EDUCATION AND EXAMINATION REGULATIONS

MASTER'S DEGREE PROGRAMMES EEMCS

A. FACULTY SECTION
B. PROGRAMME-SPECIFIC SECTION

2023-2024 academic year

Introduction to the Education and Examination Regulations for Master's degree programmes at the Faculty of Electrical Engineering, Mathematics and Computer Science.

General

The Dutch Higher Education and Research Act (Dutch abbreviation: WHW) of 1993 requires a broad outline of the teaching programme and examining for each degree programme to be recorded in the Education and Examination Regulations (EER (Dutch: OER)).

In accordance with Section 7.13, Paragraph 1, of the 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 education 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.

The EER is subdivided into two sections (Section A and Section B), which together form the EER. Section A, which can be seen as the faculty section, includes provisions that may apply to several Master's degree programmes. Section B contains the provisions that are specific to the particular Master's degree programme.

The EER is part of the UT Student Charter, which governs the rights of students and the way we treat each other at the UT. It gives an overview of the rights and obligations of our students and of the academic provisions. The charter consists of two parts: 1) the institutional section which applies to all students, irrespective of the programme and 2) the programme section, which is different for each programme and can be found in the Education and Examination Regulations (EER).

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SECTION A: FACULTY SECTION

A1. General provisions

Article A1.1 Applicability of these Regulations

1. This Faculty Section A contains general provisions that apply to education and examinations for all students in the following Master's degree programmes: Applied Mathematics, Business Information Technology, Computer Science, Electrical Engineering, Embedded Systems, Interaction Technology, Systems & Control, and Robotics (hereinafter referred to as: the Master's programmes) provided by the Faculty of Electrical Engineering, Mathematics and Computer Science (hereinafter referred to as: the faculty or EEMCS) of the University of Twente.
2. Each Master's programme also has its own Section B.
3. Section B of these Education and Examination Regulations may include additions to the general provisions in Section A only applicable to that specific programme.
4. Together the Faculty Section A and the Programme-specific Section B form the Education and Examination Regulations for the Master's programme concerned.
5. The Education and Examination Regulations apply to anyone enrolled in the Master's programmes, irrespective of the academic year in which the student first enrolled in the programme.
6. The Education and Examination Regulations also apply *mutatis mutandis* to the joint Master's degree programmes and study units provided by the faculty, pursuant to Section 7.3c of the WHW.
7. The general provisions and the programme-specific provisions to the Education and Examination Regulations are determined by the Faculty Board.
8. Students attending study units organised by another programme[1] are subject to the assessment rules laid down in the assessment schedule of the study unit concerned, in the Education and Examination Regulations and in the Rules and Guidelines of the Examination Board of the programme that organises the study unit. Special facilities according to article A7 can only be granted by the programme for which the student is enrolled.
9. The Examination Board sets down rules with regard to the execution of its tasks and powers in accordance with Section 7.12b of the WHW. These regulations are specified in the Rules and Guidelines of the Examination Board and include provisions about the rules of order during tests and rules in case of emergencies.
10. 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 Guidelines 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).
11. 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 programme, as laid down in the relevant articles of these Regulations.

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[1] This does not apply, unless otherwise agreed, for units that are organised by a programme specifically for another programme, so-called service education.

Article A1.2 Definitions

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

a. **Academic year:** The period beginning on 1 September and ending on 31 August of the following calendar year.

b. **Admission Board:** The committee that assesses, on behalf of the Faculty Board, whether a candidate meets the requirements for admission to the Master's programme of their choice. If no Admission Board has been appointed for the programme, the Programme director functions as the Admission Board.

c. **Assessment schedule:** a schedule showing the method of assessment for a study unit.

d. **Combined Programme:** A programme of courses representing an amalgamation of two separate study programmes and covering the requirements and the programme intended learning outcomes of both individual Master's programmes, yielding two degrees.

e. **Course catalogue:** The guide for the Master's programme concerned that provides further details of courses and other information specific to the programme. The course catalogue is available at www.utwente.nl/coursecatalogue.

f. **Course:** A study unit of the programme, as defined in Article 7.3, Paragraph 2 and 3 WHW.

g. **Credit (EC):** A unit of 28 hours of study load, in accordance with the European Credit Transfer System; a full academic year consisting of 60 EC or 1680 hours (Article 7.4 WHW).

h. **Curriculum:** The aggregate of required and elective study units constituting a degree programme as laid down in Section B.

i. **Double degree:** two degrees awarded by two institutions of higher education that offer a joint study programme; the joint programme covers the programme intended learning outcomes of both programmes.

j. **Examination (also: exam):** 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**.**

k. **Examination programme**: All study units of a study programme counting towards the degree.

l. **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).

m. **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.

n. **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.

o. **Executive Board:** Executive Board of the University of Twente.

p. **Faculty Board:** Head of the faculty (Article 9.12, Paragraph 2 WHW).

q. **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 is deemed to have been completed (Article 7.10 WHW).

r. **Fraud and plagiarism:** Fraud is an act or omission by a student designed to partly or wholly hinder the accurate assessment of their own knowledge, understanding and skills, or those of another

person. Fraud includes plagiarism, which is the use of someone else's work without including a correct reference to the source. See the Student Charter of the UT for further details.

s. Higher Education and Research Act (abbreviated to 'WHW'): The Dutch Higher Education and Research Act, Bulletin of Acts and Decrees 1992, 593, and its subsequent amendments.

t. Homologation: Study units that can be offered to students who are admitted to the Master's programme but who nevertheless have insufficient knowledge, understanding or skills, according to Article 7.30b. WHW.

u. Learning Management System (LMS): System that supports online learning and teaching. In this case: Canvas.

v. Master's programme (also: programme): The Master's degree programme, as referenced in Article 7.3a Paragraph 1 subparagraph b WHW: the entirety of the course components, teaching activities/methods, contact hours, testing and examination methods and recommended literature.

w. Master's thesis project / final project: A study unit comprising literature research and a contribution to scientific research, which always results in a written report.

x. Practical assignment: A practical assignment 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 Section B.

y. Pre-Master's programme (also: Bridging programme): A combination of study units that can be offered to students who cannot yet be admitted to the Master's programme due to insufficient knowledge, understanding or skills, in accordance with Article 7.30e. WHW.

z. Programme Committee (PC): Committee referred to in Article 9.18 WHW.

aa. Programme Director: The person appointed by the Faculty Board to administer the programme (Article 9.17 WHW).

bb. Quarter (also: quartile): A part of a semester as specified in the academic calendar of the university.

cc. Semester: Half an academic year, as specified in the academic calendar of the university.

dd. Senior Examiner: Specific examiners, appointed by the Examination Board to take the role as chair of an assessment committee for the Final Project.

ee. Student Information System (SIS): System designated by the Executive Board for registration and for providing information on all relevant data related to students and the programme, as referred to in the WHW. In this case: Osiris.

ff. Student: Anyone enrolled in a programme in accordance with Article 7.34 and 7.37 WHW.

gg. Study Adviser: 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.

hh. 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 credits according to the European Credit Transfer System, where 1 credit equals 28 hours.

ii. Study Programme: All study units followed by the student as part of their Master's degree programme.

jj. Study unit: A programme component as defined in Article 7.3, Paragraph 2 and 3 WHW. Also referred to as course.

kk. **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 quartile (quarter of an academic year).

ll. **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 in accordance with Article 4.7 WHW.

mm.   **UT:** The University of Twente (UT).

nn. **Working day:** Any day from Monday to Friday with the exception of official holidays and the prearranged compulsory holidays (compulsory days free of work) 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.

