

TEACHING AND EXAMINATION REGULATIONS (TER/OER) 2018-2019

**(from Article 7.13 of the Higher Education and
Research Act)**

JOINT-DEGREE MASTER'S DEGREE PROGRAMME TECHNICAL MEDICINE

LEIDEN UNIVERSITY – FACULTY OF MEDICINE

**DELFT UNIVERSITY OF TECHNOLOGY – FACULTY OF MECHANICAL,
MARITIME AND MATERIALS ENGINEERING [SECRETARY]**

**ERASMUS UNIVERSITY ROTTERDAM – FACULTY OF MEDICINE AND
HEALTH SCIENCES**

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Paragraph 1 - General

Article 1 – Applicability of the regulations

1. These regulations apply to the teaching and examinations of the Master's programme Technical Medicine, hereinafter referred to as 'the programme'.
2. The programme is provided under the responsibility of or faculties Medicine (LUMC) of Leiden University, Mechanical, Maritime and Materials Engineering of Delft University of Technology [secretary] and Medicine and Health Sciences (Erasmus MC) of Erasmus University Rotterdam, hereinafter referred to as the faculty.

Article 2 - Concepts

1. The following concepts apply in this Regulation:

- a. first academic year: the first period in the programme with a study load of 60 credits, as specified in Article 7.8b Section 8 of the Act;
- b. degree audit: the test, in which, in accordance with Article 7.10 of the Act, the Board of Examiners determines whether all examinations in the subjects of the degree programme have been successfully completed;
- c. negative binding recommendation on continuation of studies: the rejection linked to the recommendation on the continuation of studies at the end of the first year of enrolment as specified in Article 7.8b Section 3, first sentence;
- d. programme: the Master's degree programme, as stipulated in Article 7.3a, Section 1 in the Act;
- e. Osiris: the education information system;
- f. practical exercise: subject of component of a subject aimed at the acquisition of particular skills. The following can be understood as practical exercises:
 - writing a thesis,
 - conducting a project or experimental design,
 - carrying out a project or a design/research assignment,
 - completing an internship,
 - participating in field work or an excursion,
 - conducting tests and experiments, or
 - participating in other educational activities that are considered essential and that are aimed at acquiring particular skills;
- g. bridging programme: a deficiency programme aimed at moving up to a Master's degree programme, as stipulated in Article 7.30e or Article 7.57i of the Act;
- h. student: a person enrolled at Delft University of Technology in order to receive education and take the examinations and the degree audit in the degree programme;
- i. credit: credit in accordance with the European Credit Transfer System (ECTS); one credit equals a study load of 28 hours;
- j. study guide: the digital guide for the degree programme containing specific information on the subjects included in the degree programme (www.studiegids.tudelft.nl);
- k. examination: investigation of the student's knowledge, insight and skills with regard to a subject, along with the assessment of that investigation;
- l. track: major, as stipulated in Article 7.13, Section 2, Subsection b of the Act;
- m. subject: a unit of study within the programme, as stipulated in Article 7.3, Sections 2 and 3 of the Act with which an examination is associated;
- n. working day: Monday through Friday, with the exception of recognised holidays and the collective closure days;
- o. Act: the Higher Education and Scientific Research Act (abbreviated to WHW), Bulletin of Acts and Decrees 593 and any amendments since its introduction.

2. The other concepts in these regulations are used in the sense in which they appear in the Act.

3. In these regulations, the term 'examination' also refers to 'interim examination', with the exception of Articles 19, 22 and 25.

Paragraph 2 - Admission and prior education

Article 3- Admission to the Master's degree programme (Art. 7.30b WHW) BoS advisory powers; SC advisory powers 2018-2019 (amendment RIB)

1. Individuals holding one of the following degrees have access to the education of the Master's degree programme in Technical Medicine on the condition that all of the stated requirements have been met.

a. Specific university Bachelor's degree

- Full programme Bachelor's degree in Klinische Technologie (Clinical Technology) [Leiden University, Delft University of Technology and Erasmus University Rotterdam]
- Full programme Bachelor's degree in Klinische Technologie/Technische Geneeskunde (Clinical Technology) [University of Twente]
- Mind that free programme Bachelor's degrees (vrij programma) in Klinische Technologie/Technische Geneeskunde (Clinical Technology) does not give access to the Master's degree programme in Technical Medicine.

b. Other university Bachelor's degree (not including those listed in Subsection a)

The following applies to this category:

To date, no stated bridging programmes from other University's bachelor degree programmes have been established. An experimental or pilot bridging programme might apply, based on an individual customised programme, confirmed by the admission committee.

Such an individual bridging programme is completed when all its courses are passed with a final mark of 6 .0 or higher.

c. Higher professional education degree

not applicable.

d. Foreign degree

not applicable.

