BACHELOR PROGRAMME
MECHANICAL ENGINEERING

EDUCATION AND EXAMINATION REGULATIONS (EER)

- GENERAL UT GUIDELINE EER
- PROGRAMME-SPECIFIC ANNEX

2022 – 2023

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 General Guideline for Education and Examination Regulations for UT Bachelor Programmes
  - The Programme-specific Annex

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 responsibility. 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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GENERAL UT GUIDELINE FOR EDUCATION AND EXAMINATION REGULATIONS FOR UT BACHELOR PROGRAMMES

BSC MECHANICAL ENGINEERING

2022 - 2023

The Dean of the faculty Engineering Technology,

in view of the articles 9.5, 9.15, first SECTION (a), 7.13 first and second SECTIONs, 9.38 (b), and 9.18, first SECTION (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's programmes Mechanical Engineering.
2. Students attending courses that are not part of the student's core programme (see Article 1.2) are subject to the assessment rules laid down in the assessment schedule of the relevant study unit. The decision on special facilities in accordance with Article 5.2 may only be taken by the examination board of the programme for which the student is enrolled.
3. Each programme has its own programme-specific appendix.
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 institute section of the student charter includes a definition of what the University of Twente considers to be academic misconduct (fraud). The rules and regulations of the examination board for the bachelor's programme in question include additional rules about academic misconduct (fraud), such as which measures the examination board may take if it establishes misconduct (fraud).
7. The rules and regulations of the examination board of the bachelor's programme in question include provisions about the rules of order during tests and rules in case of emergencies.
8. The following applies in respect of the language used in the education and examination regulations and the rules and regulations of the examination board:
    a. In case of uncertainty or discrepancy, the Dutch version of this general section is binding.
    b. English versions of the programme-specific appendix of the education and examination regulations and the examination board's rules and regulations should be available for English-taught bachelor's programmes.
    c. Where the programme-specific appendix of the EER and the rules and regulations of the examination board of the bachelor's programme concerned are available in both Dutch and English, each version must, for the sake of clarity, state which version is binding.
9. Requests for exemptions in respect of provisions laid down in the education and examination regulations should be submitted to the examination board or the programme director of the student's own bachelor's programme, as laid down in the relevant articles of these Regulations.

ARTICLE 1.2 DEFINITIONS

The terms used in these Regulations should be interpreted as follows:

Academic year:	The period beginning on 1 September and ending on 31 August of the following year.
Assessment schedule:	A schedule showing the method of assessment for a module or semester course.
(Binding) recommendation on continuation of studies (Bindend studieadvies, BSA):	A recommendation on continuation of studies as referred to in Article 7.8b, paragraph 1 and 2 WHW involving expulsion from the programme in accordance with Article 7.8b, paragraph 3 WHW, issued by the programme director on behalf of the institutional administration.
Block:	A ME UT/VU semester is divided in three blocks of 8, 8 and 4 weeks.
Canvas	University of Twente's digital learning environment.
Core programme:	The same study units from the curriculum that apply to all the students following a programme.

Course:	A study unit in the UT/VU semester.
Credit:	a unit of 28 study workload 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 WHW).
Curriculum:	The aggregate of required and elective study units constituting a degree programme as laid down in the programme-specific appendix.
Degree programme:	Bachelor's degree programme as referred to in the programme-specific appendix to these education and examination regulations.
Examination:	An evaluation, performed to conclude a study unit, of the student's knowledge, understanding and skills as well as an assessment of the outcomes of that evaluation (Article 7.10 WHW); an examination may consist of a number of tests.
Examination board:	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 (Article 7.12 WHW).
Examiner:	The individual appointed by the examination board to administer examinations and tests and to determine the results, in accordance with Article 7.12 paragraph c WHW.
Exemption:	The decision of the examination board that the student has knowledge and skills which are comparable in terms of content, scope and level with one or more study units or components of study units. An exemption is granted on the basis of acquired competencies, i.e. previously passed examinations in higher education or in view of knowledge and skills attained outside higher education.
Faculty Board:	Head of the faculty (Article 9.12, paragraph 2 WHW).
Final examination:	A degree programme is concluded with a final examination. If the study units in the degree programme have been completed successfully, then the final examination will be deemed to have been completed (Article 7.10 WHW).
Higher Education and Research Act (abbreviated to 'WHW'):	The Higher Education and Research Act, Bulletin of Acts and Decrees 1992, 593, and its subsequent amendments.
Honours programme:	Institution-wide bachelor's honours programme.
Institution:	University of Twente (Universiteit Twente).
Institutional administration:	The Executive Board of the University of Twente (Article 1.1 WHW).
Minor:	Elective space conferring 30 credits that the student can also fill with offer outside the programme.
ME BSc programme:	The first (B1), the second (B2) and the third (B3) academic year of the Mechanical Engineering (ME) programme that is concluded with a final examination. ME refers both to the UT ME programme taught at the location of the University of Twente in Enschede as well as to the UT/VU ME programme taught at the bilocation of the Vrije Universiteit in Amsterdam.
Module (UT):	A total of 15 credits of one or more study units, in which the student's programme-specific knowledge, skills and attitude are developed and assessed as far as possible in an integrated and/or coherent manner.
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).
Osiris:	System designated by the institutional administration for registration and for providing information on all relevant data related to the students and the degree programme, as referred to in the WHW.

