FACULTY OF ENGINEERING TECHNOLOGY

GUIDELINE EDUCATION AND EXAMINATION REGULATIONS 2024-2025

For the Master's programme
Mechanical Engineering (M-ME)

UNIVERSITY OF TWENTE.

PREFACE

The rights and obligations of the students on the one hand and the University of Twente on the other hand are laid down in the Student Charter, which contains two parts:

- The institutional part of the Student Sections, 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.
- The programme-specific part of the Student Charter, which is called the Education and Examination Regulations (EER) and provides a broad outline of the teaching programme and examination for each degree programme.

This document is the Education and Examination Regulations. In accordance with Section 7.13, Paragraph 1, of the Dutch Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek, hereafter: WHW), the EER must contain sufficient and clear information about the degree programme or group of programmes to which they apply. Section 7.13, Paragraph 2, of the WHW lists those issues that must, as a minimum, be stipulated in the EER with respect to procedures, rights and responsibilities relating to the teaching and examinations that are part of each degree programme or group of programmes. The WHW also includes a number of separate obligations relating to the inclusion of rules within the EER.

An ET guideline was provided to promote uniformity in the structure and formulation of elements that apply to all ET degree programmes.

Please note rights can be derived from the EER by both the Engineering Technology Faculty (ET) and students enrolled in its Master's programme. This is not the case concerning all other written and electronic publications.

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

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 ET Education and Examination Regulations.

Prof.dr.ir. H.F.J.M. Koopman
Dean of the Faculty of Engineering Technology

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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 master's programmes of the Faculty of Engineering Technology: Mechanical Engineering (M-ME), Sustainable Energy Technology (M-SET), Civil Engineering & Management (M-CEM), Construction Management & Engineering (M-CME), and Industrial Design Engineering (M-IDE).
2. Students attending courses that are not part of the Mechanical Engineering master programme are subject to the rules laid down in the appropriate documents, such as the assessment rules laid down in the assessment schedule of the relevant course, or the rules laid down in the EER of the coordinating degree programme. The decision on special facilities in accordance with Article 7.2 may only be taken by the Examination Board of the programme for which the student is enrolled.
3. 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 master'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).
4. The rules and regulations of the Examination Board of the master's programme in question include provisions about the rules of order during tests and rules in case of emergencies.
5. Requests for exemptions in respect of provisions laid down in the education and examination regulations should be submitted to the Examination Board or mandated track/specialisation coordinator of the student's own master'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.
Admission committee:	The Admissions Committee is mandated by the Faculty Board to decide on the admission of applicants to the Master's programme (Article 7.30 WHW).
Assessment plan:	A plan indicating how the testing of a course is organised. At first, it states the grading of the study units of the course, and secondly, the conditions for passing the course (including possible compensation rules within the course).
Assignment:	The execution of a design or research assignment.
BOZ:	Office of Educational Affairs within the Centre for Educational Support (CES).
Canvas:	University of Twente's digital learning environment.
Course:	A programme component as defined in Article 7.3, paragraph 2 and 3 WHW. Each course is concluded with an examination. An examination can consist of multiple tests.
Credit/ECTS:	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 WHW).
Curriculum:	The aggregate of required and elective courses constituting a degree programme as laid down in the programme-specific part.
CPO:	A committee formed by the institutional board that issues advice to the programme board in individual cases concerning the validity, term and seriousness of the personal circumstances of the student involved
Degree programme:	Master's degree programme as referred to in Article 1.1.
Essay	Written report about a theoretical or practical project/assignment
Examination:	An evaluation, performed to conclude a course, 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 7.12c 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 courses or components of courses. An exemption is granted based on 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 courses in the degree programme have been completed successfully, then the final examination will be deemed to have been completed (Article 7.10 WHW).
FOBOS:	Financial Support for Special Circumstances of Students.
HBO:	Dutch University of Applied Sciences.
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.
Institution:	University of Twente (Universiteit Twente).
Institutional administration:	The Executive Board of the University of Twente (Article 1.1 WHW).
Internship	Period in which students are part of a professional or scientific environment and conducting activities in order to increase knowledge of and insight into business and research processes.
M-ME	The Master's programme of Mechanical Engineering.
Language of tuition:	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.
Learning outcomes:	The qualities regarding the knowledge, insight and skills a student must have acquired upon completion of the programme.
Lecture:	A plenary (on Campus or online) gathering for students, intended for the presentation of information.
Literature study:	The undertaking of a literature research into specified scientific phenomena.
MyTimetable/TE viewer:	The application used at the University of Twente to view and download the timetable of the study programme.
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.
Partner institution:	An institution with which the university has a structural relationship for collaboration, in which the programme is active. For example the 4TU federation and the ECIU -network (http://www.eciu.org/)
Practical exercise:	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, computer work and participation in fieldwork or an excursion.
Pre-master's programme:	The pre-masters programme is a transfer and bridging programme for Universities of Applied Sciences (HBO) or University Bachelor programme students who wish to obtain a university master's degree, but who cannot be admitted directly (see Article 2.2).
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).
Project:	Working as a team of students to carry out a design or research assignment, usually based on a real life scenario.
Rules and regulations Examination Board	Rules and regulations as defined by and of the Examination Board

Seminar:	A meeting for a part of the population to offer students the opportunity to work through the learning materials (also supervised self-study).
Specialisation coordinator:	Member of the scientific staff responsible for providing advice on, and establishing the master's programme. Ensuring that the programme's intended learning outcomes are adequately covered in the student's individual study programme.
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 tour:	A trip made for the purpose of study and/or carrying out research. Providing students with a hands-on experience about their learning concepts.
Study load:	The time an average student needs to learn the course material. The study load comprises project work, independent study, lectures and writing assignments, for example. The study load 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 course consists of a single test then the result of that test will count as the result of the examination. A test can consist of subtests.
Teaching period:	The period in which a course is offered. This period starts in the first week in which an educational activity takes place for the course concerned and ends in the final week in which an educational activity takes place and/or a test is administered for the course concerned.
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).
UT:	University of Twente.
Working day:	Any day from Monday to Friday with the exception of official holidays and the prearranged compulsory holidays ('brugdagen') on which the staff are free.

The definition of all other terms used in these Regulations is in accordance with the definition accorded by the main text of this document and/or the student charter or the WHW.

ARTICLE 1.3 LANGUAGE OF TUITION

1. The language of the programme, including communication, instruction and examination is English.
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 to consent of the programme committee.
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.
4. The thesis and internship report are written in English. Exceptions require approval of the Examination Board beforehand. If an exception is granted, the student is obliged to provide a summary of the final report in English.