2. Access to the education of the Master's degree programme in Technical Medicine is open to individuals who have demonstrated to the admissions committee that they possess knowledge, insight and skills at the level of the Bachelor's degree mentioned Subsections 1a, or of a university Bachelor's degree, in addition to the further requirements mentioned in Subsection 1b.

Paragraph 3 - Content and composition of the programme

Article 5 - Goal of the programme (Art. 7.13 Section 2, Subsection c WHW) BoS right of approval

1. The programme is intended to educate students to earn a Master of Science degree in Technical Medicine, providing them with such a level of knowledge, insight and skills in the area of Technical Medicine, that graduates can fulfil positions on the labour market at the Master's level.
2. Graduates must also meet the specific final attainment levels for each degree programme defined in the appendix.

Article 6 - Track (Art. 7.13 Section 2, Subsection b WHW) BoStudies right of approval

The Master's degree programme has the following tracks, with the stated content in the appendix:

- Imaging and Intervention
- Sensing and Stimulation

Article 7 - Composition of the programme and degree audits

(Art. 7.13 Section 2, Subsections a, e and g of the WHW); BoS advisory powers (a); right of approval (e and g)

(Art. 7.13 Section 2, Subsection x WHW; FSCI right of approval, BoS advisory powers)

1. The programme includes the Master's degree audit, with a study load of 180 credits.
2. Students following the master's degree programme Technical Medicine simultaneous with another Master's degree programme at TU Delft must earn 60 additional unique credits in addition to the complete Master's degree programme of Technical Medicine of 180 credits.
3. Subjects that were part of the Bachelor's degree programme that qualified a student for admission to the Master's degree programme may not be included in the Master's degree programme. If a compulsory component has already been completed in the aforementioned Bachelor's degree programme, the Board of Examiners will designate an alternative subject. If an elective module of the degree programme has already been completed in the aforementioned Bachelor's degree programme, the student will select an alternative elective module.
4. The Master's degree audit is concluded with a final test or assignment. This test or assignment demonstrates that the student possesses and is able to apply the knowledge, insight and skills acquired in the degree programme.
5. The degree programme is described in the appendix, along with the subjects, including the study load, number of contact hours and form of examination of each subject, as well as the programming of the examination and the language.
6. The actual design of the education is elaborated in greater detail in the study guide.

Article 8 - Form of the programme (Art. (7.13 Section 2, Subsection i WHW)

FSC right of approval, BoS advisory powers

The programme is offered exclusively as full-time.

Article 9 - Language

FSC right of approval, BoS advisory powers

1. The teaching is in English, and the examinations are administered in English.
2. Clinical practice and medical skills classes, internships and classes that interact with patients, including related professions act examinations, take place in Dutch.
3. Should a student request permission to complete one or more parts of the examination or the degree audit in a language other than English, this will be subject to the stipulations of the Board of Examiners in this regard, as laid down in the Rules and Guidelines of the Board of Examiners.

Article 10 – Honours Programme

FSC right of approval, BoS advisory powers

1. Based on the criteria referred to in the Bachelor's Honours Programme, students will be selected and admitted to the Master's Honours Programme by the Honours Coordinator.
2. The Master's Honours Programme comprises at least 20 credits.
 - a. At least five credits must be completed in the institution-wide component of the Master's Honours Programme: the subject 'Critical Reflection on Technology', UD2010, and
 - b. At least 15 credits must be completed in the faculty component of the Master's Honours Programme, the composition of which (including its content and options) is described in the Honours Programme.

3. All students selected for participation in the Honours Programme must submit their options for the faculty component for approval to the Honours Coordinator.
4. The Board of Examiners will be responsible for assessing whether all the requirements of the Honours Programme have been met.
5. Any student who has successfully completed the Honours Programme will be awarded a certificate signed by the chair of the Board of Examiners and the Rector Magnificus.

Article 11 – (Compulsory) participation in the programme (Art. 7.13 Section 2, Subsection t WHW)
FSC right of approval, BoS advisory powers

1. All students are expected to participate actively in the subjects for which they are registered.
2. If necessary, there will be an obligation to participate in practical exercises, with a view to admission to the related examination, without prejudice to the authority of the Board of Examiners to grant an exemption from this obligation, with or without imposing a substitute requirement.
3. Any supplementary obligations are described by component in the course description.

Article 12 - Programme evaluation (Art. 7.13 Section 2, Subsection a1 WHW)
BoS right of approval

1. The Director of Studies is responsible for the evaluation of the education.
2. The manner in which the education in the programme is evaluated is documented in the Quality Assurance Manual of 3mE, which is submitted for advice to the Faculty Student Council and the Board of Studies.
3. The Director of Studies informs the Board of Studies concerning the outcomes of the evaluation, the intended adjustments based on these outcomes and the effects of the actual adjustments.