A2. Previous education and admission

Article A2.1 Previous education

1. In order to qualify for enrolment in a Master's programme, either a Bachelor's degree obtained through academic higher education (WO) is required, or a Bachelor's degree from a university of applied sciences (UAS) in addition to the successful completion of an appropriate pre-Master's programme. The requirements that the Bachelor's degree must meet are specified in Section B.
2. The Admission Board of the Master's programme assesses the candidate's suitability for admission to the programme on the basis of the requirements stipulated in Section B.
3. The Admission Board can admit students who lack a limited amount of credits on a topic regarding required prior knowledge, provided they judge that this does not reduce the student's likelihood of successfully completing the programme.
4. The Bachelor's degrees that entitle students to automatic admission are listed in Section B.
5. Additional admission requirements are stipulated in Section B.

Article A2.2 Language requirements

1. To be admitted to the programme, students must be proficient in English.
2. Proof of proficiency in English is required by the successful completion of one of the following examinations or an equivalent:
   a. IELTS (academic) certificate, not older than two years, with an overall band score of at least 6.5, and a minimum score on each section of at least 6.0.
   b. TOEFL iBT (internet-based) certificate, not older than two years, with an overall score of 90, and a minimum score on each section of at least 21[2].
   c. Cambridge C1 Advanced, formerly known as; Cambridge English Advanced (CAE) from 2015 onwards (when the subscores were introduced) and Cambridge C2 Proficiency, formerly known as; Cambridge English Proficiency (CPE) from 2015 onwards (when the

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[2] An alternative English test can be the TOEFL iBT (Special) Home Edition test. This test is valid for February 2023, September 2023, and February 2024 intake.

subscores were introduced). Obtained an A, B or C grade, with an overall score of at least 176 and a minimum score on each section of at least 169.

3. The following students are exempt from the requirement to prove their proficiency in English; students who hold:
   a. a relevant Bachelor's or Master's degree from an accredited academic institution in the Netherlands.
   b. a three-year Bachelor's degree in one of the following countries: Australia, Canada (English-speaking part), Ireland, New Zealand, UK or USA. When your awarding institution is in one of these countries, but your teaching institution was not, you are not exempted. The same rule applies to distance (online) education where the awarding institution is in one of the mentioned countries, but the student was not.
   c. a secondary education diploma with English as an exam subject from one of the predetermined countries (according to the country list).

Article A2.3 Application and enrolment

1. The deadline for application for admission to the Master's programme is stipulated on the website www.utwente.nl/master. Different application deadlines apply to different types of applicants.
2. After admission, the student must enrol before 1 September or 1 February thereafter. The rules and regulations regarding enrolment are laid down in the UT Enrolment Regulations.

Article A2.4 Admission Board

Each programme has an Admission Board, which is appointed by the Faculty Board. The Faculty Board appoints this board after consulting with the Programme Directors and Examination Boards of the relevant Master's programmes.

Article A2.5 Admissions procedure

1. The Admission Board is responsible for the admissions to the programme in relation to any students that cannot be admitted directly (see Paragraph A2.1.4).
2. With a view to admission to the programme, the Admission Board assesses the candidate's knowledge, understanding and skills, including relevant language skills. The Board may request experts from inside or outside the University to test certain types of knowledge, understanding and skills, in order to supplement written evidence from the degree programmes the student has already completed.
3. In addition to the requirements, the Admission Board also assesses requests for admission on the basis of the following documents:
   a. motivation letter;
   b. English proficiency scores according to Article A2.2;
   c. Diploma;
   d. transcript of records;
   e. curriculum vitae;
   f. abstract of thesis;
   g. course descriptions for programme-specific courses, research methodology courses, mathematics courses and a table of content for the course materials.
4. The Admission Board may decide that particular units must be included in the student's study programme to compensate for lack of knowledge on the part of the student (homologation courses).

5. Candidates receive either confirmation of their admission to the Master's programme, admission to a pre-Master's programme or a negative decision. An appeal against a decision can be lodged with the UT Complaints Desk within six weeks.

Article A2.6 Refusal or termination of enrolment (unsuitability/judicium abeundi)

1. Based on the provisions of Section 7.42a of the WHW, the Faculty Board or the Examination Board may, in exceptional cases, ask the Executive Board to terminate or refuse a prospective student's enrolment in a programme, if that student's actions or words show that the student is unsuitable either for practising one or more of the professions for which the programme in question would prepare the student or for practical preparations for professional practice.
2. If it is believed that a prospective student is unsuitable for the programme, as described in Paragraph 1, the Examination Board or the Faculty Board will initiate an inquiry, and the student is informed of this promptly. The Examination Board or the Faculty Board does not issue any recommendation without carefully considering the interests involved and giving the prospective student the opportunity to be heard.

Article A2.7 Pre-Master's programme

1. The Admission Board may decide to admit a candidate to the Master's programme on the condition that a pre-Master's programme is completed successfully before their admission.
2. A pre-Master's programme is a bridging programme with a study load of 15 or 30 ECs, to be decided by the Admission Board. The courses in the pre-master are subject to the Bachelor Education and Examination Regulations.
3. The pre-Master's programme is assembled by the Admission Board. A fixed programme may be defined for specific groups of students. However, a student may also be given a personalized programme.
4. Proof of the successful completion of the pre-Master's programme, together with the related Bachelor's degree, serves as proof of admission to the relevant Master's programme, in the same and in the subsequent academic year.
5. Candidates are required to complete the pre-Master's programme within a year unless otherwise specified.
6. Students from Dutch Universities of Applied Sciences may be allowed to attend a pre-Master's programme during their Bachelor's programme. Paragraph 5 applies to these students. In this case, the relevant Bachelor's degree, together with the successfully completed pre-Master's programme, serves as proof of admission to the relevant Master's programme.
7. Deviations from these regulations are to be decided upon by the admission board.

A3. Programme content, structure, and rules

Article A3.1 Aim of the programme

The qualities relating to the knowledge, understanding, and skills that the student should have acquired upon completing the programme (aims and learning outcomes) (Article 7.13 Paragraph 2 (a) of the WHW) are set out in Section B.

Article A3.2 Programme structure

1. Section B describes the Master's programme in accordance with Article 7.13, Paragraph 2 WHW.

2. The scope of the Master's programme is at least 120 EC. These 120 credits must not include any credits which have constituted part of a previously completed Bachelor's degree audit.
3. If students are required to sign up to participate in a particular study unit, this is only possible during the periods designated for that purpose.
4. Every Master's programme has a nominal duration of two years, with each year divided into two semesters, both divided into two quarters[3]
5. Master's programmes are taught on a full-time basis.

Article A3.3 Language of Instruction
1. The language of instruction for all EEMCS Master's programmes is English.

Article A3.4 Exemptions
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 is registered in SIS 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. Exemptions may be granted to a maximum of 30 EC.
5. Students may also be exempted from practical assignment if they can demonstrate that a required practical assignment will likely give rise to a personal moral dilemma. In such cases, the Examination Board determines whether the component can be completed in another manner and in what way.

Article A3.5 Flexible-degree programme
1. The Examination Board decides on requests for permission to take a flexible-degree programme as referred to in Article 7.3j WHW. The Examination Board assesses whether a flexible-degree 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.
2. The content of the flexible-degree programme is determined and motivated by the student and must be equivalent to a regular Master's programme in terms of scope, breadth and depth.
3. The following requirements must be met in order to be eligible for the Master's degree:
   a. the deviation from the regular Master's programme must be at least 30 EC while still ensuring coherence in terms of content.
   b. the level of the programme must match the objectives and programme intended learning outcomes that apply to the programme for which the student is enrolled.