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 2d WHW is a study unit or a study unit component emphasising an activity that the student engages in, as described in the programme-specific appendix.
Programme Committee (OLC):	Committee referred to in Article 9.18 WHW.
Programme director:	The person appointed by the faculty board to administer the programme (Article 9.17 WHW).
Semester:	A half of an academic year corresponding to a total of 30 EC.
Student:	Anyone enrolled in a programme in accordance with Article 7.34 and 7.37 WHW.
Study advisor:	Person appointed by the faculty board who acts as contact between the student and the university, and in this role represents the interests of the student, as well as fulfilling an advisory role.
Study unit:	A programme component as defined in Article 7.3, paragraph 2 and 3 WHW. Each study unit is concluded with an examination. For the UT/VU programme a study unit is also called a course.
Study workload:	The time an average student needs to learn the course material. The study workload comprises project work, independent study, lectures and writing assignments, for example. The study workload is expressed in ECTS credits according to the European Credit Transfer System.
Test:	An evaluation of the student's knowledge, understanding and skills as well as an assessment of the outcomes of that evaluation. A test is part of an examination. If the examination for a study unit consists of a single test then the result of that test will count as the result of the examination.
Teaching period:	The period in which a study unit is offered. This period starts in the first week in which an educational activity takes place for the study unit concerned and ends in the final week in which an educational activity takes place and/or a test is administered for the study unit concerned. Resits are not part of the teaching period. This period may sometimes not be the same as a quarter (a quarter of an academic year).
TOM 1.0 Module (UT ME):	Study unit consisting of several module components worth 15 ec started before September 2020.
UT:	University of Twente.
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 holidays and the prearranged compulsory holidays ('brugdagen') on which the staff are free.

The definition of all other terms used in these Regulations is in accordance with the definition accorded by the main text of this document, the programme-specific section of the EER, the student charter or the WHW.

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 CONTENTS AND STRUCTURE OF THE PROGRAMME

ARTICLE 2.1 FINAL ATTAINMENT LEVELS AND STRUCTURE OF THE PROGRAMME

Explanatory notes: Article 7.13 WHW

1. The qualities relating to the knowledge, understanding and skills that the student should have acquired upon completing the programme (aims and learning outcomes) are set out in the programme-specific appendix.
2. The programme consists of 180 credits.
    a. The programme consists of a core programme of 120 credits, a minor of 30 credits and a graduation phase totalling at least 15 credits. Exceptions are the Advanced Technology and Technical Medicine programmes, which have electives instead of minors, or have no minors, but do have a core programme of more than 120 credits.
    b. The core programme of the educational programme is specified in the programme-specific appendix.
    c. The UT ME core programme consists of modules. The UT/VU ME core programme consists of semesters.
    d. Before the start of a study unit, the student must meet the prior knowledge prerequisites for that study unit, as described in the Osiris Course Catalogue.
    e. Students generally complete their minor courses in the first semester of their third year of study.
    f. The programme for which the student is enrolled may set conditions for the number of credits required to be eligible for admission to the minor course. These conditions are specified in the relevant programme-specific appendix.
    g. Students are limited in their choice of minor by the provisions of paragraph d and f. The choice of minors available can be viewed on the minor website
    h. In principle, the second semester of the third year of studies is devoted to the graduation phase, which comprises a minimum of 15 credits.
    i. The student must at a minimum have completed the core of the bachelor's programme to be admitted to the graduation phase.
    j. The examination board[1] is authorised in individual cases to deviate from paragraph d, f, h and i, if strict adherence to those provisions would result in an unacceptable delay in study progress. In consultation with the study adviser, the student may submit a proposal to the examination board for this.
3. The programme-specific appendix describes the degree programme in accordance with Article 7.13, paragraph 2, a to e, i, l, s, t and v WHW.

ARTICLE 2.2 THE PROGRAMME'S LANGUAGE OF TUITION

1. The official language of tuition is the language in which education is given, in which teaching material is provided and in which tests and examinations are held.
2. The choice of the official language for an educational programme or components of an educational programme lies with the programme director, subject to the right of consent of the programme committee. The educational programme's language of tuition for the ME BSc Programme is English.
3. If programme components deviate from the language of tuition, then this is to take place in accordance with the Code of Conduct for Languages of the University of Twente and Article 7.2 WHW.

[1] It is important that the student is still able to achieve the final attainment levels of the programme. In light of this consideration, this authorisation has been formally conferred to the examination board, as they are the ones to ensure that a student who achieves the final attainment levels is able to graduate.