Paragraph 4 – Registration for and withdrawal from examinations

Article 13 - Registration for written examinations
FSC right of approval; BoS advisory powers

1. Registration to participate in a written examination is compulsory and is done by entering the requested data into Osiris no later than 14 calendar days before the examination. Students receive examination tickets by email as confirmation of their registration.
2. Students who have not registered within the term specified in Section 1 may request registration for that examination after this term until no later than three calendar days before the examination by entering the requested data into Osiris. The request will be honoured providing that places are available in the room or rooms where the examination is scheduled to take place. Students receive examination tickets by email as confirmation of their registration.
3. In the event of circumstances beyond a student's control resulting in the student being unable to register for an examination, the Board of Examiners may nevertheless permit the student to participate in the examination.
4. Students who have not registered for the examination and are therefore not included on the list of examinees can report on the day of the examination to the invigilator beginning 15 minutes before the start of the examination until the actual start. They will be admitted to the examination room, in the order that they reported to the invigilator, 30 minutes after the start of the examination, if sufficient places are available. The loss of 30 minutes of examination time cannot be compensated. Students who have been

granted late access to the examination will be added to the list of examinees. The student participates in the examination subject to the validation of entitlement to participate in the examination.

5. In the situation described in the previous section, if it is found that a student was not entitled to participate in the examination, the examination work will be deemed invalid, it will not be marked and it will not count towards a result. The student may subsequently submit an appeal to the Board of Examiners, accompanied by reasons, requesting that the examination work that has been deemed invalid be declared valid and to have it assessed. The Board of Examiners will approve the request only in case of extenuating circumstances.

Article 14 - Registration for other examinations

FSC right of approval; BoS advisory powers

1. Registration for participation in an examination other than a written examination is compulsory, and it is done in the manner and within the term that is stated in the study guide for the relevant examination.
2. In special cases, the Board of Examiners make exceptions to the registration term stated in Section 1, but only in favour of the student.
3. Students who have not registered on time will not be allowed to participate in the examination. The Board of Examiners can nevertheless admit a student to the examination, but only in case of special circumstances.
4. In the event of unauthorised participation in an examination, the Board of Examiners may declare the result invalid.

Article 15 - Withdrawal from examinations

FSC right of approval; BoS advisory powers

1. Students can withdraw from an examination through Osiris up to three calendar days before the examination.
2. Any student who has withdrawn from an examination should re-register on a subsequent occasion, in accordance with the provisions of Articles 13 and 14.

Paragraph 5 – Examinations

Article 16 - Form of the examinations and the manner of testing in general (Art. 7.13 Section 2, Subsections h and I WHW)

FSC right of approval, BoS advisory powers

1. Examinations (oral, written or otherwise) are taken in the manner described in the appendix.
2. The appendix contains a description of the moments at which and the numbers of times that examinations can be taken, along with their frequency, without prejudice to the provisions of these regulations concerning written and oral examinations.
3. A student may participate in an examination for a subject no more than twice in one academic year.
4. In special cases, the Board of Examiners will deviate from the provisions of this Article in favour of the student.

Article 17 – Times and number of written examinations (Art. 7.13 Section 2, Subsection j WHW)

FSC right of approval, BoS advisory powers

1. Two opportunities to take written examinations will be offered each academic year:
 - The first time; at the end of the teaching period in which the subject is taught, and
 - The second time; unless stated otherwise in the study guide, in the seventh week after the end of the teaching period or during the resit period in the months of July and August. National exams may deviate from these dates.

2. An annual timetable is issued detailing when written examinations may be taken, and it is published before the start of the relevant teaching period.
3. Contrary to the provisions in Section 1, the opportunity to take the written examination for a subject that is not taught in a certain academic year must be given at least once in that year.

Article 18 - Oral examinations (Art. 7.13 Section 2, Subsection n WHW)

FSC right of approval, BoS advisory powers

1. For oral examinations, no more than one student shall be tested at a time, unless determined otherwise by the examiner.
2. Oral examinations shall be public, except in special cases in which the Board of Examiners has decided otherwise, or if the student has filed an objection to the publicity of the examination.
3. The oral examination is administered by at least two examiners.