Article A3.6 Combined programmes
A student can obtain diplomas for two UT Master's programmes on the basis of a combined study programme that satisfies the requirements of each individual programme, including the programme intended learning outcomes.
The following requirements apply to the combined programmes and their composition:

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[3] See https://www.utwente.nl/en/ces/planning-schedules/academic-calendar/academic-calendars/ for a more detailed explanation of the academic calendar at the UT.

1. The student needs to be admitted and enrolled in both programmes in order to combine two programmes.
2. The student's programme of courses represents an amalgamation of two separate study programmes and satisfies the requirements relating to the programme intended learning outcomes of both corresponding Master's programmes. Depending on the requirements of the two Master's programmes, there are four possibilities:
   a. A **combined final project** and **combined internship[4]**, whereby both study programmes also incorporate a **maximum of 20 ECs from common courses**.
   b. A **combined final project,** but with a **separate internship or no internship**, whereby both study programmes also incorporate a **maximum of 30 ECs from common courses**.
   c. **Two separate final projects**, with a **separate internship or no internship**, whereby both study programmes incorporate a **maximum of 30 ECs from common courses**.
   d. In case there is **a Standard Programme** for a combined study programme **defined by two UT Master's programmes**, the requirements laid down in the Standard Programme applies.
3. The common courses programme as described in Paragraph 2 includes not only study units that are part of both Master's programmes, but also all courses for which an exemption has been granted for one Master's programme on the basis of results achieved as part of the other programme.
4. If a single combined final project is included in and is relevant to both Master's programmes, as referred to in Paragraphs 2a and 2b, the study load of the final project must be at least 100% of the requirement in EC for the final project of the programme that has the highest number of EC plus at least 50% of the requirement in EC for the final project of the other programme.
5. If a single combined internship is included that satisfies the requirements of both programmes as referred to in Paragraph 2a, the study load of the internship must equal the load of the internship with the highest number of EC.
6. Approval for the common courses is required from the Examination Boards of both Master's programmes.
7. Students who complete a study programme as described take a combined final examination which they pass if the assessments included in their file would result in a pass for the final examination of both programmes individually in accordance with the applicable regulations. The Examination Boards of the programmes involved decides whether a student passes the final examination. The Programmes provide instructions concerning the date of a combined final colloquium.

Article A3.7 Master's final project

1. Requirements for starting the final project:
   a. Students must have no more than 10 ECs still to complete, other than the final project.
   b. As an exception to the rule above, if the programme allows for a combined final project and internship, 10 ECs in unfinished courses other than the internship and final project are allowed.

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[4] If for students from a university of applied science the internship is substituted by an individual project for both programmes, then these projects may be combined in the same way as the internship, whereby the number of credits from the individual project and common courses together is less than or equal to 40 EC.

2. The student and examiner(s) must agree on the start date and completion date for the Master's final project.
3. This agreement is to be documented in a plan that takes into account the nominal length of the final project, a reasonable holiday period and any uncompleted study units.
4. The schedule for completion must be approved by the examiner and signed by the student.
5. The final project is concluded with an oral presentation in public at the University of Twente unless the project is carried out at another university as part of the exit year of a double degree programme.
6. Programme-specific regulations regarding the final project are stipulated in Section B.

Article A3.8 Composition of the assessment committee for the Final Project

1. The committee consists of at least two examiners, of which at least one is senior examiner; it is chaired by a senior examiner.
2. The examiners must belong to at least two different research groups.
3. All supervisors of the project are members of the assessment committee. Supervisors who are not examiners serve on the committee in an advisory capacity.
4. The examiners are collectively responsible for grading the thesis. In case of different opinions among the examiners, the chair of the assessment committee takes the ultimate decision on the grade.
5. In the event that the assessment committee cannot meet the above specifications, a motivated request to the Examination Board may be made by the Programme Director. The approval for the particular assignment remains valid during the academic year in which the request was granted or the duration of the final project in question with the maximum of one year.

Article A3.9 Internship

1. The internship is a period of study-related professional practice amounting to 20 EC and is carried out by the student at a company, university, or organization outside the University of Twente.
2. Requirements for starting the internship:
   a. students must already have obtained at least 45 EC of their examination programme.
   b. additional requirements may apply for each programme and are stipulated in Section B.
3. A description of the internship must be drawn up and approved by a member of UT staff appointed as examiner. This approval must be obtained before commencing the internship.
4. Students must contact the internship office for an intake at least three months before their preferred start date of the internship.
5. The day-to-day supervisor for the internship is the company supervisor: a member of the organization where the internship is carried out. This supervisor must be named in the project description, mentioned in Paragraph 3.
6. The UT supervisor mentioned in Paragraph 3 supervises the student remotely during the internship. If, in the opinion of this UT supervisor, adequate supervision by the company supervisor is not – or no longer – possible, the UT supervisor may decide to take over as the student's day-to-day supervisor.
7. During the internship, the student writes a report about their work. At the end of the internship period, this report is submitted to the company supervisor. The company supervisor assesses the internship using the relevant assessment form. The assessment is based on the supervisor's observations of the student and on the report submitted by the student.

8. The UT supervisor acts as the examiner for this unit and bases their grade on the assessment made by the company supervisor, the report written by the student and a discussion with the student. The student must submit the report to the UT supervisor within two months after finishing the internship. The internship report is *not* published publicly.

Article A3.10 Duration of the internship
1. According to the study load of 20 EC, the duration of an internship is the equivalent of 14 weeks of full-time work including writing a report. An extension with two weeks of this period is allowed to compensate for unforeseen delays.
2. If the host organisation and the student want to maintain a working relation after this period, the student must complete the internship first. After completion of the internship, the working relation between the student and the company falls outside the scope of the student's study programme and outside the responsibility of the University of Twente.

Article A3.11 Confidentiality
1. The final-thesis report is made public unless confidentiality has been deemed necessary.
2. The Programme director may declare a final thesis report to be confidential for a limited period upon receiving a motivated request to do so.
    a. A confidentiality request must be made by the examiner as soon as possible, but no later than four weeks before the end of the final project.
    b. A confidential report remains accessible to the supervisor, the Programme director, and any members of bodies with the authority to assess the quality of the grading of the entire programme.
    c. All parties mentioned in Paragraph 2b are required to respect the confidentiality of the report.
3. The confidentiality period is by default be set at 2 years up to a maximum of 5 years.
4. If confidentiality is deemed necessary as described in Paragraph 2, the contents of the public final thesis presentation may be adapted to avoid making public those matters that are considered confidential.
5. Section B of these Education and Examination Regulations may include additional provisions.

Article A3.12 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. To monitor and to improve the quality of teaching, the EEMCS MSc programmes use information about the students' learning experiences obtained from:
    - Internal evaluations
        o Periodic course evaluations at the end of each course
        o Additional (panel) evaluations, on request from lecturer, students, Programme committee, Examination Board or Programme Director
    - External sources
        o National Student Survey (NSE)
        o National Alumni Survey
        o International Student Barometer
4. Section B can include further details on how the education in the programme is evaluated.

A4. Teaching and assessment

Article A4.1 Examinations

1. Each study unit concludes with an examination.
2. The examination consists of one or more tests.
3. A test or examination can have various forms[5] and can be administered online or offline.
4. A student has the right to inspect recent model test questions, model tests, or old tests that are representative of the test or examination, as well as the associated answer keys, along with the norm for assessment and time estimated for answering the example test.
5. If an examination or test is administered online using *online surveillance*[6] or *online proctoring*[7], the Examination Board may set further rules and conditions for online (*proctored*) assessment. General information and detailed rules on online assessment is presented at the university's [website](#).