ARTICLE 1.4 SAFETY

Working in a laboratory or workshop is subject to certain safety requirements. Students are obligated to inform themselves of these rules and comply with them. To be allowed to work in a laboratory or workshop, the student must be registered as a student at the UT.

SECTION 2 APPLICATION AND ENROLMENT

ARTICLE 2.1 CONDITIONS

1. 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, Article 7.30b.
2. Admission to a Master's can be achieved in several ways:
   a. Students from the UT, UT-VU, TUE and TUD holding a university bachelor's degree in mechanical engineering are directly admissible
   b. University bachelor's degrees from related subjects or programmes: bachelors of a number of adjoining subjects are admissible, in many cases under the condition that a certain supplement of the bachelor's programme is undertaken (for example, a pre-master programme). Admission from other University of Technology programmes is determined in the admissions matrix.
   c. Those holding a university Bachelor's degree in the field of mechanical engineering and/or aeronautical engineering from a foreign university can be admitted if:
      i. the (level of the) Bachelor of Science degree from a university abroad is equivalent to the Dutch WO Bachelor's degree
      ii. the student has a CGPA of at least 75% of the maximum score, or the country's equivalent
      iii. the additional requirements (including the language requirements) have been met
      iv. the application fee has been paid
   d. Those who have successfully completed a pre-master's programme are admitted (see Article 2.2 and article 7.30e WHW)
   e. Students who, after a further assessment of the pre-masters programme, have been admitted to the master's programme in mechanical engineering of one of the other Dutch Universities of Technology are admissible to the programme at the UT.
3. Students from abroad must show they have sufficient command of the English language according to the requirements specified on the website https://www.utwente.nl/en/education/master/admission-requirements/language/.
4. The Faculty Board of Engineering Technology establishes an admission committee for each master programme, for the purpose of assessing the candidate's suitability for admission to the programme on the basis of the requirements stipulated in Article 2.1.1 - 2.1.3. During the assessment of the application for admission to the master's programme, the admission committee can demand that certain subjects must be passed before the proof of admission to the master's programme can be issued.

ARTICLE 2.2 PRE-MASTER PROGRAMME

1. Students with a Bachelor's degree from a Dutch University of Applied Sciences (HBO) in Mechanical Engineering or in an adjacent subject, as well as students with a Dutch university's Bachelor's degree in adjacent subjects that does not give direct admission to the Master can be admitted to the pre-master's programme. Admission is at the discretion of the Admissions Committee.
2. The pre-master's programme consists of a selection of courses from the bachelor's programme with an emphasis on those subjects that were absent or lacked depth in the previous education.
3. Depending on the previous education, the pre-master's is a 15-60 EC full-time study programme: https://www.utwente.nl/en/education/master/programmes/mechanical-engineering/pre-master/
4. Students are allowed no more than two attempts to sit the corresponding examination/test per course of the pre-master's programme. Students who fail to successfully complete a course within these two attempts will not be admitted to the master's programme.
5. In order to complete the pre-master's programme all study components have to be passed with a maximum of one failed courses with a minimum mark of 5.0 in the agreed pre-master's programme within twelve months after enrolling in the pre-master's programme
6. Students who have successfully completed the pre-Master's programme can be admitted to the corresponding master's programme.
7. Students who are unable to successfully complete the pre-Master's programme within 12 months are no longer admissible to any of the ET pre-master's programmes in any following academic years.

ARTICLE 2.3 FOLLOWING MASTER'S COURSES BY NON-MASTER STUDENTS

A student has the right to follow education and/or take examinations relating to the programme, provided the student has satisfied the legal regulations in force. Results of Master courses obtained during or as part of the bachelor programme are listed on the bachelor's degree. Courses from the master programme may only be listed on the master's degree if the courses were passed during the enrolment in the master programme. This complies with the rules regarding the 'bachelor before master'-rule (Article 7.30b WHW).

SECTION 3 CONTENT OF THE PROGRAMME

ARTICLE 3.1 AIM OF THE PROGRAMME

The master's programme offers students the possibility to develop themselves into a professional who is prepared for the work field and is able to adapt to future developments in that particular field. In addition, the master programme enables students to distinguish themselves by specializing in a particular content field within Mechanical Engineering while at the same time having the opportunity to build up a broad and multidisciplinary profile. The programme is offered in a teaching and learning environment stimulating personal contact between students and staff and good communication and cooperation between learners, using interactive teaching methods and maintaining a strong link to professional practice.

The programme provides education up to the Master of Science in 'Mechanical Engineering'. Mechanical engineers are generating ideas, designing, analysing and producing products, processes and systems. This can involve new concepts or the improvement and adaption of already existing concepts. Mechanical engineers have wide-ranging tasks within technical design teams. Within a design team, they are the subject specialist, the integrator and also often the leader of the team or project. A multidisciplinary approach is often necessary to arrive at a solution. The first year of the MSc programme is dedicated to courses, whereas the second year consists of an internship and graduation project. Within the master programme, each student composes their unique programme with a specialisation, in which core courses are done and a range of electives that can be freely chosen. Seven specialisations can be distinguished in the curriculum

The theoretical part of the master's programme is covered by core courses from the specialisation and electives. The master assignment (and preferably also the internship) is in the area of the specialisation. The theoretical part (courses) is followed by an internship and the master's assignment. The main objective of the internship is to put acquired knowledge and skills into practice in a real professional engineering environment. The trainee engineer can participate in research, design, development or production activities. During this internship, the student works independently (or in a team of researchers) on a real problem. The assignment is carried out in a company or scientific environment in order to (among others) become acquainted with the future field of mechanical engineering by working on a mechanical engineering problem or task in a professional manner and as part of a team of engineers in a corporate environment

The master assignment is carried out under the responsibility of one of the research groups within the faculty. In this assignment, the student shows that they are qualified to make a contribution to the field of mechanical engineering.

ARTICLE 3.2 PROGRAMME INTENDED LEARNING OUTCOMES

The qualities relating to the knowledge, understanding and skills that the student should have acquired upon completing the programme are as follows:

1. Advanced level of knowledge within at least one sub-disciplines of Mechanical Engineering and the ability to apply this knowledge in design and research in this area
2. The ability to design and conduct experiments, to develop models and simulations
3. The ability to identify, formulate and solve mechanical engineering problems by designing and development of innovative solutions, including evaluating the feasibility
4. The ability to integrate theory and practice from a range of mechanical engineering subjects
5. The ability to use the techniques, skills and modern engineering tools, whenever relevant for mechanical engineering practice.
6. The ability to design a mechanical engineering system, component or process to meet desired needs, within defined boundary conditions
7. The ability to effectively communicate with professionals about one's own work and its relevance and impact in various contexts.
8. The ability to work independently on a design or research assignment
9. Insight into the complex working of modern industrial organisations
10. The ability to decide about the first step in their professional career
11. The attitude and ability to maintain and continuously improve one's academic and professional skills (life-long learning).