Article 19 - Determination and announcement of results (Art. 7.13 Section 2, Subsection o WHW)

FSC right of approval, BoS advisory powers

1. The examiner determines the result of a written examination as quickly as possible but by no later than 15 working days after the examination. The results of written interim examinations shall be announced no later than five working days before the next written interim examination.
2. The examiner determines the result of an oral examination immediately after it is administered and issues the student with a written statement of this result.
3. The examiner records the results of the assessment of a practical exercise as quickly as possible, but no later than 15 working days after the completion of the practical exercise at the designated time. In Osiris, the result will be dated on the date of completion of the practical exercise. With regard to a series of practical exercises in which the knowledge acquired in a previous practical exercise is important to the subsequent practical exercise, the result of the previous practical exercise shall be announced before the subsequent practical exercise. If this is not possible, the examiner shall schedule a timely discussion of the previous practical exercise.
4. The examiner is responsible for the registration and publication of the results in Osiris, with observance of the student's privacy. When the result of an examination is announced, the student is informed about the right of perusal as stipulated in Article 20 as well as about the possibility of appealing to the Examinations Appeals Board.
5. Contrary to the previous provisions, results achieved in the resit period in August shall be registered and published no later than the last working day of the week following the examination week in August.
6. If special circumstances prevent the examiner from registering the results on time, the examiner will report this to the Board of Examiners, accompanied by reasons, and notify the students and student administration as quickly as possible.

Article 20 - Right to inspect results (Art. 7.13 Section 2, Subsection p WHW)

FSC right of approval, BoS advisory powers

1. Upon request, students will have the right to inspect their assessed work during a period of at least 20 working days after the announcement of the results of a written examination or the assessment of a practical exercise. Students intending to appeal against the assessment of their work will be issued with a copy of the assessed work.
2. During the period mentioned in Section 1, all students who have participated in the examination can become acquainted with the questions and assignments of the relevant examination, as well as with the standards that form the basis of the assessment.

3. The examiner can determine that the inspection or cognizance intended in Sections 1 and 2 will take place at a pre-established place and at a pre-established time.
4. Students proving that they were unable to appear at such an established place and time because of circumstances outside of their control will be offered another possibility, if possible within the period mentioned in Section 1. The place and times mentioned in the first sentence will be made known in good time.

Article 21 - Discussion of the results of examinations (Art. 7.13 Section 2, Subsection q WHW)
FSC right of approval, BoS advisory powers

1. Students who have taken a written examination or who have received the assessment of a practical exercise can ask the relevant examiner for a discussion of the results during a period of 20 working days after the announcement of the results. The discussion will take place within a reasonable period, at a place and time to be determined by the examiner.
2. At the request of the student or at the initiative of the examiner, a discussion justifying the assessment will take place between the examiner and the student as soon as possible after the announcement of the result of an oral examination.
3. If a collective discussion is organised by the examiner, students may submit requests as referred to in the last section only if they have been present at the collective discussion and have motivated their requests, or if they were unable to be present at the collective discussion because of circumstances outside their control.
4. The Board of Examiners may allow deviation from the provisions in Sections 2 and 3.

Article 22 - Period of validity for examinations (Art. 7.13 Section 2, Subsection k, Art. 7.10, Section 4 WHW).
FS Council right of approval, BoS advisory powers

1. The period of validity of the results of an examination is indefinite. The dean can restrict the period of validity of a successfully completed examination only if the knowledge or insight that was examined has become outdated or if the skills that were examined have become outdated.
2. In cases involving a limited period of validity based on the first section, the period of validity shall be extended at least by the duration of the acknowledged delay in studies, based on the TU Delft Profiling Fund Scheme.
3. In individual cases involving special circumstances, the Board of Examiners can extend periods of validity that have been limited based on the first section or further extend periods of validity that have been extended based on the second section.
4. If a subject consists of interim examinations, the period of validity of the interim examination for which no credits are assigned shall be restricted to the academic year where the results have been obtained unless the validity of the component examination is linked to a period of time in the study guide or Implementation Regulations.
5. The result of an TM internship is valid for a three year period.
6. The result of an professions-act examination is valid for a two year period, until start of the clinical internships.

Article 23 - Exemption from an examination or obligation to participate in a practical exercise (Art. 7.13 Section 2, Subsection r WHW)
FSC right of approval, BoS advisory powers

1. After having obtained recommendations from the relevant examiner, the Board of Examiners may grant exemptions to students:
 - a. who have successfully completed an examination or degree audit in a system of higher education within or outside the Netherlands that corresponds to the examination for which the exemption has been requested in terms of content and level, or
 - b. who demonstrate that they possess sufficient knowledge and skills that have been acquired outside the system of higher education.

2. After having obtained recommendations from the relevant examiner, the Board of Examiners may grant exemption from the requirement to participate in a practical exercise with a view to admission to the related examination, possibly subject to alternative requirements.

Article 24 - Periods and frequency of degree audits (Art. 7.13 Section 2 WHW)
FSC right of approval, BoS advisory powers

In principle, the opportunity to take the Master's degree audit will be offered once each month. The dates for the meetings of the Board of Examiners shall be published before the beginning of the academic year.