Article A4.2 Course Catalogue and Assessment Schedule

1. The Programme director publishes at least the following details of the study units in SIS not less than four weeks in advance: scope, intended learning outcomes and content, language of tuition and assessment, prerequisites, required and recommended study materials, design of teaching methods, and assessment.
2. The assessment schedule of a study unit is drawn up by the examiner or examiners and is determined by the Programme director. The Examination Board provides advice on the assessment schedule.
3. At least two weeks prior to the start of the study unit an assessment schedule must be published in the Learning Management System (LMS).
4. The assessment schedule includes at least all items as included in the course catalogue yet shall also include:
   a. The intended learning outcomes of the study unit and how they are assessed and when they are attained.
   b. when examinations, tests, and resits are held (the precise times and dates are announced via the timetable).
   c. the relative weighting of the tests.
   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).
5. The Programme director may modify the assessment schedule during the study unit:
   a. The assessment schedule may only be changed in consultation with the examiners of the study unit.
   b. The Programme director consults the Examination Board before any changes to the form or manner of administering an examination or one or more tests. If the change only

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[5] A test or exam can have the following forms: a written test, an assignment, an oral test, a presentation, practical assignment, or a combination of these forms.

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

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

involves moving tests to a timeslot other than as shown in the timetable, the Programme director informs the Examination Board of the decision as soon as possible.

    c.   Students must be informed immediately of the change.

6. Changes to the assessment schedule may not put students at an unreasonable disadvantage. The Examination Board may take special measures in individual cases.

Article A4.3 Examination and test opportunities

1. There will be an opportunity to take written or oral tests at least twice a year. Other forms of examination can be completed at least once a year.
2. In the event that a study unit is discontinued, at least one opportunity is provided in the year subsequent to discontinuation to take the examination or parts thereof, and a transitional arrangement must be included in Section B for the subsequent period.
3. At the student's request, the Examination Board may permit a different form of examination than that stipulated in the course catalogue. The examiner may ask the Examination Board to permit a different form of examination on condition that all students participating in the test agree.

Article A4.4 Registering for courses, tests and examinations

1. Registration in SIS is required prior to participating in a course[8]. It is also mandatory to register before every test opportunity.
2. Notwithstanding Paragraph 1, any student who has correctly registered to participate in the instruction/classes for a particular course and has been admitted will also automatically be registered for the subsequent tests, unless the course description specifies otherwise. Only if as student has passed a test and the student still wants to take part in the subsequent test, the student has to register in SIS manually prior to the test opportunity.

Article A4.5 Examination date

1. The examination date of a study unit, mentioned in the SIS, is the date on which the student fulfilled the last obligation, necessary for an assessment of the unit.
2. If a student agrees with an examiner about an examination date for a certain unit, the submission of additional material by the student after this date leads to a new examination date, being the date of the submission of this additional material.
3. With respect to possible prior knowledge requirements of subsequent study units a student is allowed to assume that they passed an examination at the examination date, as long as the result of the examination is pending.
4. Notwithstanding Paragraph 3, if the pending result turns out to be a fail and because of that the student violates the prior knowledge requirements of a subsequent unit, the Examination Board can decide that the student must interrupt their participation in this subsequent unit pending a repair of the fail.

Article A4.6 Oral tests

1. If the student or the examiner wishes a third party to be present when administering an oral test, then a request to this end must be submitted to the Programme director at least fifteen working days prior to the oral test. The student and the examiner are notified of the Programme director's decision not less than five working days in advance. The Programme director must inform the

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

Examination Board of the decision. Public graduation colloquia, 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 test, then the Examination Board must make this known to the examiner and the student at least one working day before the oral test.

Article A4.7 Examination results

1. 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[9] or as *'pass' / 'fail'.* With grades only being rounded in the final phase[10] of the assessment of a study unit and in accordance with the schedule below:

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

2. Test results are expressed in a grade from 1 to 10 with a single decimal, or as *'pass' / 'fail'*.
3. Examination results of 6.0 or higher respectively '*pass'* are a pass.
4. Examination results, if a pass, obtained at foreign universities are registered as a P (*pass*). Examination results obtained at Dutch universities are adopted one-to-one, with due regard for the provisions in Paragraph 1.
5. Credits may only be issued for a study unit if the study unit has been completed with a pass mark.
6. If more than one examination or test result has been recorded in SIS for one and the same unit of study, the highest grade applies.

Article A4.8 Determining and announcing results

1. The result of a written test or practical assignment is published via SIS within 20 working days.
    a. The examiner determines the result of a written test within 15 working days after the test.
    b. The examiner needs to pass on the result to the examination office or process the results in SIS within 5 working days of determining the result.
    c. No rights can be derived from test results published on the LMS or communicated via any medium other than SIS.
2. The examiner has 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

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[9] In SIS, a comma is used based on the Dutch grading system (e.g., 7.0).

[10] Final phase: the calculation of the examination result after all test results have been announced.

is to determine and announce the result within one working day following the conclusion of the series of oral examinations.

3. In case the result for a study unit is based on multiple tests, the date of completion of the final test counts as the examination date.

4. In case the examiner is unable to meet the terms described in Paragraphs 1 and 2 due to extraordinary circumstances, they must inform the Examination Board of this, providing reasons for this situation. The student is then informed of the delay by the Examination Board as soon as possible, whereby a new deadline for the result is also determined. If the Examination Board concludes that the examiner has not met their obligations, it may appoint another examiner to ascertain the result of the examination.

5. Notwithstanding Paragraph 1, the results of the first test have to be published at least five working days before the resit to give the student time to prepare.

Article A4.9 Period of validity

1. The period of validity for the results of an examination that has been passed is unlimited. The validity of an examination result can only be restricted if the tested knowledge, insight, or skills are proven to be out of date.

2. Test results are only valid in the academic year in which they were obtained unless they are aggregated into an examination result.

3. The Examination Board may extend the validity of test results in individual cases at the request of the student.

Article A4.10 Post-examination right of inspection and discussion

1. Student are entitled to discuss and review their test together with the examiner, and the examiner has 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 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 has 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 has 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. The student has the right to inspect their work for a period of two years after the assessment.

Article A4.11 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 thesis reports is seven years.

A5 Final Examination

Article A5.1 Master's final examination and degree

1. The Master's final examination is considered to be complete when the student has passed all study unit examinations in the Master'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 diploma can only be awarded after the student has received formal approval for their study programme as described in Section B.
4. 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[11], the student may have valid reasons for requesting that the awarding of the diploma be postponed for more than twelve months.
5. If the student has requested postponement based on the provisions of Paragraph 4, then the date of the examination is the date on which the Examination Board decides that the student has passed the final examination subsequent to the postponement.
6. Students who have successfully met all requirements for the Master's final examination are awarded a Master of Science (MSc) degree.
7. The degree conferred is stated on the diploma.

Article A5.2 Diploma

1. The Examination Board awards a diploma as proof that the student has satisfied all the requirements of the examination once the Executive Board 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 is 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 diploma is in English and complies with the European format for such diplomas and WHW Article 7.11.
4. An International Diploma Supplement is 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 (WHW, Article 7.11, Paragraph 4).
5. If the Examination Board has awarded a specific distinction (e.g., cum laude) to the student, then this is 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, 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 states the results of the examinations the student has passed.

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[11] Some examples (by way of illustration, not to exclude other situations): the student attends a double degree or combined degree programme, or an extensive extra-curricular activity requires more than twelve months.