ARTICLE 2.3 EXEMPTION

1. The examination board may grant an exemption to students at their request for one or more examinations or tests. To this end, the student should demonstrate having sufficient knowledge and skills in relation to the examination concerned or the test in question.
2. An exemption granted by the examination board will be registered in Osiris under the study unit or study units, or components thereof, by means of an EX (exemption).
3. Students cannot be compelled to take additional study units or components of study units in their curriculum instead of an exemption that has been granted.
4. Students may also be exempted from practical exercises if they can demonstrate that a required practical exercise will likely give rise to a personal moral dilemma. In such cases, the examination board will determine whether the component can be completed in another manner and in what way.

ARTICLE 2.4 ELECTIVE PROGRAMME

The examination board decides on requests for permission to take an elective programme as referred to in Article 7.3h WHW. The examination board assesses whether an elective programme is appropriate and consistent within the domain of the educational programme and whether the level is high enough in light of the attainment targets of the programme.

SECTION 3 TEACHING AND ASSESSMENT

ARTICLE 3.1 GENERAL

1. Each study unit concludes with an examination.
2. The examination consists of one or more tests.
3. A test or examination may take several forms, e.g. a written test, an assignment, an oral test, practical exercises or a combination of the aforementioned. Tests and examinations can be administered online.
4. The programme director publishes at least the following details of the study units in Osiris not less than four (4) weeks in advance: scope, learning objectives and content, language of tuition and assessment, prerequisites, required and recommended study materials, design of teaching methods and assessment.
5. The possibility of unconditional access to at least one resit[2] must be offered for each study unit in the same academic year. An exception may be made for practical exercises (such as practical classes and projects).

ARTICLE 3.2 ONLINE ASSESSMENT

1. If an examination or test is administered using online surveillance[3] or online proctoring[4], the examination board may set further rules and conditions for online (proctored) assessment.
2. Further information and detailed rules on online assessment can be found on the university's website.

ARTICLE 3.3 RESULTS

1. Results of examinations, tests or components of tests must be announced to students. Osiris is used for the registration of grades for examinations and in some cases also for tests.
2. The student has the right to inspect recent model test questions, model tests or past tests as well as their keys and the norm for assessment.

[2] This means resits of all the tests within a study unit.

[3] Camera surveillance of the student or students during an unrecorded test, using for example Canvas, Teams, etc.

[4] Surveillance of the student or students using special *proctoring* software, such as Proctorio.

3. The time allotted to administering a test may not exceed three hours. Exceptions in this regard are listed in section 7.2. If the examiner wishes to use a form of assessment that requires more than three hours, the examiner must, with due regard for article 3.1.4, ask the examination board for approval to deviate from the above.
4. Test results are expressed in a grade from 1 to 10 with a single decimal, or as *'pass' / 'fail'*.
5. The examination result of a study unit, as determined by the examiner, is expressed in half grades from 1.0 to 5.0 and from 6.0 to 10.0[5], with grades only being rounded in the final phase[6] of the assessment of a study unit and in accordance with the schedule below:

If figure before the decimal (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
If figure before the decimal =5:	
Grade ≥ 5.00 and < 5.50	⇨ 5.0
Grade ≥ 5.50 and <6.00	⇨ 6.0

6. Examination results of 6.0 or higher are a pass.
7. Examination results, if a pass, obtained at foreign universities will be registered as a P (*pass*). Examination results obtained at Dutch universities will be adopted one-to-one, with due regard for the provisions in paragraph 5.
8. Credits may only be issued for a study unit if the study unit has been completed with a pass mark.
9. If more than one examination or test result has been recorded in Osiris for one and the same unit of study, the highest grade will apply.

ARTICLE 3.4 MODULES/SEMESTER

1. Each UT ME module or UT/VU ME semester has a module/semester coordinator, appointed by the programme director.
2. If a module/semester comprises a single study unit then the examiner of that study unit will also be the module/semester examiner.

ARTICLE 3.5 REGISTRATION

1. Registration in Osiris is required prior to participating in a module or study unit[7].
2. Upon registering for the module or study unit, the student will automatically be registered for the assessments associated with the teaching period of the module/study unit.

[5] In Osiris, a comma is used, based on the Dutch grading system (e.g. 7,0).

[6] Final phase: when all grades are known.

[7] The applicable registration deadlines are mentioned on the webpage www.utwente.nl/en/education/student-services/education/courses-and-modules/ .