Paragraph 6 – Studying with a disability

Article 25 - Adjustments to the benefit of students with disabilities or chronic illnesses
(Art. 7.13 Section 2, Subsection m WHW)
FSC right of approval, BoS advisory powers

1. Upon a written and substantiated request to that effect, students with disabilities or chronic illnesses may be eligible for adjustments in teaching and examinations. These adjustments are coordinated to the situations of the students as much as possible, but they may not alter the quality or level of difficulty of a subject or the study programme. Facilities to be provided may include modifications to the form or duration of examinations and/or practical exercises to suit individual situations or the provision of practical aids.
2. Requests as mentioned in Section 1 must be accompanied by a recent statement from a physician or psychologist or, in cases involving dyslexia, from a testing office registered with BIG, NIP or NVO. If possible, this statement should include an estimate of the extent to which the condition is impeding the student's academic progress.
3. Decisions concerning requests for adjustments relating to educational facilities are taken by the Dean or by the Director of Studies on the Dean's behalf. Decisions concerning adjustments relating to examinations are taken by the Board of Examiners.
4. Adjustments to examinations can involve the following or other matters:
 - form (e.g. replacing a written test with an oral test or vice versa, testing the required material in the form of interim examinations or granting exemptions to the attendance requirement);
 - timing (e.g. additional time for an examination, wider staggering of examinations across the examination period, granting exemptions to admission requirements or extending the period within which a component must be completed);
 - aids permitted during testing (e.g. English-Dutch dictionaries for students with dyslexia);
 - location (taking the examination in a separate, low-stimulus space).
5. Adjustments in educational facilities could include:
 - providing modified furniture in teaching and examination spaces;
 - providing special equipment (e.g. magnification or Braille equipment for students with visual impairments and blindness or loop systems and individual equipment for students with hearing impairments and deafness);
 - providing more accessible course material;
 - providing special computer facilities (e.g. speech-recognition or speech-synthesising software);
 - providing a rest area.

Paragraph 7 - Study support and (binding) recommendation on the continuation of studies

Article 26 – Study support and Monitoring of student progress (Art. 7.13 Section 2, Subsection u WHW)

FSC right of approval, BoS advisory powers

1. The Dean is responsible for providing individual study supervision to students registered for the degree programme, partly for their orientation towards potential study options within and outside the degree programme. He will also ensure that effective support and supervision is provided to students in making choices related to their studies.
2. The examination and study programme applying to each student is documented in Osiris.
3. The Student Administration is responsible for ensuring that all students are able to review and check their results in the Osiris student-information system.

Paragraph 8- Final provisions

Article 28 - Conflicts with the regulations

In the case of conflict between provisions in the study guide or other document concerning the relevant teaching and examination education and study programme and these regulations, the provisions of these regulations shall take precedence.

Article 29 - Amendments to the regulations

1. Amendments to these regulations are adopted separately by the Dean.
2. Amendments that are applicable to the current academic year will be made only if they would not reasonably damage the interests of students.
3. Amendments to these regulations may not lead to disadvantageous changes to any decisions that have been made with regard to individual students.

Article 30 - Transitional measures

1. If the composition of the degree programme undergoes substantive changes, transitional measures will be established and published through the Dean.
2. These transitional measures shall include at least the following:
 - a. an arrangement regarding exemptions that may be obtained based on examinations that have already been passed;
 - b. the period during which the transitional arrangement shall be valid.
3. Students shall follow the degree programme as it applied or applies during the first academic year of their enrolment, unless components of the programme are no longer offered. In such cases, students must transfer according to the applicable transitional measures. Deviations require the approval of the Board of Examiners. Before submitting a request to this end, the student must have first obtained recommendations from an academic counsellor.
4. If a subject within a degree programme is cancelled, four additional opportunities for taking the examination in this subject shall be offered after it has been taught for the last time: the examination at the end of the teaching of the subject, a resit in the same academic year and two resits in the following academic year.

Article 31 – Code of Conduct and Professional Practice

1. The rules for access to buildings and areas by the Executive Board of TU Delft, Leiden University or Erasmus University Rotterdam as well as by the Board of Directors of LUMC or Erasmus MC apply to students of Technical Medicine.
2. Also applicable are the codes of conduct adopted by the Executive Board of TU Delft, Leiden University or Erasmus University Rotterdam as well as by the Board of Directors of LUMC or Erasmus MC and, if applicable, supplementary established faculty and education specific rules of conduct.