ARTICLE 3.3 SPECIALISATIONS

Students choose one of the specialisations offered by the various departments of the Faculty. The specialisations within the Mechanical Engineering programme are:

Aeronautics (AERO)
Focuses on aerodynamics and its interaction with acoustics, structures, and propulsion. It covers aspects including the optimisation of aircraft designs, the design and operation of vehicles for Urban Air Mobility and Unmanned Aerial Vehicles (UAVs) and the advancement of wind turbine technology, but also new technologies for production, energy storage or energy harvesting, electric propulsion, the design of multifunctional materials combining structural integrity and noise control, and in-flight monitoring.

Design and Manufacturing (DM)
Focuses on the development of new methodological design and manufacturing methods. The student will learn to understand and implement (high-tech) manufacturing technique and will focus on the design of the production process and manufacturing facilities as a whole and how to deal with the breadth of these challenges by gaining a methodological approach to manufacturing methods.

Energy and Flow (EF)
Covers all aspects that deal with the sustainable generation, transport, storage and use of energy. This includes the development and optimisation of energy systems. This specialisation entails a strong combination of fundamental, theoretical and experimental knowledge.

High-Tech Systems and Materials (HTSM)
Focuses on the behaviour of systems and materials used to develop products and manufacturing processes. And also on the creation of new and optimized materials, products and machinery.

Maintenance Engineering and Operations (MEO)
Focuses on the rapidly developing field of maintenance of technical systems from two points of view: On one side it is about analysis of failure behaviour, condition monitoring and adaptation of maintenance strategies to prevent failure. On the other hand it deals with the logistics of maintenance.

Personalised Health Technology (PHT)
Using mechanical engineering to solve societal problems related to human health. This specialisation integrates several disciplines within mechanical engineering to analyse, simulate and support aspects of human functioning.

Smart Sustainable Industry (SSI)
Is aimed at the development, analysis, simulation and control of innovative digitally driven production systems, integrating technologies such as sensor systems, robots, digital twins and artificial intelligence.

The specialisation and elective courses can be found on the website:
https://www.utwente.nl/en/me/master_programme/programme-information/#profiles

ARTICLE 3.4 INDIVIDUALISED PROGRAMME

The Examination Board decides on the received request of a student for permission to take an individualised programme as referred to in Article 7.3j WHW. The Examination Board assesses whether an individualised 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.

ARTICLE 3.5 STUDY ABROAD

1. The programme wants to stimulate all students to have an international experience during their studies. This can be an internship, graduation project and/or attending a number of regular courses at a foreign university (See Article 4.4).
2. Studying abroad requires consultation with the exchange coordinator and approval of the specialisation coordinator.
3. For graduation abroad the rules in article 6.1 apply.

SECTION 4 STRUCTURE OF THE PROGRAMME

ARTICLE 4.1 STRUCTURE IN GENERAL

1. The programme is fulltime and consist of 120 EC (1 EC = 28 hours of study). This equals 2 academic years, each divided into 4 quartiles.
2. Within the programme, each student composes their (individual) study programme within which a specialist area is recognisable. The study programme must be approved beforehand by the specialisation coordinator and the Programme Director and consists of the following:
   a. 30 EC of core specialisation courses
   b. 30 EC of elective courses. Within the elective courses there is an option for an interdisciplinary focus:
      i) A maximum of 3 MSc courses outside of the ME MSc curriculum to add interdisciplinary focus.
      ii) A maximum of 5 EC within the elective courses can be used for courses that are part of the preparation for the study tour. Any additional EC of the study tour can be registered under additional courses.
   c. An internship of 15 EC. This does not have to be in the specialisation area but does require the approval of the specialisation coordinator.
   d. The MSc graduation assignment of 45 EC is in the area of the specialisation and requires the approval of the specialisation coordinator and/or UT graduation supervisor. The MSc graduation assignment is carried out under the responsibility of one of the research groups within the faculty.
3. The programme consists of at least (see Appendix A for full curriculum information):

Master's programme for an individual student	**EC**
a. Specialisation courses	30
b. Elective courses	30
c. Company or research internship	15
d. Graduation project	45
Total (minimum)	**120**

ARTICLE 4.2 COMPOSITION OF THE STUDY PROGRAMME

1. The student composes a study programme together with the specialisation coordinator to which the student is assigned. This programme requires the approval of the specialisation coordinator and the Programme Director.
2. At the start of the master's programme, no later than one month after of the start of the programme, the student submits the approved study programme to the Educational Affairs Office (BOZ). Even if this is a provisional programme, submitting the student's study programme on time is crucial (admission to courses and making sure that the course is part of the graduation programme). BOZ processes the study programme within one month.

3. The study programme mentioned above can be registered on the form that is available on the website https://www.utwente.nl/en/me/master_programme/profiles/
   The filled out form is then discussed with, and approved by the specialisation coordinator. It will then be sent to BOZ (with the signature of the student and the specialisation coordinator or an accompanying e-mail from the specialisation coordinator). BOZ submits the study programme to the Programme Director for approval.
4. If the student wishes to change one or more courses in the already approved programme, this can be done by submitting a request to the relevant specialisation coordinator. For this purpose the form 'Changing master's courses' or a new study programme is submitted, see https://www.utwente.nl/en/me/graduate_procedure/#graduate-procedure. This will then be sent together with the original study programme to BOZ (with the signature of the student and the specialisation coordinator or an accompanying e-mail from the specialisation coordinator). BOZ submits the study programme to the Programme Director for approval.

ARTICLE 4.3 FOLLOWING TWO UT MASTER PROGRAMMES SIMULTANEOUSLY

The Master's programme Mechanical Engineering can be combined with another UT master's programme. The following requirements must be met:

1. The student has to be admissible to the Mechanical Engineering programme and other MSc programme.
2. The student chooses 30 EC in core courses, 15 EC of elective courses from the ME programme, 45 EC of master courses in the other MSc programme (pre-master courses are not accepted) and 15 EC of master courses shared in both MSc programmes.
3. The master assignment incorporates themes of both master programmes and is increased from 45 to 60 EC. The total study load of the two master programmes is at least 180 EC
4. The Examination Boards of both programmes need to approve the proposed study programme so that it meets the intended learning outcomes of both master programmes.