ARTICLE 3.6 DESCRIPTION OF MODULES/SEMESTERS AND ASSESSMENT SCHEDULE

1. The programme-specific appendix contains a description of each module/semester.
2. The module/semester description must include:
    a. the study units comprising the module/semester and the number of related credits;
    b. if applicable[8], the number of tests and their relative weighting;
    c. the language of tuition and assessment (Dutch-language programmes only);
    d. the manner in which the examinations and/or tests are sat (oral, written or an alternative manner).
3. The assessment schedule of a module/semester course is drawn up by the examiner or examiners and is determined by the programme director. The examination board provides advice on the assessment schedule.
4. The assessment schedule must be published in Canvas at least two weeks before the start of the module.
5. The assessment schedule of a module/semester course must include:
    a. how the learning objectives of the module/semester course or the study units of the module/semester course are assessed and when they are attained;
    b. the period of validity of the result of the test or tests;
    c. in which weeks examinations, tests and resits are held (the precise times and dates will be announced via *my-timetable*);
    d. any required minimum grade per test; a minimum grade for a test may not be set higher than 5.5;
    e. if applicable: information on resits (such as conditions, compensation options and grading periods).
6. The programme director may modify the assessment schedule during the module or study unit:
    a. The assessment schedule may only be changed in consultation with the module/semester coordinator and the examiner of the study unit.
    b. The programme director will consult the examination board before any changes to the form or manner of administering an examination or one or more tests. If the change only involves moving tests to a timeslot other than as shown in the timetable, the programme director will inform the examination board of the decision as soon as possible.
    c. Students are to be informed immediately of the change.
7. Changes to the assessment schedule may not put students at an unreasonable disadvantage. The examination board may take special measures in individual cases.

ARTICLE 3.7 ORAL EXAMINATIONS

1. If the student or the examiner wishes a third party to be present when administering an oral examination, then a request to this end must be submitted to the programme director at least fifteen working days prior to the oral examination. The student and the examiner will be notified of the programme director's decision not less than five working days in advance. The programme director must inform the examination board of the decision. Public graduation symposia, public presentations and group tests are excluded from this provision.
2. 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 day before the oral examination.

[8] As with integrated modules or larger study units.

ARTICLE 3.8 ASSESSMENT DEADLINE, EXAMINATION AND TEST DATE

1. The examiner is to inform the student of the result of an oral examination within one working day, unless, for the examiner, the oral examination is part of a series of oral examinations of the same study unit which are administered on more than one working day. In that case, the examiner is to determine and announce the result within one working day following the conclusion of the series of oral examinations.
2. The result of a test is to be disclosed to the student within ten working days after the test date, with due regard for paragraph 8 below.
3. The examination result of a study unit is to be disclosed to the student within ten working days after the conclusion of the teaching period during which the study unit is offered.
4. The examination date is the date on which the test is taken with which the student definitively passes the study unit.
5. The test date is the date on which a written or oral test is taken.
6. If a test assessment is (among other things) dependent on completing one or more assignments or writing a paper or thesis, then the test date will be the deadline of submission of the final component (or the date of the last written or oral test).
7. If a test resit is planned shortly after the first test, the results of the first test will be published at least five working days before the resit to give the student time to prepare.
8. Should the examiner not be able to meet the deadline referred to in paragraphs 1, 2, 3, 4 and 7 due to exceptional circumstances, then the examiner is to notify the examination board, providing reasons for the delay. The student concerned is to be informed of the delay immediately, and a new deadline for publication of the results will be set and notified to them. If the examination board is of the opinion that the examiner has not met the obligations, it may appoint another examiner to ascertain the result of the exam and determine the grade.

ARTICLE 3.9 PERIOD OF VALIDITY

1. The results of an examination that has been passed remain valid indefinitely. The period of validity of an examination that was passed may only be limited if the tested knowledge or understanding is demonstrably outdated or the tested skills are demonstrably outdated.
2. Results of tests of a study unit that was failed expire after the academic year. The study unit must be repeated in its entirety in the next academic year. Any exceptions are listed in the assessment schedule.

ARTICLE 3.10 RIGHT OF INSPECTION AND DISCUSSION

1. Student are entitled to discuss and review their 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 to exercise the right to discussion referred to in paragraph 1. If a 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 the test with the examiner, the student may submit a request for individual discussion with the examiner within five working days after the group discussion. The individual discussion is to take place no later than three working days prior to the next test opportunity.
3. If there is no group discussion of the test, then a student may submit a request to the examiner for an individual discussion within ten days after publication of the results. The individual discussion is to take place no later than three working days prior to the next test opportunity.
4. Individual and group discussions must take place no later than five weeks after the publication of the test results, but at least three working days prior to the next test opportunity, in the presence of the examiner or a substitute designated for that purpose.

5. Students are to be given the opportunity to inspect their assessed work for a period of two years following the assessment.

ARTICLE 3.11 RETENTION PERIOD FOR TESTS

1. The retention period for test assignments, keys, papers and the assessments of written tests is two years.
2. The retention period for final bachelor's projects is a minimum of seven years.

ARTICLE 3.12 TEACHING EVALUATION

1. The programme director is responsible for monitoring the quality of the educational programme.
2. The programme director is responsible for evaluating the programme.
3. The programme-specific appendix details how the tuition in the programme is evaluated.

SECTION 4 EXAMINATIONS

ARTICLE 4.1 EXAMINATION BOARD

1. In line with Articles 7.12a and 7.12b WHW:
    a. the faculty board appoints an examination board for each educational programme or group of programmes;
    b. examination boards determine the rules and regulations for the examiners, examinations and final examinations without further consultation.