Article A5.3 Cum Laude

1. The Examination Board checks whether the student has fulfilled all requirements. If the *judicium Cum Laude* ('with distinction') applies, this is stated on the diploma and the diploma supplement.
2. The *judicium Cum Laude* can be awarded provided the following requirements are met:
    a. The precise weighted average[12] of the grades for all study units of the Master's examination programme, excluding the Master's thesis (final project) and the internship (if applicable), is at least 8.00; Results for study units outside the examination programme, are not taken into account.
    b. Those parts of the examination programme for which an exemption was granted, or which were not graded with a number[13] are not considered when calculating the average grade.
    c. Exemptions within the examination programme may be granted to a maximum of 15 ECs.
    d. The Master's thesis (final project) is graded at 9.0 or higher.
    e. If an internship is part of the examination programme, it is graded at 8.0 or higher.
    f. No more than one study unit of the examination programme has been graded lower than 7.0.
    g. The study programme has been completed within 125% of the nominal duration, starting from the start date recorded in SIS.
3. Students who have been found guilty of academic misconduct in academic activities related to the programme for which the cum laude is to be awarded, are excluded from the judicium cum laude.
4. In individual cases the Examination Board may grant the judicium Cum Laude even if not all requirements are met due to extenuating circumstances. It is noted that the distinction of cum laude is never awarded automatically, but only following individual assessment of the student's academic achievements.

A6. Student guidance and study progress

Article A6.1 Study progress report

1. Every student can access their list of the results achieved in SIS. The student can request a certified study progress overview from the Student Services Desk if required.

Article A6.2 Student guidance

1. The Faculty Board is responsible for student guidance.
2. Student support and guidance includes 'decentralised' 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.

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[12] The weighted average is proportional to the number of credits.

[13] With the exception of EIT Digital Master school programmes

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. 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 A6.3 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 records the agreements made with the student in SIS.
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.

A7. Studying with a functional impairment

Article A7.1 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 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 A7.2 Request for facilities
1. The study adviser and the student concerned discuss the most effective facilities that can be provided for the student as referred to in Article 2 of the Equal Treatment of Disabled and Chronically Ill People Act (WGB h/cz).
2. Based on the discussion referred to in Paragraph 1, the student has 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 participates 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 decides on the admissibility of the request and informs 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 is also indicated.
   b. If the request is not granted, or only partly granted, the study adviser informs 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, are granted a maximum of 15 extra minutes for each hour that a test or exam is officially scheduled.
5. The study adviser informs the relevant parties in due time about the facilities that have been granted.
6. The applicant and the study adviser 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.

A8. Amendments, transitional arrangements, appeals and objections.

Article A8.1 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 prevail.

Article A8.2 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 A8.3 Amendments to the regulations
1. Substantive amendments to these Education and Examination 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 A8.4 Transitional arrangements
1. In the case of amendments to the Education and Examination Regulations, the Faculty Board adopts a transitional arrangement, as necessary.
2. The transitional arrangement must to published on the degree programme's website or published in Section B of these regulations.
3. The following principles are applicable to any transitional arrangement if a Master's programme is changed:
     a. Changes to the curriculum are to be announced prior to the academic year in which the changes take effect.
     b. No guarantee can be made that all programme study units that were part of the curriculum when students enrolled in a programme 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. Transitional arrangements always include:
     a. which discontinued study units are equivalent to study units or components thereof in the revised Master's programme that is included in Section B.

   b. if a study unit without practical exercises is discontinued, there will be at least one opportunity in the subsequent academic year to take a written or oral examination or to ensure assessment by some other means.
   c. if a study unit that involves practical exercises is removed from the programme, and during the subsequent academic year no opportunities are provided to complete these practical exercises, at least one study unit is designated as a suitable replacement for the discontinued study unit.
   d. the term 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 A8.5 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. In accordance with article 9.18 of the 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 A8.6 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 A8.7 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 A8.8 Publication

The education and examination regulations and the Examination Board's Rules and Guidelines are to be published on the degree programme's website.

Article A8.9 Entry into force

These Regulations enter into force on 1 September 2023 and replace the Regulations dated 1 September 2022.

SECTION B – PROGRAMME-SPECIFIC SECTION: INTERACTION TECHNOLOGY

About this Section

The Education and Examination Regulations (EER) are subdivided into two sections (Section A and Section B), which together form the EER. Section A, which can be seen as the faculty section, includes provisions that apply to all EEMCS Master's degree programmes. Section B contains the provisions that are specific to the particular degree programme, in this case the Master's programme Interaction Technology.

B1. General provisions

B2. Programme objectives and final qualifications

Article B2.1 Aim of the Interaction Technology (I-Tech) Master's programme

The I-Tech programme aims at creating impact by envisioning, designing and evaluating cutting edge technology that takes into account the complexity of human lives and environments. Interaction Technology represents a broad cross-disciplinary perspective on research, design, and entrepreneurship and combines the fields of computer science and electrical engineering, subjects from industrial design and several social sciences to study how people interact with digital technologies. These technologies vary from augmented or virtual reality up to mixed reality, speech and language interfaces, the internet of things and social robots. Interaction Technology students learn how digital technologies should be designed and built, so that people can have a pleasant and/or effective interaction with the technology. Graduates from I-Tech have obtained competencies to do research, to design and to understand how to create impact and finally, they should know how to tell their story to users, to customers or grant agencies.

Article B2.2 General final qualifications

The degree programme has the following general scientific final qualifications

    a. Graduates have an extensive knowledge of and understand the issues relevant to their specific field of study (i.e. domain specific final qualifications) described in Art. B2.3.

    b. Graduates can contribute to scientific research, and independently design, conduct and present the results of small-scale research.

    c. Graduates can provide an original contribution to the development and/or application of the field of study. 'Original' is understood to mean 'demonstrative of a creative contribution'.

    d. Graduates can analyse complex problems relevant to the field of study and obtain the required knowledge and information.

    e. Graduates can design, validate and implement solutions/systems in their operational context; identify and apply relevant advanced knowledge, methods and techniques from their field of study.

    f. Graduates can assess solutions/systems and their applications according to their properties and potential to solve problems even if they are new to or unfamiliar with the situation or lack information and/or reliable information; they can use their assessment as a basis for (substantiation of) decisions.

    g. Graduates understand the ethical, social, cultural and public aspects of problems and solutions in their field of study; apply this insight in their international role as scholar.

    h. Graduates can work as part of and play a leading role in a team; manage and plan a development process; document development and research processes.

    i. Graduates can substantiate research results, designs and applications in writing and verbally; critically assess and participate in debates regarding the same.

    j. Graduates can independently acquire new knowledge and skills; reflect on trends in their field of study, responsibilities and roles and use this insight as a guide for and integrate it into their own personal development.

    k. Graduates can integrate information from other disciplines into their own work if necessary.

    l. Graduates take a critical approach to reading, incorporating information presented in and participating in debates regarding international scientific literature relevant to their field of study.

Article B2.3 Domain specific final qualifications

The degree programme has the following subject specific scientific final qualifications (elaborating

Art. B2.2)

a. Graduates have a thorough knowledge and understanding of each of the Human Technology Interaction sub-fields listed below

- methodology of user-oriented design, including the drafting of user requirements and user studies
- usability engineering;
- intelligent interaction employing techniques taken from artificial intelligence

b. Graduates have practical experience conducting, reporting about and applying the results of scientific research in developing innovative interactive systems by using interaction technology techniques and methods.

c. Graduates can design sophisticated applications involving interactive systems that are geared to the needs of users, using state-of-the-art techniques and methods. They are able to design such applications both independently and as part of a team.

d. Graduates have knowledge of and understand various aspects of the user context of interactive systems and can based on this, communicate effectively and efficiently with users during the various phases of the development process.

e. Graduates have knowledge of and understand basic questions and research methods into human behaviour relevant to the multimodal system they develop and grasp the relevance of these fields of study to the design of interactive systems.

f. Graduates can draft, transfer, document and communicate to technical designers specifications on the basis of a knowledge and understanding of the technical aspects of interactive systems.

g. Graduates can draft, transfer, document and communicate functional specifications and technical aspects of interactive systems to end-users or clients (by storytelling and using expressive media).

h. Graduates can assess systems for Human Technology Interaction according to their technical and operational aspects, incorporating a thorough knowledge and understanding of qualitative, quantitative and numerical methods.

i. Graduates understand how interactive systems influence technological and business requirements.