Master's programme for a Double UT programme	**EC**
a. Specialisation courses ME	30
b. Elective courses ME	15
c. Courses other UT MSc programme	45
d. MSc courses both programmes	15
c. Company or research internship	15
d. Graduation project	60
Total (minimum)	**180**

ARTICLE 4.4 INCLUDING INTERNATIONAL COURSES IN THE PROGRAMME

1. The incorporation of international courses or projects into the study programme requires the prior approval of the specialisation coordinator
2. The motivated request includes the necessary information on the courses and institution, on the basis of which the specialisation coordinator can determine the level and content. A UT teacher who provides a comparable course can be asked for advice. In principle, the international course must have a level equivalent to that of UT master courses.
3. No international courses may be included that substantially overlap with regular UT courses that have already been completed or that still have to be completed.
4. The maximum number of EC for international courses which can be included in the programme is is 30 EC in the elective programme. The surplus of courses can be added to the marks list of the degree certificate as 'extra courses' Exceptions are if a student participates in a joint or double degree with an international partner university (see Article 4.5) When the student participates in a master's programme which is set up together with a partner university and the education and assessment takes place at the partner university, the programme should be approved and countersigned beforehand as-a-whole by the specialisation coordinator, Examination Board and the Programme Director .
5. If needed, BOZ calculates the number of EC by using the Credit Conversion Table of the UT.
6. Where possible, BOZ uses the international names of the courses on the Diploma Supplement.

ARTICLE 4.5 JOINT/DOUBLE DEGREES IN INTERNATIONAL COOPERATION

The Master's programme Mechanical Engineering has a double degree programme with the Instituto Tecnológico de Aeronáutica (ITA) (Brazil). Completing the MSc programme (120 EC) will result in two MSc degrees, a Master of Science in Mechanical Engineering from the University of Twente and a Master of Science in Aeronautics and Mechanical Engineering from the Instituto Technológico de Aeronáutica

1. Content of the programme
   a. First year (at the University of Twente): 60 EC of ME MSc courses
   b. Second year (at ITA): 3 courses fitting to the selected specialisation of Aerospace Engineering or Aircraft Maintenance (9 ITA credits) and a research assignment equivalent to 40 EC, which is supervised by a daily supervisor at ITA and a co-supervisor from the UT.
   c. Students are exempted from their internship at the University of Twente.
2. Admission
   The double degree is available for a maximum of 5 students per academic year. In order to be admitted to the double degree programme, the following requirements have to be fulfilled:
   a. Completed a BSc in Mechanical Engineering or related
   b. Eligible for admission or admitted to the UT MSc Mechanical Engineering
   c. Following the Aeronautics or High-Tech Systems and Materials Specialisation
   d. Follow/have followed the minor Aeronautical Engineering & Management containing both:
      i. HTHT-minor Aerospace Management & Operations
      ii. HTHT-minor Aircraft Engineering
   e. Obtained a minimum of 60 EC in the first year of the MSc programme

More information on the double degree with ITA can be found via:
https://www.utwente.nl/en/me/master_programme/double-degree/

ARTICLE 4.6 INTERNSHIP

1. Students who have already completed an internship during their Bachelor's degree are not required to do an internship in their master's programme. In that case, they are required to follow additional (pre-)master courses.
2. Students who have industrial experience could be exempted from their internship and can follow 15 EC of ME MSc courses. For this students are required to put in a request with the Examination Board ME/SET. It is up to the discretion of the Examination Board to determine if the exemption gets granted.
3. The internship can be started after at least 40 EC of the master's programme has been completed.
4. The extent of the internship is 15 EC (10.5 nominal study weeks, including writing the report). The content of the internship is determined beforehand and depends on the nature, scope and extent of the project and the necessary residence period.
5. The internship should be on a mechanical engineering problem or task in a professional manner and as part of a team of engineers in a corporate environment or research institute that is not part of the University of Twente.
6. A student can also choose to use their experience as part of a "Student Team" (for example Green Team Twente, Solar Team Twente or Robo Team Twente) for the internship, provided that the internship supervisor is an employee of one of the participating companies (not a fellow student member) and that a suitable project is available and agreed upon by the UT internship supervisor and/or specialisation coordinator.
7. The student takes the initiative to arrange a suitable internship. The student is obliged to register the internship in Mobility Online. Only after approval by the UT internship supervisor or specialisation coordinator and correct registration in Mobility Online will the internship become part of the student's study programme.
8. Support is available through an internship coordinator, who ensures that the application in Mobility Online is completed by the student and provides administrative support.
9. At the start of the internship, the student is assigned a UT internship supervisor, for whom the department is responsible. The UT internship supervisor is responsible for the substantive assessment and determines whether the project meets the general UT and programme policy, assessing the internship report and has contact with the company supervisor at least once during the internship period.

10. If it becomes clear that a student cannot achieve the learning objectives as described in the proposal form, the student should contact the UT internship supervisor to discuss the consequences.
11. The internship report will be assessed by the UT internship supervisor using a list of assessment criteria. The assessment form from the company or institute is also taken into consideration
12. The programme does not impose any financial requirements on the organisation that provides the internship.
13. Further information about the internship and/or the subsidy regulation is available from the Mechanical Engineering internship coordinator. See https://www.utwente.nl/en/me/master_programme/student_mobility/

SECTION 5 TEACHING AND ASSESSMENT

ARTICLE 5.1 ASSESSMENT IN GENERAL

1. Each course concludes with an examination. The examination consists of one or more tests.
2. 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 (see Article 5.3).
3. The Programme Director ensures that at least the following details of the courses are published in Osiris not less than four 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.
4. The possibility to at least one resit of written and oral examinations must be offered for each course in the same academic year. Practical exercises or projects can be completed at least once per academic year.
5. Absence during a study period may result in the failing of tests, examinations, projects, or practical exercises. In the event of force majeure (e.g. illness), the student must contact the lecturer and/or study adviser as soon as possible.
6. Information on the practical procedures regarding the conduct of examinations and completing projects is available in the Rules and Regulations of the Examination Board.
7. The student has the right to inspect model test questions, such as akin tests, past tests, or tutorial assignments that are representative of the test or examination, as well as their keys and the norm for assessment.
8. The time allotted to administering a test may not exceed three hours. Exceptions in this regard are listed in Article 7.4. If the examiner wishes to use a form of assessment that requires more than three hours, the examiner must, with due regard for article 5.1.3, ask the Examination Board for approval to deviate from the above.