ARTICLE 4.1 FINAL EXAMINATION AND DEGREE

Explanatory notes: Article 7.10, paragraph 2 and Article 7.11 WHW

1. The bachelor's final examination is considered to be complete when the student has passed all study unit exams in the bachelor's programme.
2. The date of the final examination is the date on which the student completes the final study unit of the degree programme.
3. A student may submit a written request, giving reasons, to the examination board to postpone the final examination, and thus to postpone the awarding of the diploma. The maximum duration of any postponement that can be granted is twelve months, in principle. In exceptional cases[9], the student may have valid reasons for requesting that the awarding of the diploma be postponed for more than twelve months.
4. If the student has requested postponement based on the provisions of paragraph 3, then the date of the examination will be the date on which the examination board decides that the student has passed the final examination subsequent to the postponement.
5. Students who have successfully met all requirements for the bachelor's final examination will be awarded a Bachelor of Science (BSc) degree.
6. The degree conferred is stated on the diploma.

[9] Some examples (by way of illustration, not to exclude other situations): the student follows a double bachelor's programme, the student needs more time for a pre-Master's programme, an extensive extra-curricular activity requires more than twelve months.

ARTICLE 4.3 DIPLOMA

Explanatory notes: Article 7.11 WHW

1. The examination board will award a diploma as proof that the student has satisfied all the requirements of the exam once the institutional administration has confirmed that the procedural requirements for awarding the diploma have been met. The date indicated on the diploma (i.e. the date of the final examination) is the date on which the student completed the final study unit of the degree programme.
2. The diploma 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 diploma.
3. The following information is to be stated on the diploma:
    a. the student's name and date of birth;
    b. the name of the institution and the degree programme as stated in the register referred to in Article 6.3 WHW;
    c. the date of the final examination;
    d. the study unit components of the final examination;
    e. the degree conferred (in accordance with Article 7.10a WHW);
    f. where appropriate, the specific qualifications associated with the degree (with due consideration for Article 7.6, paragraph 1 WHW);
    g. the date on which the programme was last accredited or the date on which the programme passed the new programme assessment (Article 5a.11 WHW).
4. An International Diploma Supplement is to be appended to the diploma. 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 diploma supplement is to include the following information at a minimum:
    a. the name of the programme and the name of the university;
    b. that the programme was offered at an institution for academic education;
    c. a description of the programme content; an indication of any specialisation and/or minor, if applicable;
    d. the study workload of the programme;
    e. the final examination components and results, based on the registration of grades in Osiris;
    f. examinations passed by the student that are not part of the final examination;
    g. if the student has successfully completed an honours programme while on the bachelor's programme, then this fact will be stated on the diploma supplement as an extracurricular programme;
    h. the student's average grade, weighted by credits (Grade Point Average, GPA). The diploma supplement indicates how the average grade is calculated.
5. If the examination board has awarded a specific distinction (e.g. cum laude) to the student, then this is to be mentioned on the diploma.
6. Students who have successfully completed more than one examination but cannot be awarded a diploma as referred to in paragraph 1, will receive, at their own request, from the Student Services Desk a statement prepared by or on behalf of the examination board which in any case will state the results of the examinations the student in question has passed.

SECTION 5 STUDENT GUIDANCE

Explanatory notes: Article 7.13 paragraph 2b and Article 7.59 WHW

ARTICLE 5.1 STUDENT GUIDANCE

1. The student can request a certified study progress overview from the Student Services Desk if required. The faculty board is responsible for student guidance.
2. Student support and guidance includes 'decentralized' guidance, as provided within study programmes, and 'central' guidance, as provided by the Centre for Educational Support.
3. Student guidance includes guidance with questions or problems with regard to career orientation and career choices and guidance with problems that affect study progress. Students are offered personal and professional student (career) guidance for optimal study progress. Where possible, needs for specific guidance are met.
4. Each student is assigned a study adviser.
5. The study adviser supervises students and advises them on all aspects of the studies, also on personal circumstances that may be affecting the student's studies.
6. The opportunity for an introductory interview will be offered to each student before 1 November of the first year of enrolment in the programme.
7. A systematic method on how students are monitored and obstruction in study progress is signalled is documented by the programme (for example in a policy plan or an annual cycle).
8. Information about the guidance facilities of the study programme is in any case available on the website of the study programme.

ARTICLE 5.2 SPECIAL FACILITIES

1. If students wish to exercise their right to specific supervision or special facilities, they should contact the study adviser. The study adviser will record the agreements made with the student in Osiris.
2. A student is entitled to special facilities in case of demonstrable circumstances beyond the student's control or extenuating personal circumstances. The facility may provide for dispensation from or an additional opportunity to sit examinations or tests to be granted and/or for specific facilities to be made available. Such dispensation and additional resits may only be granted by the examination board.