B3. Further admission requirements

Admission requirements additional to the ones in Article A2 can be found in Appendix II.

B4. Curriculum structure

Article B4.1 Programme structure

1. The structure of the program consists of courses divided over six pillars, research topics, and a graduation project. The programme needs to fulfil the following requirements:
    a. Technology pillar: minimum 20 EC
    b. Understanding humans and context pillar: minimum 10 EC
    c. Research pillar: minimum 10 EC
    d. Design pillar: minimum 5 EC
    e. Impact, innovation and entrepreneurship pillar: minimum 5 EC
    f. Storytelling pillar: minimum 5 EC
    g. Foundations of Interaction Technology - 201800234 (5 EC)
    h. Research Topics - 201900194 (10 EC)
    i. Final Project - 201900195 (30 EC)
    j. The total course programme adds up to at least 120 EC
2. If a course loads on two pillars the amount of credits will be equally divided over both pillars.

3. Depending on the content, the advanced courses (see Appendix I) and 201900194 Research Topics will be assigned to a maximum of two pillars in consultation with the project's supervisor.
4. The Capita Selecta Interaction Technology course of 5 EC is offered to enable the student to deepen his or her knowledge in a topic of choice. The student is responsible for finding a supervisor for the Capita Selecta course and preparing a proposal with clear goals for this course. The Capita Selecta supervisor should agree with the proposal before the start of the course and assigns the EC to a pillar. The decision to which pillar the EC will be assigned will depend upon the focus and content of the Capita Selecta assignment. The requirement is that a student dedicates and spends an adequate number of hours on the topic of that pillar.
5. Students may choose to do an internship (20 EC) and assign maximum 10 EC to maximum two pillars. Maximum 5 EC can be assigned per pillar. The assignment of EC points needs to be approved by the programme mentor in consultation with the internship supervisor. The decision to which pillar the EC will be assigned will depend upon the focus and content of the internship. The requirement is that a student dedicates part of an internship (and thus report) to the chosen pillar(s) and spends an adequate number of hours on the topic of that pillar. Before the internship starts an agreement needs to be made with the internship supervisor who will grade that part of the report.
6. Students can use their Final Project (30 EC) to assign maximum 10 EC to maximum two pillars. Maximum 5 EC can be assigned per pillar. The assignment of EC points needs to be approved by the programme mentor in consultation with the chair of the graduation committee of the Final Project. The decision to which pillar the EC will be assigned will depend upon the focus and content of the Final Project. The requirement is that a student dedicates part of the Final Project (and thus report) to the chosen pillar(s) and spends an adequate number of hours on the topic of that pillar. Before the Final Project starts an agreement needs to be made with the member of the Graduation Committee who will grade that part of the report.
7. During their first quarter students have to take 201800234 Foundations of Interaction Technology and one other course out of the Technology (1.a) pillar.
8. A more detailed overview of the courses and the allocation over the pillars is placed in Appendix I.
9. Students whose admission to the I-Tech programme is derived from, or constitutes a part of, their admission to a special programme within the EIT Digital Master school (HCID programme), may have a course programme which deviates from the requirements listed under 1-4. The programme for HCID students is described in Article B4.4.

10. A choice of courses becomes a course programme once it has been approved and signed by the programme mentor (Article B5). The programme mentor has the authority to refuse his approval even if the choice of units is within the limitations of these Regulations.

Article B4.2 Final Project

Graduation work[14] consists of a graduation project, a graduation report, a summary of the report, and a presentation, worth 30 EC with the following criteria;

1. Completion of the thesis
    a. Interaction Technology students (both years in Twente) can choose to complete their work within the University of Twente or at an external company or institution. In the case of an external company or institution, an additional external supervisor is optional.
    b. HCID entry students (starting in Twente) complete their graduation work at a partner university;
    c. HCID exit students (starting at a partner) complete their graduation work in Twente.

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[14] Organizational procedures and instructions are available through https://www.utwente.nl/en/itech/programme/final-project/.

2. Students carry out their graduation work under the supervision of staff members from the university of Twente, who have examiner rights. The **graduation committee** is formed as described in Art. A3.8 of the faculty Section of this EER. Additionally, the graduation committee should consist of at least two members, who meet the following requirements:
   1. at least one staff member is part of the HMI research group
   2. at least one staff member is from another research group than HMI
   3. the appointed **chair** of the graduation committee meets one or more of these criteria: a. Is a full professor
      b. has obtained or is exempted for the UTQ *and* has supervised five or more final thesis projects as member of an I-Tech Graduation Committee.

3. Besides two members in the categories as describe above, the graduation committee could hold additional members, such as external supervisors or staff members without the role of examiner.
4. Students may only start the graduation work with a maximum of 10 EC of unfinished courses, unless the chair of the graduation committee grants permission to deviate from this rule.
5. The graduation committee takes responsibility for supervision and assessment of graduation work. However, students also share this responsibility and are expected to be proactive in arranging their supervision.
6. The graduation project description is written down as an agreement including a thesis proposal, signed by both the student and the chair of the graduation committee.
7. For HCID students who complete their graduation work at a partner university; a HMI staff member will check if the thesis is good enough for an I-Tech diploma.

Article B4.3 Additional Courses
1. To meet the minimum requirement of 120 EC, students are allowed to take:

   a. Courses mentioned in Appendix I.
   b. Courses from related programmes, after permission from the programme mentor
   c. A 20 EC internship. In addition to the rules and regulation in Art. A3.9. of the faculty section of this EER[15].

Article B4.4 EIT Digital Master School Human Computer Interaction Design
1. Students enrolled for the Human Computer Interaction and Design (HCID) programme of the EIT Digital Master School take a 60 EC course programme in I-Tech, which is completed to a full 120 EC course programme at one of the other participating institutions.
   a. First year HCID students in I-Tech take a 60 EC programme in I-Tech as outlined in item 2. These students continue with a second-year specialization at Royal Institute of Technology in Stockholm (KTH), University of Trento (UniTN), Aalto University, University Paris-Sud (UPS) or Technical University of Madrid (UPM).
   b. Second year HCID students have completed 60 EC (a first year) at Aalto University, KTH, UPM, Polytechnic University of Milan or UPS before they start their 60 EC programme in I- Tech as outlined in item 3.
   c. Both first and second year HCID students will take a combined programme, one of their diplomas is the I-Tech diploma.

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[15] Organizational procedures are found on: www.utwente.nl/en/eemcs/traineeship.

2. The I-Tech course programme for students with an entry year at the University of Twente needs to include the mandatory courses mentioned under HCID Entry year supplemented with other I-Tech courses to add up to 60 EC.
3. The I-Tech course programme for exit year students need to include the mandatory units mentioned under HCIT Exit year.