ARTICLE 5.2 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 course or courses, or components thereof, by means of an EX (exemption).
3. Students cannot be compelled to take additional courses or components of courses 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.
5. A request for an exemption of one or multiple tests or examinations will be judged by the Examination Board on the conditions set out in its Rules and Regulations.

ARTICLE 5.3 ONLINE ASSESSMENT

1. If an examination or test is administered using online surveillance[1] or online proctoring[2], the Examination Board may set further rules and conditions for online (proctored) assessment.

[1] Camera surveillance of the student or students during an unrecorded test, using for example Canvas, Teams, etc.
[2] Surveillance of the student or students using special *proctoring* software, such as Proctorio.

2. Further information and detailed rules on online assessment can be found on the university's website.

ARTICLE 5.4 ORAL EXAMINATIONS

1. If the student or the examiners 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.

ARTICLE 5.5 ASSESSMENT PLAN

1. The assessment plan of a course is drawn up by the examiner or examiners and is determined by the Programme Director. The Examination Board provides advice on the assessment plan.
2. The assessment plan must be published in Canvas at least two weeks before the start of the quartile.
3. The assessment plan of a course must include:
   a. how the learning objectives of the course is 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, resits and discussion are held (the precise location, times and dates will be announced via MyTimetable/TE viewer);
   d. any required minimum grade per test; a minimum grade for a test may not be set higher than 5.5;
   e. the composition of the final grade (including weighing factors);
   f. if applicable: information on resits (such as conditions, compensation options and grading periods).
4. The Programme Director may modify the assessment plan during the course:
   a. The assessment plan may only be changed in consultation with the examiner of the course.
   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 via the digital learning environment.
5. Changes to the assessment plan may not put students at an unreasonable disadvantage. The Examination Board may take special measures in individual cases
6. Oral examinations and other examination 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.
7. The examiner may deviate from the published examination method after approval of the Examination Board. The examiner will inform the students of this change immediately.

ARTICLE 5.6 REGISTRATION

1. Registration in Osiris by the student is required prior to participating in a course[3].
2. Upon registering for the course, the student will automatically be registered for the assessments associated with the teaching period of the course. The student is automatically de-registered from the resit opportunity if a sufficient grade is obtained for the first test opportunity. In such case, students still have the opportunity to re-register for the resit on their own initiative if they wish to make use of that resit opportunity, despite having obtained a sufficient grade for the first test opportunity[4].

[3] The applicable registration deadlines are mentioned on the webpage www.utwente.nl/en/education/student-services/education/courses-and-modules/.
[4] www.utwente.nl/en/ces/sal/exams/participants/

ARTICLE 5.7 RESULTS

1. Results of examinations, tests or components of tests must be announced to students. Osiris is used for the formal[5] registration of grades for examinations and in some cases also for tests
2. Test results are expressed in a grade from 1 to 10 with a single decimal, or as *'pass' / 'fail'*.
3. The examination result of a course, as determined by the examiner, is expressed in half grades from 1.0 to 5.0 and from 6.0 to 10.0[6], with grades only being rounded in the final phase[7] of the assessment of a course 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

4. Examination results of 6.0 or higher are a pass.
5. 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.
6. 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 5.8 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 course 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 fifteen working days after the test date, with due regard for paragraph 7 below.
3. The examination date is the date on which the test is taken with which the student definitively passes the course.
4. The test date is the date on which a written or oral test is taken.
5. 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).
6. If a test resit is planned, the results of the first test will be published at least five working days before the resit to give the student time to prepare.
7. Should the examiner not be able to meet the deadline referred to in paragraphs 1, 2, 3, and 6 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 5.9 PERIOD OF VALIDITY OF RESULTS

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 course that was failed expire after the academic year. The course must be repeated in its entirety in the next academic year. Any exceptions are listed in the assessment plan in accordance with Article 5.5 paragraph 3.

[5] In case of any discrepancy between results published in Osiris and results communicated via any medium other than Osiris (e.g. Canvas, email), the results in Osiris will prevail. Article 8.2 still applies.
[6] In Osiris, a comma is used, based on the Dutch grading system (e.g. 7,0).
[7] Final phase: when all grades are known.

3. If the period of validity of a result of an examination is limited as described in paragraph 1, at least the rules in Article 7.2 of these regulations and Article 7.10 paragraph 4 WHW are taken into account by the Examination Board when assessing the extension of the limited validity period.

ARTICLE 5.10 RIGHT OF DISCUSSION AND INSPECTION

1. Students are entitled to discuss and review their submitted work together with the examiner of the course and the examiner is to explain the assessment. This can be done individually or in a group setting, either in person or by using an online tool. The examiner chooses the setting of, methods of and tools for discussion.
2. Individual and group discussions must take place no later than five weeks after the publication of the test or examination results, but at least three working days prior to the next test opportunity, in the (online) presence of the examiner or a substitute designated for that purpose.
3. If the examiner organises 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 no later than on the first working day following the group discussion. Students are informed about the group discussions and the aforementioned deadline. The individual discussion is to take place no later than three working days prior to the next test opportunity.
4. 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.
5. Students are to be given the opportunity to inspect their assessed written work for a period of two years following the assessment.

ARTICLE 5.11 RETENTION PERIOD FOR TESTS

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

ARTICLE 5.12 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.
2. The Examination Board makes objective and well-grounded decisions on whether students meet the requirements in terms of their end level and guards the standards for the end level itself.

ARTICLE 5.13 QUALITY ASSURANCE

The quality of education is systematically monitored according to the Plan-Do-Check-Act (PDCA) cycle. The quality assurance system consists of at least the following parts:

1. The organisation of the faculty with all actors who play a role in the management, organisation, development and execution of the study programme. Through a clear division of tasks and responsibilities and mutual coordination, the actors jointly ensure a high-quality study programme.
   a. The Programme Director is responsible for monitoring the quality of the educational programme.
   b. The Programme Director is responsible for evaluating the programme.
2. The evaluation system that monitors the quality of the study programme and provides the actors with information on the quality and is therefore aimed at educational development and continuous quality improvement. This will at least include the execution of the following activities on an annual basis:
   a. The Programme Director writes an annual programme development plan, which is subject to advice from the Programme Committee. Improvement points regarding the study units are made available to students and staff.
   b. Course evaluations: A course will be comprehensively evaluated at least once every three years. If a course does not meet the criteria, it will be evaluated again the next time it is taught

to determine whether appropriate measures have been taken. The programme committee can also decide to re-evaluate a course in the following year

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. Yearly analysis of the results of the NSE (National Student Survey) and the NAE (National Alumni Survey): Based on the analysis, UT-wide, faculty-specific and/or programme specific improvement actions can be identified.
e. Educational professionalisation: Teachers within the programme are expected to acquire their University Teaching Qualification (UTQ) within 3 years after starting.
f. Performance Reviews: Results of activities stated in the paragraphs above are brought to the attention of chair holders, to allow them to address these issues in their annual performance appraisals with all employees.