SECTION 6 STUDENT PROGRESS EVALUATION (BSA)

Explanatory notes: Article 7.8b WHW

ARTICLE 6.1 PRELIMINARY RECOMMENDATION ON CONTINUATION OF STUDIES

1. Students will receive a preliminary recommendation on continuation of studies by calendar week 52 at the latest of their first year of enrolment in the programme and a second recommendation on continuation of studies by calendar week 10 at the latest. These recommendations can be positive, negative or neutral and are not binding. Students with a postponed recommendation on continuation of studies receive a warning in their second year of enrolment in the degree programme when their study progress is jeopardized.
2. Students who receive a negative recommendation on continuation of studies will be invited for an interview with the study adviser to discuss their study methods and review their choice of specialisation. A negative preliminary recommendation on continuation of studies is considered as a warning (Article 6.2, paragraph 4).

ARTICLE 6.2 (BINDING) RECOMMENDATION ON CONTINUATION OF STUDIES

1. Students receive a written recommendation on continuation of studies, at the latest by the end of the first year of enrolment in the programme, about continuing their studies. This recommendation 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 for Articles 6.3 and 6.4. The institutional administration mandates the programme director to issue recommendations on continuation of studies.

2. The recommendation on continuation of studies includes:

    a. the results of examinations and tests from the first year of the programme that remain valid the following academic year;

    b. the exemptions for examinations and tests in the first year that were granted to the student. The programme director may set programme-specific requirements which must be met. These requirements are specified in the programme-specific appendix. Programme-specific requirements may not state that all study units of a certain curricular course must be attained[10].

3. The programme director may decide that a recommendation on continuation of studies should involve expulsion. A *recommendation on continuation of studies that involves expulsion* is referred to as a *binding recommendation on continuation of studies* (bindend studieadvies, BSA). The programme director will take the student's personal circumstances of which the university is aware into consideration when making a decision. The recommendation on continuation of studies may only involve expulsion if the programme director considers the student as not suited to the educational programme, or the student's results do not meet the required standard, i.e. if:

    a. the student has obtained fewer than 45 credits of the first year, or

    b. the student has obtained 45 or more credits of the first year, but does not meet the programme-specific requirements (as referred to in paragraph 2 of this article).

The decision notification relating to a binding recommendation on continuation of studies must inform the students of their right to file an objection and appeal via the Complaints Desk.

4. Before issuing a binding recommendation on continuation of studies, the programme director must first issue a warning to the student giving him/her a reasonable term in which to improve the course results, to the programme director’s satisfaction (Article 6.1 paragraph 2), and the programme director will give the student the opportunity to be heard.

5. Students may file a request (supported by documentary evidence) for assessment of their personal circumstances to the Personal Circumstances Committee (CPO). This request is to be filed in consultation with the study adviser. The CPO will assess the validity, nature, severity and duration of the personal circumstances and will issue an advisory opinion on these matters. The CPO's advisory opinion, issued to the programme director and the study adviser concerned, will be taken into account in the programme director's decision-making referred to in paragraph 3.

6. Personal circumstances include illness, physical, sensory or other functional disability or pregnancy of the student involved, extenuating family circumstances, participation in top-level sports or arts and membership of the university council, faculty council, programme committee or a Category 3 or 4 board in accordance with the FOBOS Regulations.

7. Students who have received a binding recommendation on continuation of studies (BSA) may not enrol in the same degree programme for a period of three consecutive academic years. If a student re-enrols in the relevant bachelor's programme after this period, this enrolment is designated as a first-year enrolment and the relevant provisions of this section apply in full.

[10] For example: ‘The student must pass all mathematics study units from the B1 programme’ is not permitted, whereas ‘The student must pass three of the four mathematics study units from the B1 programme’ is permitted.

ARTICLE 6.3 DISCONTINUATION OF THE PROGRAMME

1. The programme is considered to be discontinued if the student stops taking courses or any form of tests for the programme, and where the student:
    a. submits a request to the University of Twente to terminate the enrolment, or
    b. submits a request to terminate the enrolment for one programme at the University of Twente and enrols in another programme at the University of Twente, thus switching to another programme at the University of Twente, or
    c. continues the studies at another institute of higher education with a proof of tuition fees paid (*bewijs betaald collegegeld*, BBC).
2. A recommendation on continuation of studies will not be issued if the request to terminate enrolment is received through Studielink by 31 January in the first year of enrolment for the degree programme and the student does not re-enrol for the same programme in that same academic year. If the student re-enrols in the same bachelor's programme in a following academic year, this enrolment is designated as the first-year enrolment.
3. Students who de-enrol after 1 February for a degree programme at the University of Twente will receive a recommendation on continuation of studies, as referred to in Article 6.2 paragraph 1, from the programme they discontinued.

ARTICLE 6.4 POSTPONEMENT OF RECOMMENDATION ON CONTINUATION OF STUDIES

1. The recommendation on continuation of studies as referred to in Article 6.2 paragraph 1 may be postponed if:
    a. the student has enrolled in the degree programme on or after 1 October of the relevant academic year and on 31 August at the latest has not met the norm, or
    b. if personal circumstances preclude an assessment of the student's suitability at the end of the first year of enrolment in the degree programme.

In the event of postponement pursuant to the provisions under a), the recommendation on continuation of studies will be issued by the degree programme in which the student is newly enrolled.