3. The rules and guidelines regarding patient-related skills set by the LUMC and Erasmus MC apply to the student and can be found in the Dutch document 'Regels en richtlijnen m.b.t. patiëntgebonden vaardigheden' at <http://onderwijs.3me.tudelft.nl/reglementen>.
4. Unprofessional behaviour will be reported to the Professional Behaviour Committee (Commissie Professioneel Gedrag). This committee advises the Board of Examiners on remediation and compulsory guidance programmes that offer the student the opportunity to improve his/her professional behaviour. The Examination Board can impose additional requirements on the student. The Examination Board can also initiate a procedure that can lead to an Iudicium Abeundi ex article 7.42a of the WHW. Completion of the procedure Iudicium Abeundi can be found in the procedure description at <http://onderwijs.3me.tudelft.nl/reglementen>.
5. After successful completing of the Masters' Technical Medicine the students is able to register him of herself in the Dutch BIG-register for legal protected title(s) belonging to this discipline as healthcare professional. This law is regulated by the Dutch government. More information about the BIG-register can be found online, <https://english.bigregister.nl/>.

Article 32 - Announcement

1. The Dean is responsible for ensuring a suitable announcement of these regulations and any amendments to them.
2. In any case, the Teaching and Examination Regulations are to be posted on the programme's website.

Article 33 - Entry into force

These regulations shall enter into force on 1 September 2018.

Adopted by the Dean of the faculty on 20 August 2018

APPENDIX to Art. 3 of the TER (Language level)

Language level for individuals holding a higher professional education degree (c)

The Dutch language, through the successful completion of:

- The entire Dutch course of the: TU Delft Centre for Languages and Academic Skills
- The NT2-II certificate and the professional language course of the TU Delft Centre for Languages and Academic Skills

The English language, through the successful completion of one of the following tests:

- A TOEFL iBT (Test of English as a Foreign Language internet-Based Test) with an overall band score of at least 90, or
- an IELTS (academic version) with an overall Band score of at least 6.5, or
- a proof of completion of the 'Certificate of Proficiency in English' (CPE) or the 'Certificate in Advanced English' (CAE), both of the University of Cambridge

Certificates must have been completed successfully before the start of the bridging programme.

The following candidates shall be exempted from the requirement to pass an English language test:

- Nationals from the USA, UK, Ireland, Australia, New Zealand or Canada
- Applicants with a Dutch Pre-university (VWO) certificate
- Applicants who have obtained a higher professional education degree in an English-language programme.

Language level for individuals holding a foreign degree (d)

The Dutch language, through the successful completion of:

- The entire Dutch course of the: TU Delft Centre for Languages and Academic Skills
- The NT2-II certificate and the professional language course of the TU Delft Centre for Languages and Academic Skills

The English language, through the successful completion of one of the following tests:

- A TOEFL iBT (Test of English as a Foreign Language internet-Based Test) with an overall band score of at least 90 and a minimum score of 21 for each section, or
- an IELTS (academic version) with an overall Band score of at least 6.5 and a minimum score of 6.0 for each section, or
- a proof of completion of the 'Certificate of Proficiency in English' (CPE) or the 'Certificate in Advanced English' (CAE), both of the University of Cambridge

Certificates older than two years shall not be accepted.

The following candidates shall be exempted from the requirement to pass an English language test:

- Nationals from the USA, UK, Ireland, Australia, New Zealand or Canada
- Applicants who have obtained a Bachelor's degree in one of the countries mentioned.

APPENDIX to Article 5 of the TER (attainment levels)

The programme offers an integrated package of knowledge, skills and attitudes from three different fields: the technical domain, the medical domain and professional development. The graduates of the Master's programme Technical Medicine (TM) are, as Technical Physicians, able to perform the following roles:

TECHNICAL - MEDICAL EXPERT

- The TM professional as technical medical expert has a broad package of knowledge and skills from the medical as well as the technical domain, and applies these skills in the technical medical practice.
- The TM professional provides an independent contribution to the patient diagnosis and/or therapy. He collects and interprets data, makes a problem analysis, takes the appropriate clinical decisions and acts with respect to and awareness of his own limitations and abilities. The TM professional controls the desired effect and the quality of the chosen decision and its implementation.
- The TM professional provides care in accordance with the current professional standards, ethically justified, cost-conscious, and (where possible) evidence based.
- The TM professional communicates effectively with patients and their families, and with other professionals in the social and health care fields, orally, in writing and via information technology.

COMMUNICATOR

- As a communicator, the recently graduated TM professional establishes and maintains an effective relation with patients and their families and other professionals in social and health care. To offer high quality care, the TM professional has adequate (medical) communication skills.

COLLABORATOR

- The newly graduated TM professional as collaborator creates a collegial collaboration and works effectively as a team player in a multidisciplinary team; this serves to optimize patient care, education and/or research.
- The TM professional collaborates effectively with patients and their families and other professionals in social and health care. The TM professional discusses appropriate information with patients, negotiates, manages, consults and participates in inter-collegial assessments.