3. Improvement points regarding the courses are made available to students and staff.

SECTION 6 FINAL EXAMINATION AND DEGREE

ARTICLE 6.1 FINAL EXAMINATION

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

Article 6.1.1 General

1. The master's final examination is considered completed when the student has completed all components (courses, internship and MSc graduation assignment in the programme. The Examination Board may determine, under conditions set by it, that not every examination has to be completed successfully to determine that the Master's examination has been successfully completed.
2. The date of the final examination is the date on which the student completes the final course of the degree programme.
3. A student who has successfully completed all requirements for the master's final examination will be awarded a Master of Science (MSc) degree.
4. The degree conferred is stated on the diploma.

Article 6.1.2 Requirements

1. The MSc graduation assignment must lie within the territory of one of the directions of the programme and can be carried out at one of the departments of the UT or at an external organisation. The graduation assignment is preferably not carried out at the same organisation where the internship took place, nor should it be an extension of the internship. If the student wants to carry out the graduation assignment at the same organisation as the internship, the following applies:
   a. The request should be discussed with, and approved by the specialisation coordinator
   b. The internship needs to be completed before the start of the graduation project.
   c. The objective and research question of the internship and research assignment should be different.
2. In order to be able to start with the graduation assignment the student has:
   a. Obtained at least 60 EC in courses that are part of the signed individual study programme.
   b. Finished the internship by handing in the report to the supervisor
   c. Completed all the pre-master courses successfully (if applicable)

   When a student does not meet the entry requirements, the student and (intended) UT supervisor will be informed. If the student still wants to start the MSc graduation assignment without meeting the requirements mentioned above, an exemption must be requested via the ME/SET Examination Board.
3. Before the start of the MSc graduation assignment the student must complete the application in Mobility Online, stating the start and end date of the MSc graduation assignment, and provide all necessary agreements.
4. The student is the only author of the report of the MSc graduation assignment
5. The report of the MSc graduation assignment is written in the language of the programme (English)

Article 6.1.3 Duration

1. The duration of the MSc graduation assignment corresponds to the applicable study load of 45 EC, this corresponds to a workload of 40 hours per week within a period of 8 months (not counting holidays). During this period, the student's progress is monitored over time based on the start date registered in Mobility Online until the MSC graduation assignment report has been handed in.
   a. If the MSc graduation assignment time exceeds 8 months the student should contact the study advisor regarding the progress and completion of the graduation assignment and any unforeseen circumstances that may have arisen.
   b. If the MSc graduation assignment time exceeds 12 months, the student should ask permission from the Examination Board for an extension. Permission must be requested no later than 11 months into the graduation assignment.
   c. If the extension is not given, the completed work of the MSc graduation assignment thus far (after 11 months) will be assessed by the graduation committee and in case this is not sufficient the student has to start a new MSc graduation assignment with a new supervisor.
   d. If the student fails to meet the extended deadline as agreed upon with the Examination Board, the completed work of the MSc graduation assignment thus far will be assessed by the graduation committee and in case this is not sufficient the student has to start a new MSc graduation assignment with a new supervisor
2. The duration of the double MSc graduation assignment corresponds to the applicable study load of 60 EC, this corresponds to a workload of 40 hours per week within a period of 12 months (not counting the holidays). In case a lager amount of EC is required by the other MSc programme the maximal duration for the double MSc graduation assignment should be amended accordingly. During this period, the student's progress is monitored over time based on the start date registered in Mobility Online until the MSC graduation assignment report has been handed in.
   a. If the MSc graduation assignment time exceeds 12 months, the student should contact the study advisor regarding the progress and completion of the graduation assignment and any unforeseen circumstances that may have arisen.
   b. If the MSc graduation assignment time exceeds 16 months, the student should ask permission from the Examination Board for an extension. Permission must be requested no later than 15 months into the graduation assignment.
   c. If the extension is not given, the completed work of the MSc graduation assignment thus far (after 15 months) will be assessed by the graduation committee and in case this is not sufficient the student has to start a new MSc graduation assignment, with a new supervisor.
   d. If the student fails to meet the extended deadline as agreed upon with the Examination Board, the completed work of the MSc graduation assignment thus far will be assessed by the graduation committee and in case this is not sufficient the student has to start a new MSc graduation assignment, with a new supervisor.
3. At the beginning of the MSc graduation assignment, agreements are made about the nature of the assignment, the planned start date of the MSc graduation assignment, the manner of guidance and the date on which the final MSc graduation report must be submitted.
4. The agreements made in paragraphs 1 and 2 are recorded in Mobility Online.
5. The (draft) MSc graduation report is submitted to the chairman of the graduation committee for review. In case the chairman is the supervisor of the graduation assignment at least one other member of the graduation committee should be consulted. If the MSc graduation report is approved, the chairman issues a statement that can be used by the student to apply for the final examination. If the MSc graduation report is not (yet) approved, the chairman indicates clearly what additions and/or changes to the MSc graduation report are required. A new date is set on which the revised graduation report must be handed in. If necessary, this procedure is repeated. The above mentioned deadlines need to be taken into account.
6. The approved report of the MSc graduation assignment should be available for the committee two weeks in advance of the graduation date.
7. If the graduation committee is of the opinion that the work done by the student is insufficient, the committee may decide, in consultation with the Examination Board, that the student has to do another MSc graduation assignment. The same applies if the student fails to hand in the MSc graduation report or hands them in after the agreed upon deadlines.

Article 6.1.4 Graduation Committee

The graduation committee consists of at least three members authorised to conduct examinations.

1. The approved MSc graduation report should be available for the committee two weeks in advance of the graduation date.
2. One of the full professors, UHD1 or UHD2 from the relevant Department is the chairman of the graduation Committee. The Examination Board can also invite a professor from outside the Department or the faculty to function as chairman of the graduation committee.
3. One or more supervisors of the student.
   At least one member of the committee is external, i.e. a member of permanent academic staff member (member of scientific staff) from another chair.
4. Qualifications of members of the graduation committee:
   a. Academic staff and research staff of the chair, can be regular members.
   b. All members must have been observers (guests without voting rights) in two graduation exams from either ME or SET
   c. All members should be in active service. However, a supervisor can be a member up to and including 5 years after retirement.
5. Additional observers of the graduation committee may include:
   a. Guest(s), being experts on the topic, company supervisors or invited by the chairman. Guests have no voting rights.
   b. Members of the Examination Board and the Programme Director, who are, because of their tasks, entitled to attend examination sessions. They have no voting rights.
6. When a member of the graduation committee is prevented from attending an examination session, they can be replaced by a member who has the authority to conduct examinations. The unavailable member should inform the chairman before or at the start of the examination who the replacement will be. The substitute has the voting rights of the member he replaces.