HCID Entry year: mandatory courses
HCID core courses:
- 201800234 Foundations of Interaction Technology (5 EC)
- 201600087 Experience Design for Interaction (5 EC)
- 201800227 Human Centred Design (5 EC)
- 201800226 Concepts, Measures and Methods (5EC)
- 202100208 Introduction to Human Computer Interaction (5 EC)

Innovation and Entrepreneurship (I&E) course for HCID students:
- 202100178 I&E Basics: Innovation Management for EIT[16]
- 201700119 Business Development Lab for EIT I (5EC)
- 201700120 Business Development Lab for EIT II (5EC)
- One of the following courses:
    - o 201500008 Empirical Methods for Designers
    - o 191612680 Computer Ethics
    - o 201500090 Advanced Topics in Digital Marketing
    - o 201800230 Advanced Project in Impact, Innovation & Entrepreneurship
    - o 202001492 Design Thinking for Service and Business Innovation
    - o 201000087 Entrepreneurial Finance
    - o 201600015 Strategic Technology Management and Innovation
    - o 194105070 Information Systems for the financial services industry

HCID Exit year: mandatory courses
Students in the exit year of the HCID programme need to include the following courses:

- 201800524 Research Topics EIT (4 EC)
- 201800525 I&E Study EIT (6 EC)
- 201900195 Graduation Project / Final Assignment (30EC)
- At least 10 EC of the specialisation courses:
    - o 201600074 Natural Language Processing (5 EC)

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[16] All HCID-students that have already taken 201600233 Innovation and Entrepreneurship as part of their bachelor programme must take a different course: 201600011 International Entrepreneurship - A Strategic Technology Perspective (5 EC).

o 201600075 Speech Processing (5 EC)
o 201600070 Machine Learning I (5 EC)
o 201600071 Machine Learning II (5 EC)
o 192320601 Multi-Agent Systems (5 EC)
o 201600076 Foundations of Information Retrieval (5EC)
o 201600083 Advanced Project in Information Retrieval (5 EC)
o 201600081 Advanced Natural Language Processing (5 EC)
o 201800177 Deep Learning: from Theory to Practice (5 EC)
o 202200103 Image processing and computer vision (5 EC)

B5. Course programme approval

The student must complete the following steps to obtain course programme approval:

1. *Contacting the programme mentor for approval of the course programme:* Students may complete subjects and sit interim examinations up to a maximum of 15 credits before contacting the programme mentor. At this point, permission from the programme mentor is required for a complete programme of 120 credits. The programme is written down as an agreement on the content of the course programme, signed by both the student and the programme mentor[17]. The programme mentor signs on behalf of the Examination Board.
2. *Alterations and renewed approval of entire course programme:* After the course programme has been laid down it can be altered during executing the master's programme, by laying down revised course programmes. This can be done until research topics and the final project are started by the student.
3. *HCID students only need approval for the year spent at the UT.*
4. *The completed and signed form listing the course programme must be included in the student's file at Bureau Onderwijszaken* (BOZ, office of educational support): The student will earn the diploma if he/she completes the units of study listed in the course programme and earns results in line with the guidelines for passing the final assessment.
5. *Requirements apply to each course programme to ensure basic knowledge in the field of study:* The admissions board may adjust these programme requirements on the basis of the student's prior education and training. Such an adjustment will never entail an intensification of the requirements, the programme will always have a minimum study load of 120 credits.
6. *The total number of credits completed at the UT or at another university or research institute approved by the programme mentor, must be at least 90.* The Examination Board may permit a student to deviate from this rule.

B6. Degree

Students who have successfully completed their Master's final examination are awarded a Master of Science degree. The degree awarded is stated on the diploma.

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[17] The I-Tech course approval form is available on the I-Tech website: Master Interaction Technology (I-Tech,): for students and staff (utwente.nl)

B7. Transitional and final provisions

Article B7.1 Transitional provisions

The transitional arrangements for students Interaction Technology who started as students of Human Media Interaction can be found in appendix III.

Article B7.2 Publication

1. The Dean will ensure the appropriate publication of these Regulations and any amendments to them.
2. The Teaching and Examination Regulations will be posted on the faculty and programme website.

Article B7.3 Effective date

These Teaching and Examination Regulations take effect from 1 September 2023.

APPENDIX I. COURSES MASTER INTERACTION TECHNOLOGY 2022-2023[18]

I-TECH PILLARS 2021-2022						Other Courses
Technology Min. **20EC**	**Understanding Humans & Context** Min. **10EC**	**Research** Min. **10EC**	**Design** Min. **5EC**	**Impact, Innovation & Entrepreneurship** Min. **5EC**	**Storytelling** Min. **5EC**	To be assigned to max. 2 pillars depending on (project) proposal
Courses*						
201800234 Foundations Of Interaction Technology	201800234 Foundations Of Interaction Technology	201600079 Trends In Human Robot Interaction Research	201600087 Experience Design for Interaction	201800229 Basics Of Impact, Innovation & Entrepreneurship	201600087 Experience Design for Interaction	201900194 Research Topics (10 EC)
201600074 Natural Language Processing	201600074 Natural Language Processing	201800226 Concepts, Measures And Methods	201800235 Social Robot Design	201800230 Advanced Project In Impact, Innovation & Entrepreneurship	201800231 Documentary Practice	201900195 Final Project (30 EC)
201600075 Speech Processing	201600075 Speech Processing	201300074 Research Experiments In Databases & Information Retrieval	201400180 Multisensory Design	191612680 Computer Ethics	201800336 Storytelling Through Oral Presentation	201600071 Machine Learning II
201600073 Affective Computing	201600073 Affective Computing	201500008 Empirical Methods For Designers	201800227 Human Centred Design	201700019 Brand Management	201800232 Storytelling Through Sound	201600080 Advanced Research Project in Affective Computing
201600078 Brain Computer Interfacing	201600078 Brain Computer Interfacing	202100208 HCI for I-Tech	201800228 Mastering Tinkering	201000087 Entrepreneurial Finance	201800233 Art, Mathematics & Technology	201600081 Advanced Project in Natural Language Processing
201600077 Conversational Agents	201600077 Conversational Agents		201700008 Design and Behaviour Change	201600015 Strategic Technology Management & Innovation	202100322 Popular Science Writing	201600082 Advanced Research Project in Speech Processing
202001583 Sports Interaction Technology	202001583 Sports Interaction Technology		192850830 Create The Future (10 EC)			201600083 Advanced Project in Information Retrieval
201600070 Machine Learning I	201200063 Philosophy Of Technology		202100208 HCI for I-Tech			201600084 Advanced Project in Conversational Agents
202200110 Tele-presence Robotics	201400180 Multisensory Design					201600085 Advanced Project in Brain Computer Interfaces
201600076 Foundations of Information Retrieval	202200102 Human Robotic Communication					201600086 Advanced Research Project in Human Robot Interaction

[18] Yellow coloured courses belong to two pillars and the EC's are equally distributed over both pillars (2,5 EC each). *Courses are 5 EC unless otherwise specified **
Courses will be assigned to max two pillars by: Advanced courses and I-Tech project: lecturer; Internship and Research Topics: supervisor; Courses from related programmes: programme mentor

201800337 Artificial Intelligence	202200113 Human-Robot Collaboration					201100254 Advanced Project in Computer Vision and Pattern Recognition
201800235 Social Robot Design	202200105 Robot Perception, Cognition and Navigation					201800236 I-Tech Project (10 EC - Semester)
191210910 Image Processing And Computer Vision						201900234 Internship I-Tech (20 EC)
192320601 Multi Agent Systems						192166200 Capita Selecta I-Tech
202100244 Pervasive Computing						202200015 Amrita Dissertation
201000201 Virtual Reality						Additional Courses from related programmes
191211060 Modern Robotics						
191210431 Engineering System Dynamics						
201400174 Data Science						
202200104 Control System Design for Robotics						
201800177 Deep Learning						
202200102 Human Robotic Communication						
202200112 AI for Autonomous Robots						
202200113 Human-Robot Collaboration						
202200105 Robot Perception, Cognition and Navigation						

APPENDIX II. ADMISSIONS TO THE MASTER INTERACTION TECHNOLOGY

The provisions in this appendix are an integral part of the Education and Examination Regulations of the Master's programme Interaction Technology of the Faculty of Electrical Engineering, Mathematics and Computer Science of the University of Twente and are an addition to the regulation stated in Section A and B. References to numbered articles in this appendix are references to the main text of these Regulations.