MANAGER

- The recently graduated TM professional as manager contributes to decisions about policy and the allocation of limited financial, material, and personal means. The TM professional independently aligns the tasks in the job and beyond – on a strategic, tactical and operational level. The TM professional prioritises, performs, and evaluates tasks in a team as needed.

SCHOLAR

- The recently graduated TM professional as scholar contributes scientifically to generation, assessment, structure and understanding of (new) knowledge and skills in health care. The TM professional facilitates learning of patients, staff / students and other healthcare professionals. The TM professional participates independently in scientifically based clinical decision making, acknowledges life-long learning and functions as a role model.

PROFESSIONAL

- The newly graduated TM professional as a professional practices an unique social role to bring society's health care and wellbeing to the highest level possible. The TM professional delivers the highest quality care with integrity, honesty and compassion according to the applicable medical and ethical standards in the Dutch and European legal framework. The TM professional strives continuously to practice medicine consistent with the obligations of a technical physician.

APPENDIX belonging to Articles 7 and 16 of the model

Programme (MSc)

YR1 - I&I;S&S obligatory

Coursecode	year of study	Language	TRACK	coursename	Test (T-x) and test name	EC	weight of tests	Way of testing	exam period	resit period	start of course	Course periods	Education (# wks)	Contains mandatory practicals	rounding of final grade	Entrance requirements, passed the following courses (or equivalent)	Course equivalent to
TM10002	TM - 1	EN	I&I;S&S	Python Programming	T1: Final grade (exam and assignments)	2,5	T1: 100%	Divers	3A	4A	3A	3A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	
TM10003	TM - 1	EN	I&I;S&S	BROK and Ethics	T1: Final grade (exam and assignments)	1,5	T1: 100%	Divers	4B	?	4B	4B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	
TM10004	TM - 1	EN	I&I;S&S	Medical Skills 1	T1: Final grade (exam and assignments)	3	T1: 100%	Divers	t.b.a.	t.b.a.	1A	1A	15	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	
TM10005	TM - 1	EN	I&I;S&S	Medical Skills 2	T1: Final grade (exam and assignments)	3	T1: 100%	Divers	t.b.a.	t.b.a.	3A	3A	15	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	
TM10006	TM - 1	EN	I&I;S&S	Patient Cases	T1: Final grade (exam and assignments)	7,5	T1: 100%	Divers	t.b.a.	t.b.a.	1A; 3B	1A;1B;2A; 3B;4A	25	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	
TM10001	TM - 1	EN	I&I;S&S	Healthcare Organisation and regulation	T1: Final grade (exam and assignments)	2,5	T1: 100%	Divers	2B	3B	2B	2B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide	

YR1 - I&I specific

Coursecode	year of study	Language	TRACK	coursename	Test (T-x) and test name	EC	weight of tests	Way of testing	exam period	resit period	start of course	Course periods	Education (# wks)	Contains mandatory practicals	rounding of final grade	Entrance requirements, passed the following courses (or equivalent)
TM11001	TM - 1	EN*	I&I	Advanced Image Acquisition	T1: Final grade (exam and assignments)	5	T1: 100%	divers	1A	2A	1A	1A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11002	TM - 1	EN*	I&I	Molecular Imaging and Therapy	T1: Final grade (exam and assignments)	5	T1: 100%	divers	1B	2B	1B	1B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11003	TM - 1	EN*	I&I	Radiation Protection	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	2A	t.b.a.	2A	2A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11004	TM - 1	EN*	I&I	Radiation Therapy	T1: Final grade (exam and assignments)	5	T1: 100%	divers	2B	3B	2B	2B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11005	TM - 1	EN*	I&I	Advanced Image Processing	T1: Final grade (exam and assignments)	5	T1: 100%	divers	3A	4A	3A	3A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11006	TM - 1	EN*	I&I	Image Guided Interventions	T1: Final grade (exam and assignments)	5	T1: 100%	divers	3B	4B	3B	3B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11007	TM - 1	EN*	I&I	Biomaterials and Issue Biomechanics	T1: Final grade (exam and assignments)	5	T1: 100%	report	4A	5AB	4A	4A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM11008	TM - 1	EN*	I&I	Computer assisted Reconstructive Surgery	T1: Final grade and assignments	5	T1: 100%	divers	4B	5AB	4B	4B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide

* Due to assessment rules of the National Exam

YR1 - S&S specific

Coursecode	year of study	Language	TRACK	course name	Test (T-x) and test name	EC	weight of tests	Way of testing	exam period	resit period	start of course	Course periods	Education (# wks)	Contains mandatory practicals	rounding of final grade	Entrance requirements, passed the following courses (or equivalent)
TM12001	TM - 1	EN*	S&S	Advanced Signal Acquisition	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	1A	2A	1A	1A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12002	TM - 1	EN*	S&S	Sensing of Neurophysiological Systems	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	1B	2B	1B	1B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12003	TM - 1	EN*	S&S	Electrostimulation of Neurophysiological Systems	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	2A	3A	2A	2A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12004	TM - 1	EN*	S&S	Drug Sensing and Delivery	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	2B	3B	2B	2B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12005	TM - 1	EN*	S&S	Advanced Signal Processing	T1: Final grade (exam and assignments)	5	T1: 100%	written exam	3A	4A	3A	3A	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12006	TM - 1	EN*	S&S	Extramural Sensing and Virtual Stimulation	T1: Final grade and assignments	5	T1: 100%	Divers	3B	4B	3B	3B	5	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide
TM12007	TM - 1	EN*	S&S	Sensing and Stimulation of Circulation and Ventilation: Acute and Chronic Care	T1: Final grade and assignments	10	T1: 100%	written exam	4A	5AB	4A	4AB	10	yes	Conform art.17 RGBE-TM	Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide

YR 2 & 3 - I&I;S&S obligatory

Coursecode	year of study	Language	TRACK	course name	Test (T-x) and test name	EC	weight of tests	Way of testing	exam period	resit period	start of course	Course periods	Education (# wks)	Contains mandatory practicals	rounding of final grade	Entrance requirements, passed the following courses (or equivalent)
TM20001	TM - 2	NL*	I&I;S&S	TM internship 1	T1: Final grade (internship and assignments)	15	T1: 100%	Divers	1B	n.a.	1A	1Ab	13	yes	Conform art.17 RGBE-TM	<ul style="list-style-type: none"> Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide 45 EC need to be obtained of the first year (Technical Medicine) including: All 5 patient cases, the BROK and ethics course and all medical skills courses of the first year. In addition to these admission requirements, other admission requirements can be made due to the specific nature of an internship. This will be reviewed on an individual base. * for more information see StudyGuide and text below
TM20002	TM - 2	NL*	I&I;S&S	TM internship 2	T1: Final grade (internship and assignments)	15	T1: 100%	Divers	2B	n.a.	2A	2AB	13	yes	Conform art.17 RGBE-TM	<ul style="list-style-type: none"> Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide completed the first year of Technical Medicine (60 EC) In addition to these admission requirements, other admission requirements can be made due to the specific nature of an internship. This will be reviewed on an individual base. * for more information see StudyGuide and text below
TM20003	TM - 2	NL*	I&I;S&S	TM internship 3	T1: Final grade (internship and assignments)	15	T1: 100%	Divers	3B	n.a.	3A	3AB	13	yes	Conform art.17 RGBE-TM	<ul style="list-style-type: none"> Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide completed and passed the first internship with (V) In addition to these admission requirements, other admission requirements can be made due to the specific nature of an internship. This will be reviewed on an individual base. * for more information see StudyGuide and text below
TM20004	TM - 2	NL*	I&I;S&S	TM internship 4	T1: Final grade (internship and assignments)	15	T1: 100%	Divers	4B	n.a.	4A	4AB	13	yes	Conform art.17 RGBE-TM	<ul style="list-style-type: none"> Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide completed and passed the second internship with (V) In addition to these admission requirements, other admission requirements can be made due to the specific nature of an internship. This will be reviewed on an individual

																	base. * for more information see StudyGuide and text below
?	TM - 3	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	t.b.d. in April 2019	year	academic year	t.b.d. in April 2019	Conform art.17 RGBE-TM		<ul style="list-style-type: none"> • Only for fulltime TM-Student. If applicable, exceptions and additions are mentioned in the Study guide • t.b.d. in April 2019

*TM Internships

1. Students who will start with their internships in the second year need to fulfil the following admission requirements:
 - a. TM Internship 1: 45 EC need to be obtained of the first year, including: All 5 patient cases, the BROK and ethics course and all medical skills courses of the first year.
 - b. TM Internship 2: 60 EC need to be obtained of the first year.
 - c. TM Internship 3: the first internship needs to be completed and passed.
 - d. TM Internship 4: the second internship needs to be completed and passed.
2. In addition to these admission requirements, other admission requirements can be made due to the specific nature of an internship. This will be reviewed on an individual base.
3. Only in special cases the education board may deviate from the admission requirements mentioned above.
4. When a student fails an TM- internship, the Board of Examiners determines the following course of action for assigning credits of the TM internship course.

Personal portfolio and assessments

1. A personal file of each student participating in the MSc-programme is available for the examination committee. This file contains all relevant information regarding the assessment of knowledge, skills and professional behaviour of the student and the other personal data relevant to the MSc- programme. University regulations concerning privacy and access rights apply to the personal files and archives.