ARTICLE 6.2 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 final examination 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 course 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 course 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, if applicable;

d. the study load 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 master'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. The Programme Director determines if a special distinction (such as cum laude) is applicable to the degree programme, and determines the requirements to qualify for a special distinction (see Article 6.3). Awarding the diploma and (the consideration for) awarding a distinction such as cum laude lies with the Examination Board[8]. 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.

ARTICLE 6.3 WITH DISTINCTION / CUM LAUDE

1. When a student has demonstrated exceptional competence and ability in their master programme, this can be stated on the diploma with the words 'Cum Laude'.
2. The Examination Board awards this judicium when a student meets each of the following conditions:

In addition to the 'exceptional level and potential' the guidelines for passing 'with distinction' are:

a. The final mark for the master's project is at least an 8.5;
b. The unweighted average mark of all courses, not including the master's project, must be at least: 8.0;
c. The assessments of all examinations of the master's courses, including extra courses, are satisfactory ('EX', 'P' or a grade higher than or equal to 6);
d. All study units that belong to the exam programme of the candidate should be completed within 2.5 years counted from the first date of enrolment in the MSc programme. In case the candidate is completing a double programme with another UT MSc programme this should be completed within 3.5 years counted from the first date of enrolment in the Mechanical Engineering MSc programme.
e. No form of academic misconduct is documented in the student's file.
f. Exemptions were granted for no more than a third of the total master's programme.
g. Any additional courses (not part of the regular programme) are not included under the aforementioned regulations.

3. If these guidelines are not fully met, the chairman of the graduation committee of the student involved can submit a substantiated proposal to the Examination Board to award the designation 'With Distinction' or 'Cum Laude'. In that case, the special circumstances and the exceptionality of the achievement must be properly substantiated.

SECTION 7 STUDENT GUIDANCE AND FACILITIES

Explanatory notes: Article 7.13 paragraph 2u and Article 7.59 WHW.
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 STUDENT GUIDANCE

1. 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.

[8] Personal circumstances are taken into account. If it considers activism, an acknowledged fulltime board year is excluded from the calculation of the nominal study load for cum laude.

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. 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).
7. Information about the guidance facilities of the study programme is in any case available on the website of the study programme.

ARTICLE 7.2 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.
3. 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 (student activism) in accordance with the FOBOS Regulations.
4. 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.

ARTICLE 7.3 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 following the degree 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 7.4 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, examinations 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 examination 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 FINAL PROVISIONS

ARTICLE 8.1 CONFLICTS OF THE REGULATIONS

If other additional regulations and/or provisions pertaining to education and/or examinations conflict with this EER, the provisions in this EER 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 courses that were part of the curriculum when students enrolled in a programme will continue to be part of the curriculum. The final master'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 courses, which have been dropped, that are equivalent to courses from the current curriculum;
    b. an indication that if a course 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 test or examination or to undergo another form of assessment;
    c. an indication that if a course 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 course will be designated that may be completed as a substitute for the course 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 examinations and/or tests related to courses 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 load.
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 AND 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, the Faculty Board or the Programme Director may deviate from its stipulations, provided that doing so does not negatively affect the student. 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. This decision must be motivated and announced in writing to the student, the Examination Board, the Faculty Board, the Programme Director or the Office of Educational Affairs (BOZ).

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 2024 and replace the Regulations dated 1 September 2023. 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.

APPENDIX A: CURRICULUM INFORMATION

APPENDIX B: PROCEDURE FOR MASTER EXAMINATION, COLLOQUIUM AND AWARD OF DEGREE

The programme can proceed to the award of the master's degree certificate when the student has met the following requirements:

1. Well before the graduation the student contacts the graduation supervisor in order to determine the graduation committee, graduation date and room. Also, see the Graduation Handbook and/or the relevant graduation regulations within the Department;
2. The student ensures that the 'Registration for the master's degree award' form and the colloquium form countersigned by the graduation supervisor are handed in at the Educational Affairs Office (BOZ) four weeks (20 working days) before the examination;
3. BOZ sends the student an e-mail (and a copy to the graduation supervisor) with information on not-yet-completed study phases(s) and a request to check this data within a week. When it's necessary to tidy things up, change, delete and/or add courses, the student needs to hand in a copy of the 'Form for proposal for changes to master's courses' countersigned by the specialization coordinator at BOZ;
4. Immediately thereafter BOZ checks all study data and, where applicable, the form proposals for changes;
5. The marks of all courses, except the graduation project, must be handed in at BOZ three weeks before the examination;
6. If all requirements for passing have been met, BOZ registers the student with Student Services (in writing two weeks before the examination);
7. The student ensures that at the time of the colloquium he is registered for the programme of the UT;
8. Student Services checks whether the student has met all (registration) requirements;
9. Once each week, BOZ authenticates and registers all the relevant degree certificates at Student Services.
10. About one week before the examination, the student hands in the master thesis (Word or PDF) in digital form, preferably by e-mail, at BOZ.
    When the rules above have been met and the examination has been completed successfully, the student can immediately after the examination sign and receive the degree certificate which is also signed by a member of the ME/SET Examination Board. The diploma supplement is also awarded. In exceptional circumstances, BOZ is not able to hand over the degree certificate in time for the award directly after the colloquium. The degree certificate can be obtained at a later time arranged by BOZ or the Department.
11. After the final mark of the examination has been processed by BOZ, the transcript of records is sent to the student as soon as possible.

All the forms mentioned above can be obtained from the Educational Affairs Office or can be downloaded from the Mechanical Engineering website:
http://www.utwente.nl/me/master_programme/graduate_procedure/

APPENDIX C: ASSESSMENT OF THE MASTER EXAMINATION

1. GENERAL REMARKS

In the assessment of the master's project, it is determined whether the candidate meets the aims of the programme. The aspects of assessment are:

a. The level of the contents of the work undertaken in the light of the aims of the programme;
b. The demonstrated skills of the engineer (working on projects, independence, approach to design, scientific/academic attitude);
c. Communications skills (report, presentation, communication with colleagues in the company and in the Department).