Enrolment as a student is required to sit interim examinations and to be eligible to earn the Master's diploma. In order to be enrolled, students must demonstrate that they have been admitted to the Master's programme.

Article II.1 Admission to the programme

1. Admission to the programme can be granted only to students who meet the requirements regarding the level of their previously earned diploma's, in accordance with the provisions of Art.7.30b of the WHW.
2. Students in possession of a diploma which shows that they have passed the final examination for a bachelor degree in Technical Computer Science or Computer Science & Engineering (TU/e, TUD, UT), Informatica (RUG, UU, UvA, VU, UL, RU, OU), Business & IT (UT), Creative Technology (UT), Electrical Engineering (UT, TUD, TU/e), (Technische) Kunstmatige Intelligentie (RUG, UvA, UU, RU) will be eligible for admission to the programme[19].
3. Students who are admitted to the HCID-programme are also admitted to the Interaction Technology programme.
4. Students who are not in possession of the diploma mentioned in Article II.1.2 will require a certificate of admission issued by the Admissions Board. The Admissions Board is appointed by the Dean with the power to act in matters of admission to the programme. Admission involves an assessment of the student's eligibility for the Master's programme of his/her choice. If the admissions board positively assesses an application for admission, it issues a certificate of admission. Students with a certificate of admission are eligible for enrolment by the Central Student Administration. Enrolment will only take place if the other admission requirements maintained by the UT have also been satisfied.
5. Admission of students with an international degree. In addition to the requirements in Article A2.5 and A2.7, the following criteria apply:
a. The level of education in the country, in which the student has completed his/her pre-university education, must be comparable with that in the Netherlands.
b. Level of knowledge: the student must have accumulated sufficient knowledge on the basis of the courses he/she has studied abroad to be at a level comparable to that of UT Bachelor's degrees that are eligible for the Master programme Interaction Technology.

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[19] The admission criteria are also described here:
https://www.utwente.nl/en/education/master/programmes/interaction- technology/admission/

Article II.2 Admission to the programme pursuant to a regulation

The Dean has adopted the following provisions for certain students to be eligible for admission (in addition to the ones mentioned in Article II.1). For all three scenario's below it is required that the applicant has successfully completed a premaster or transfer programme as issued by the admission committee of Interaction Technology. The applicant can start a premaster programme in September or February.

Applicants who satisfy one (or more) of the following requirements are eligible for admission to the I-Tech Master's programme.

1. The applicant is holder of a diploma of a University of Applied Sciences (HBO) demonstrating that he has satisfied the requirements of the final assessment of the Computer Science (Informatica) HBO Bachelor's programme, the HBO ICT Bachelor's programme, the Technical Computer Science (Technische Informatica) HBO Bachelor's programme or the Electrical Engineering (Elektrotechniek) Bachelor's programme.
2. The applicant is holder of a diploma from the University of Twente demonstrating that he or she has satisfied the requirements of the final assessment of the Psychology Bachelor's programme.
3. The applicant is holder of a diploma from the University of Twente demonstrating that he or she has satisfied the requirements of the final assessment of the Industrial Design Bachelor's programme.

Article II.3 Admission to the Master's programmes after individual assessment

In all other instances than those mentioned in Art. II.1 and II.2., the admissions board conducts a detailed assessment of the applicant's eligibility for admission. This assessment takes the following factors into account:

1. the highest diploma earned by the applicant: This must be at least a Bachelor's diploma from a recognized higher education institution. If such a diploma cannot be produced, the admissions board will ask for a statement attesting to the equivalency of the applicant's qualifications with the Bachelor's diploma required. The body issuing this statement must be authorized to do so.
2. the nature of the degree course and the content of the course programme completed by the applicant, the speed with which the course programme was completed and the marks earned: The nature of the degree course, content of the course programme and marks earned for the individual units of study must clearly demonstrate that the applicant has the fundamental academic skills and appropriate

      basic knowledge for the Master's programme or is able to compensate for any gaps in basic knowledge.

3. the student's motivation for applying for admission
4. the applicant's command of English: The threshold values for sufficient command of English are in Article A2.2.

Article II.4 Variations in admission decisions

1. <u>Issuing an unconditional certificate of admission</u>

The admissions board may decide to admit applicants to the Master's programme after assessing their file. These applicants will be issued a (unconditional) certificate of admission.

2. <u>Issuing a conditional certificate of admission</u>

The admissions board may not reach a final decision about admission, because it finds insufficient or formally incorrect evidence of the applicant's status in the application file. In such a case the board can decide to admit the applicant conditionally. The student can enrol at the UT on the condition he or she submits the evidence lacking in the original application file to the satisfaction of the admissions board. (A typical case of conditional admission is when the applicant's file shows no formal proof of sufficient proficiency in English.)

3. <u>Issuing a certificate of pre-Master admission</u>

In some cases, the admissions board will issue applicants a certificate of pre-Master admission. While these individuals may enroll at the UT, they are not entitled to sit interim examinations or to have the final assessment conducted.
Students with a certificate of pre-Master admission must first successfully complete the pre-Master's programme before being fully admitted to the Master's programme and become fully enrolled students with all the associated rights. Certificates of pre-Master admission are valid for a limited term (generally one year). Students who are not fully admitted during this term must re-apply for admission.

Completing a programme to convert a pre-Master admission to 'fully admitted' student status is often referred to as 'overcoming deficiencies'.

Students who completed their pre-Master's programme will be issued a certificate allowing them to enter the Master's programme.

4. <u>Issuing a certificate of admission with additional requirements</u>

The admissions board may attach additional requirements to a certificate of admission (also to conditional and pre-Master admissions). These additional requirements do not impact the right to enroll, sit interim examinations or have the final assessment conducted. They do, however, impact the regulations governing successful conclusion of the Master's programme final assessment. With this admission decision, the admissions board establishes additional requirements for the course programme to satisfy in order to successfully pass the Master's programme final assessment. Naturally, the additional requirements will be limited to the extent that the student will still be able to complete the programme with a study load of 120 credits. The additional requirements placed on the course programme are referred to as "homologation".

5.   Issuing a certificate of admission with a requirements waiver

Article A3.4 of the Teaching and Examination Regulation stipulates that the Examination Board may not honour requests for exemptions based on results earned as part of a Bachelor's programme. However, the Examination Board may waive a requirement placed on the course programme in recognition of the results earned as part of a Bachelor's programme and, consequently, permit the student to successfully pass the Master programme's final assessment with a course programme that does not satisfy all the formal requirements. Students who wish to have a waiver for requirements placed on the course programme based on their undergraduate education should submit a request to the admissions board. The admissions board will render a decision on the request on behalf of the Examination Board. If granted, it will issue a certificate of admission with a waiver for requirements, thereby granting the student the right to have the Master's programme final assessment conducted without meeting all the formal requirements. Such a waiver will never affect the Master's programme study load. A study load requirement of less than 120 credits is not permitted.