2. If the student whose recommendation has been postponed re-enrols in a subsequent academic year in the same programme, the end of the second year of enrolment in the relevant programme at the latest will be the deadline for issuing the recommendation on continuation of studies. The student will in any event be notified in writing within six weeks of the date of enrolment before which date the programme will issue the final recommendation. The same norm as set out in Article 6.2 paragraph 3 applies to this recommendation.
3. If a student transfers to another UT degree programme prior to 1 October, then the recommendation on continuation of studies will not be postponed based on transfer and the norm will not therefore be adjusted as referred to in Article 6.2, paragraph 3.

SECTION 7 STUDYING WITH A FUNCTIONAL IMPAIRMENT

Explanatory notes: Article 7.13 paragraph 2m WHW and Article 2 of the Equal Treatment of Disabled and Chronically Ill People Act (WGBH/CZ),

ARTICLE 7.1 STUDYING WITH A FUNCTIONAL IMPAIRMENT

1. A functional impairment is defined as having an illness, condition, impairment or handicap that might impede or otherwise constitute a barrier to the student's academic progress.
2. Facilities are to be aimed at removing individual barriers in the teaching programme and/or when it comes to taking examinations and tests. These facilities may be related to access to infrastructure (buildings, classrooms and teaching facilities) and study materials, adjustments to the form of assessment, alternative learning pathways or a customised study plan.

ARTICLE 7.2 REQUEST FOR FACILITIES

1. The study adviser and the student concerned will discuss the most effective facilities that can be provided for the student.
2. Based on the discussion referred to in paragraph 1, the student is to submit a request for facilities. This request should be submitted to the study adviser, who has been mandated by the faculty board, preferably three months before the student is to participate in classes, exams and tests for which the facilities are required.
3. The request should be supported by documents that are needed to enable an assessment to be made.
4. The study adviser will decide on the admissibility of the request and will inform the student of the decision within twenty working days after receipt of the request, or sooner if the urgency of the request dictates.
    a. Should the request be granted, the period of validity will also be indicated.
    b. If the request is not granted, or only partly granted, the study adviser will inform the student of the justification for not granting the request as well as the possibilities for filing an objection and an appeal with the Complaints Desk.
    c. Students who are dyslexic, will be granted a maximum of 15 extra minutes for each hour that a test or exam is officially scheduled.
5. The study adviser shall inform the relevant parties in good time about the facilities that have been granted.
6. The applicant and the study adviser will evaluate the facilities before the end of the period for which they have been granted. During this evaluation, the parties discuss the effectiveness of the facilities provided and whether they should be continued. No evaluation takes place of facilities granted to students because of the functional impairment dyslexia.

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 a result, a marks sheet, or a student's progress report a manifest 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 in rectifying the error.

ARTICLE 8.3 AMENDMENTS TO THE REGULATIONS

1. Substantive amendments to these Regulations are enacted by the faculty board in a separate decision.
2. In principle, substantive 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 students 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 ARRANGEMENTS

1. In the case of amendment of these education and examination regulations, the faculty board will adopt a transitional arrangement, as necessary.
2. The transitional arrangement is to be published on the degree programme's website.

3. Changes to the curriculum are to be announced prior to the academic year in which the changes take effect. No guarantee can be made that all programme study units that were part of the curriculum when students enrolled in a programme will continue to be part of the curriculum. The final bachelor's examination is to be based on the curriculum most recently adopted by the faculty board.
4. The transitional arrangement will always include:
    a) the study units, which have been dropped, that are equivalent to study units from the current curriculum as indicated in the programme-specific appendix;
    b) an indication that if a study unit that does not involve a practical is dropped from the curriculum, then students are to have at least two opportunities in the following academic year to take a written or oral exam or to undergo another form of assessment;
    c) an indication that if a study unit with practical exercises is dropped from the curriculum and there is no opportunity in the subsequent academic year to complete the practical exercises concerned, then at least one study unit will be designated that may be completed as a substitute for the study unit that has been dropped;
    d) the period of validity of the transitional arrangement.
5. The transitional arrangement must be approved by the examination board.
6. In exceptional cases and to the student's benefit, the examination board may deviate from the prescribed number of opportunities to sit exams and/or tests 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, with specific emphasis on the study workload.
2. Based on Article 9.18 WHW, the programme committee has a partial right of consent of and a partial right to be consulted on parts of the education and examination regulations.
3. The programme committee is responsible for the annual assessment of the manner in which the education and examination regulations are implemented.

ARTICLE 8.6 APPEAL AN OBJECTIONS

An appeal and objections must be submitted in writing to the University of Twente Complaints Desk within six weeks after notification of a decision to the student.

ARTICLE 8.7 HARDSHIP CLAUSE

In cases of demonstrable unreasonableness and unfairness of a predominant nature, the examination board or the programme director may allow the provisions in these Regulations to be deviated from. This depends on which body is authorised or has the duty according to these Regulations to take a decision on or make an exception to a provision in these Regulations.

ARTICLE 8.8 PUBLICATION

The education and examination regulations and the examination board's rules and regulations are to be published on the degree programme's website.