1. These aspects are tested by reference to the report (thesis), the presentation, the oral cross-questioning and the approach to the problem (master's problem). Marks for each component are used to substantiate decisions and for giving feedback. The final mark is not the average of the component marks.
2. In case of a complete and regular master's programme, the student passes when the following conditions have been satisfied:
   a. the assessment of the master's thesis is satisfactory;
   b. every mark is at least a 6, 'exempt' (EX) or 'pass' (P), with the exception of at most one 5 which may occur in the Master's courses or pre-master courses followed during the MSc programme provided it is not the mark for the master's thesis nor internship.
3. If the student has passed, the Educational Affairs Office will send the result with the date of passing to Student Services.

1.2 ASSESSMENT PROTOCOL MASTER THESIS ME

This protocol was set up to support the assessment of master theses within the MSc-programme Mechanical Engineering (ME).

The assessment of the master thesis takes place after the public colloquium and discussion/ questioning in a closed meeting with the student and the master graduation committee. The assessment is done in a short, closed meeting of the master graduation committee without the student. The assessment is performed by the university members of the master graduation committee, guests have an advisory-vote. At the assessment, several aspects are taken into account (as described below and in appendix 1.3). Appendix 1.4 presents profiles for final grading that indicate how the quality of the master thesis as a whole can be translated into a final grade. The list of aspects for assessment and the profiles for final grading offer guidelines for a more equalized assessment of master theses and offer clarity to the student about the way he or she will be assessed. The aspects for assessment and the grading profiles were set up according to the learning goals of the master thesis and (partially) on the final qualifications of the MSc-programmes.

Regarding the assessment aspects, five main aspects are distinguished:

1. With respect to content: quality of research or design
2. Report
3. Working process during master thesis project
4. Oral presentation
5. Defence

Appendix 1.3 lists all aspects within these five main categories. When assessing a master thesis, the committee will address these five main aspects and determines the strong and weak points of the student's work and gives grades (not necessary integers) on each of these main aspects. This is registered by the chairman of the master graduation committee on the Assessment Form MSc-thesis ME (appendix 1.5). Subsequently the committee determines the final grade, by a half point, for the master thesis according to the final grading profiles (see Appendix 1.4).

After determination of the final grade, the master graduation committee invites the student for a closed meeting and announces the final grade and presents the feedback on the assessment form orally to the student.

1.3 ASPECTS FOR ASSESSMENT

1) With respect to content; quality of research / design
- insight in subject matter
- depth (detailed elaborations, use of literature)
- insight in coherence between different parts of the research project
- reasoning / argumentation of conclusions (are research questions clearly stated and answered?)
- relevance (scientifically, but also applicability in practice) (being able to put research into its context)
- creativity / inventiveness: extent to which the student independently introduces new concepts
- extent to which the research contributes to new knowledge / contributes to a concrete product, design or model
- learning (quality and quantity)

2) Report
- composition, structure
- consistency
- clarity/sharpness of formulations
- readability
- editing, layout
- images and tables (usefulness, added value)
- references to literature
- has been checked on plagiarism (plagiarism report added by student)

3) Working process during the master thesis project
- attitude
- independence
- commitment/engagement
- cooperation
- communication skills
- incorporation of feedback
- functioning within the organisation where the project is carried out
- student's attitude during progress meetings (active/passive)
- the extent to which the original research proposal has been met and reasons for alterations (keeping up with work planning, follow up on appointments made)
- time needed to finish master thesis

4) Oral Presentation and defence
- content (what is included / not included in the presentation; is the message coming across?)
- structure/outline presentation
- care of details/neatness
- captivating way of presenting (verbal capabilities, posture)

5) Defence
- insight into subject matter and its relation with adjacent subjects
- answering questions/discussion
- ability to interpret/understand/analyse questions

1.4 PROFILES FOR FINAL GRADING

5. Insufficient
The research and/or report are insufficient and the student was strongly directed by the supervisors. Weak points can clearly be pointed out. The student did not show an academic attitude. On average, the student scores ‘insufficient’ on all aspects of assessment.

6 – 6.5: Sufficient
With respect to content, the research was conducted sufficiently. The report is mediocre. Weak points can clearly be pointed out, but are compensated by aspects on which the student performs better. The student has shown little own input and was strongly directed by their supervisors. On average, the student scores ‘sufficient’ on all aspects for assessment.

7 – 7.5: Satisfactory
With respect to content, a solid piece of research was delivered. The report is carefully edited. Either the research process or the mastery of subject matter leaves room for improvement.
The supervisors clearly had a steering influence on the final product. The student scores at least ‘sufficient’ on all aspects for assessment and ‘good’ on some aspects.

8 – 8.5: Good
With respect to content, the research was set up in a solid way and was carried out accurately. The report is carefully edited regarding language, structure as well as lay out with minimal input of the supervisors. The student has worked independently and was able to put forward own initiatives. Guidance given by the supervisors was minimal. On average, the student scores ‘good’ on all aspects for assessment.

9 – 9.5: Very good
The research is innovative and can be converted to an article for a renowned (scientific) magazine or a conference proceeding without putting in too much effort. With respect to content, the research is very solid with some points that can clearly be pointed out as very good. The report is carefully edited and shows that the student disposes of very good writing skills. The student’s own input and independence are large. The student clearly stands above subject matter and is able to defend their statements in discussions well. The student scores at least ‘good’ on all aspects for assessment and ‘very good’ on some aspects.

10: Excellent
The student functions at the level of an expert in the field. With respect to content, the research is excellent. The student is very capable of conducting research independently. The report and the presentation show that the student disposes of excellent communication skills (written and oral). The student scores at least ‘very good’ on all aspects for assessment and ‘excellent’ on some aspects.

1.5 ASSESSMENT FORM MSC-THESIS ME

MASTER'S EXAM:

Name :
Student number :
Master's track :
Graduation professor :
Master's programme : attached
Date master's examination :

☐ **Plagiarism check**, no plagiarism found

Oral presentation : _____
Report : _____
Defence : _____

M-assignment (content) : _____

M-assignment (process) : _____

FINAL GRADE : _____ *RESULT* : _____

The graduation committee hereby states that
The status of the final report will be*:
O = "**Confidential**" (for a period of _ years)
O = "**Public**"
*) *tick the appropriate box*

Graduation committee: *Signature*:
Prof.dr.ir. XX _____
Dr.ir. YY _____
Prof.dr.ir. ZZ _____

Criteria	Motivation (What went well, What could have been improved)
Oral Presentation	
Report	
Defence	
Content (quality of research or design)	
Working process during project	

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