
|---------|--------------|----------------|-------------------|
| 10 | Excellent | C4 | Compensated 4 |
| 9 & 9.5 | Very good | C5 | Compensated 5 |
| 8 & 8.5 | Good | EX (VR) | Exemption granted |
| 7 & 7.5 | Satisfactory | F (NVD) | Fail |
| 6 & 6.5 | Sufficient | P (V) | Pass |
| 1 & 5 | Fail | | |

²⁵ Transition rule UT ME: non-completed TOM 1.0 modules can still be completed after September 2020. A student can retake the non-completed module component offered as a separate study unit in 2020 – 2021. The result of the exam will be registered in the TOM 1.0 module started before September 2020. Students should NOT subscribe in Osiris for these module components, the programme will arrange that they will be subscribed for the tests / exams of the corresponding study unit and that they will be added to the Canvas site of the study unit.

6. If bonus credits are awarded for a study unit, this may never result in an unwarranted passing grade for this study unit.
7. The examination board has the option to declare a grade invalid if it was acquired in a manner that violates these regulations.

RULE 10 - ASSESSMENT REGULATIONS

1. Completion of the BSc programme:
 - a. The student has successfully completed their BSc programme if all study units of the academic year 1, 2 and 3 have been successfully completed.
2. The assessment of the premaster programme:
 - a. Each of the exams of the study units of the premaster programme will be assigned a full or half grade, “exemption” (EX), “unsatisfactory” (F) or “sufficient” (P) as a final assessment result.
 - b. Student have passed their premaster programme in accordance with the regulations if:
 - i. All theoretical subjects, practical exercises and projects have been completed with an assessment result and the list of grades does not include a “fail” (F) or a grade of 5 or lower.
 - ii. These results are achieved within eight months of the students’ enrolment at the UT.
 - c. Students who passes their premaster programme will not receive a bachelor certificate. However, students who passed their premaster programme will acquire regulatory admission to the UT Mechanical Engineering master programme. If the prerequisites for regulatory admission have not been met, the examination board may admit the student to the programme if their overall grades and/or exceptional conditions provide reason to do so.
3. Resits
 - a. One resit opportunity is available for every study unit or part of a study unit not being a project during the ongoing academic year and at the date and time listed on the assessment plan.

RULE 11 - EXEMPTIONS

The examination board will grant an exemption from participation in the exams or tests of a study unit and/or participation in practical exercises if:

1. an equivalent (in terms of level) and similar (in terms of the nature of the objectives) study unit was completed as part of a different programme or at a different certified and equal higher education institution.
2. the student has achieved the intended learning goals in some other manner, as demonstrated by evidence provided by the student and evaluated by an authorised examiner.

RULE 12 - ENTRY INTO FORCE

These regulations enter into force on 1 September 2021 and replace the regulations of 1 September 2020.

Adopted by the examination board for the BSc Mechanical Engineering programme.

Enschede, 1 September 2021.