ARTICLE 8.9 ENTRY INTO FORCE

These Regulations enter into force on 1 September 2022 and replace the Regulations dated 1 September 2021. Adopted by the faculty board, having regard to Article 9.5, 9.15 paragraph 1a, 7.13 paragraph 1 and 2, 9.38b, 9.18 paragraph 1a and 7.59 WHW, and after approval by the faculty council.

EDUCATION AND EXAMINATION REGULATIONS PROGRAMME-SPECIFIC ANNEX

BSC MECHANICAL ENGINEERING

2022-2023

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 code 50439) 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 & OBJECTIVES OF ME BSC PROGRAMME (ARTICLE 7.13 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, 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).
   - By the way of doing projects, students are trained in extending their knowledge by finding and learning new information and theories. There will also 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, presentation skills, 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. **colstruction:** a gathering combing elements of lectures, tutorials and other teaching methods.
4. **assignment:** the execution of a design or research assignment.
5. **practical:** a practical assignment (online or on Campus). 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.
6. **project:** working as a team of students to carry out a design or research assignment.
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.

For some teaching activities, there is a participation obligation. In the event of force majeure (e.g. illness), the student must immediately contact the lecturer and/or supervisor and the student adviser.

SECTION F - INSTRUCTION LANGUAGE AND THE LANGUAGE OF THE EXAMINATIONS

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

SECTION G – STRUCTURE OF THE ME BACHELOR PROGRAMME

The ME programme is a 3-year full-time programme. The total study load is 180 EC, 150 EC for the core programme (major) and 30 EC for the minor. The core programme (major) consists of ten coherent UT modules[11] / 5 UT/VU 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 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 examination 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 are available in Osiris. Upon successful completion of all study units the student passes the final examination of the ME BSc programme[12].

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 website[13]. It is not allowed to choose two first year join-in minor modules. 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 broad[14]. With the VU specific arrangements has been made. Students must submit their choice of minor in the semester prior to the start of the minor.

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[11] ***Coherent*** education means that the education consists of different parts which are related. A coherent module/semester consists of different separate study units. These study units are assessed separately with an examination and registered in Osiris as separate study units with their own grades expressed in half grades, rounded by the Osiris system (see Article 3.3). Successfully passed examinations remain valid indefinitly (see article 4.7.1). The examinations 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 3.3). All test results registered in Osiris (see table 1) remain valid indefinitly, others expire. The coherent module/semester itself is not graded.

[12] The bachelor is assessed with a final examination. A study unit is assessed with an examination. Parts of a study unit are assessed with tests.

[13] https://www.utwente.nl/en/education/electives/minor/

[14] 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 Sience 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 Sciende 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 indefinitly, all grades need to be minimal 5.5 or pass

Table 1: UT ME programme showing the 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 semesters, study units (courses), and the study load (EC).

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.

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 requirements[15].
b. For some study units, it is not possible to achieve the learning objectives without the use of a laptop with the operating system Windows.
c. The ultimate responsibility for the prevention of Repetitive Strain Injury (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 Engineering Technology 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

Minor: to participate in a minor, the student must have completed the first academic year (60 EC) and have obtained 30 EC from the 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 and have to resit no more than one study unit of module 4.

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 resit 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 half 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 semesters 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 resit 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 half 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.

[15] https://www.utwente.nl/nl/et/intranet/arbo_milieu_huisvesting/Veiligheid/safety-regulations-et/.

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

As formulated in the Guideline EER, Section 6, 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 none of the ME programmes (UT ME nor UT/VU ME) for the next three years.

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 examinations 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

Graduation committee: The BSc graduation committee consists of three ME staff members of which the chair is an assistant, associate or full professor appointed by the examination board. One of the three ME staff members is preferred to be the daily supervisor.

Extension Bachelor assignment: The Bachelor assignment should be finished within one quarter. If an extension is needed the student can file a substantiated request for an extension to the examination board supported by a study plan validated by the study adviser and the supervisor.

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 examination grades for the study units of the ME 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 fourth 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 director can submit a substantiated 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 SECTION)

Successful completion of the Mechanical Engineering bachelor programme provides direct admission to the master programmes Mechanical Engineering, Robotics and Sustainable Energy Technology of the University of Twente.

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 EXAMINATIONS, TESTS AND PRACTICAL EXERCISES

Refer to the assessment schedule for an overview of the number of examinations and tests and the examination periods.

Oral examinations and other examination components not listed in the assessment schedule 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 examination s/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, examination s, projects, or practical exercises. The ME programme accepts 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[16].

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/block, 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).

[16] Mentorship is the influence, guidance, or direction given by a mentor. A mentor is a staff member appointed by the programme to supervise a group of students, may advise on admission into certain study units upon or without request.

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 (preferably windows). 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. Students should use this e-mail address, it will be used for all of the programme's electronic communication with a student. E-mail from other addresses will be ignored and the programme is not responsible if students miss an e-mail because they don't check their UT e-mail address.

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 some 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 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 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 2022 and replace the regulations of 1 September 2021.