

Addendum 20-09-2017

Due to administrative reasons all 'Patient cases' courses and results will be bundled into one coursecode.

Therefore the following changes will have affect:

- Page 4: a new overview of the curriculum MSc TM

	Period 1 Sep - Oct (1A)	Period 2 Oct - Nov (1B)	Period 3 Nov - Dec (2A)	Period 4 Dec - Jan (2B)	Period 5 Feb - Mar (3A)	Period 6 Mar - Apr (3B)	Period 7 Apr - May (4A)	Period 8 May - Jun (4B)
Sensing and Stimulation								
Track: S&S	Advanced Signal Acquisition TM12001 5 EC	Sensing of Neurophysiological systems TM12002 5 EC	Electrostimulation of neurophysiological systems TM12003 5 EC	Drug sensing and delivery TM12004 5 EC	Advanced Signal Processing TM12005 5 EC	Extramural sensing and virtual stimulation TM12006 5 EC	Sensing and Stimulation of circulation and ventilation: Acute and chronic care TM12007 10 EC	
	Patient cases TM10006 >	Patient cases TM10006 >	Patient cases TM10006 >	Healthcare organisation and regulation TM10001 2,5 EC	Advanced Programming TM10002 2,5 EC	Patient cases TM10006 >	Patient cases TM10006 7,5 EC	BROK & Ethics TM10003 1,5 EC
	Medical Skills 1 TM10004 3 EC					Medical Skills 2 TM10005 3 EC		
Imaging and Intervention								
Track: I&I	Advanced Image Acquisition TM11001 5 EC	Molecular Imaging and Therapy TM11002 5 EC	Radiation Protection TM11003 5 EC	Radiation Therapy TM11004 5 EC	Advanced Image Processing TM11005 5 EC	Image guided Interventions TM11006 5 EC	Biomaterials and tissue biomechanics TM11007 5 EC	Computer assisted reconstructive surgery TM11008 5 EC
	Patient cases TM10006 >	Patient cases TM10006 >	Patient cases TM10006 >	Healthcare organisation and regulation TM10001 2,5 EC	Advanced Programming TM10002 2,5 EC	Patient cases TM10006 >	Patient cases TM10006 7,5 EC	BROK & Ethics TM10003 1,5 EC
	Medical Skills 1 TM10004 3 EC					Medical Skills 2 TM10005 3 EC		

- Page 5/6: the following course codes will disappear and merged into one coursecode:

Coursecode TM I&I	Coursecode TM I&I	New coursecode
TM11011	TM12011	TM10006 Patientcases (7,5EC)
TM11012	TM12012	
TM11013	TM12013	
TM11014	TM12014	
TM11015	TM12015	

- The examination, will stay the same:

TM10006	Patient cases	S&S;I&I	7,5 EC	(V) Pass/Fail
T1	Final grade – skills and assignments		100	

IMPLEMENTATION REGULATIONS

BELONGING TO THE TEACHING AND EXAMINATION REGULATIONS
(see Article 7.13 of the Dutch Higher Education and Research Act)

2017-2018

**JOINT DEGREE
MASTER OF SCIENCE
TECHNICAL MEDICINE**

**DELFT UNIVERSITY OF TECHNOLOGY
LEIDEN UNIVERSITY
ERASMUS UNIVERSITY ROTTERDAM**

Chapter 1 – Compiling the study programme	3
Article 1 – Composition of the Master’s degree programme and the study load.....	3
Article 2 – Electives.....	7
Article 3 – Internships.....	7
Article 4 – Thesis.....	7
Article 5 - The frequencies, times and sequences of the exams.....	7
Article 6 – Deviate from the examination programme.....	7
Article 7 – The free study programme.....	8
Article 8 – The Honours Programme Master.....	8
Chapter 2 – Examinations, Internships and practicals	8
Article 9 – Practicals.....	8
Article 10 – Personal portfolio and assessments.....	8
Article 11 – Assessment of (cross)clinical internships.....	8
Chapter 3 – Transitional rules	8
Article 12 – Transitional rules current year.....	8
Article 13 – Transitional rules previous years.....	8
Chapter 4 – LEIDEN-DELFT-ROTTERDAM specifics	8
Article 14 – Code of conduct.....	8
Article 15 – Use of services Leiden-Delft-Rotterdam.....	9
Chapter 6 – Professional Practice	9
Article 16 - Denial of access to education and examinations regarding possible incapacity for professional practice....	9
Article 17 – Possibility of registration in the Dutch BIG-Register.....	9

Chapter 1 – Compiling the study programme

Article 1 – Composition of the Master's degree programme and the study load

1. The academic calendar format 2017-2018 is the calendar format used by Delft University of Technology, <http://studenten.tudelft.nl/en/students/faculty-specific/3me/education-3me/practical/3me-academic-calendar/>
2. The academic year is based on 8 periods of 5 weeks that end with an examination. Internships can deviate from both these periods and the academic calendar format.
3. The study load for the Master's degree programme is 180 credits. The Master's study programme can not include courses from a student's BSc programme.
4. Detailed information about the content of the programme can be found in the MSc Study Guide of the current academic year (www.studyguide.tudelft.nl).
5. The Master's Degree Programme has 2 tracks:
 - a. Imaging and Intervention (I&I)
 - b. Sensing and Stimulation (S&S)

6. Programme overview:

		2017-2018							
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8
		Sep - Oct (1,5)	Oct - Nov (1,5)	Nov - Dec (2,5)	Dec - Jan (1,5)	Feb - Mar (2,5)	Mar - Apr (1,5)	Apr - May (1,5)	May - Jun (1,5)
Sensing and Stimulation									
Year 1	Advanced Signal Acquisition	Sensing of Neurophysiological systems		Electrostimulation of neurophysiological systems	Drug sensing and delivery	Advanced Signal Processing	Extramural sensing and virtual stimulation	Sensing and Stimulation of circulation and ventilation: Acute and chronic care	
	TMI2001 5 EC	TMI2002 5 EC	TMI2003 5 EC	TMI2004 5 EC	TMI2005 5 EC	TMI2006 5 EC	TMI2007 5 EC		
	Patient case 1	Patient case 2	Patient case 3	Healthcare organisation and regulation	Advanced Programming	Patient case 4	Patient case 5	BROK & Ethics	
Track: S&S	TMI2011 1,5 EC	TMI2012 1,5 EC	TMI2013 1,5 EC	TMI0001 2,5 EC	TMI0002 2,5 EC	TMI2014 1,5 EC	TMI2015 1,5 EC	TMI0003 1,5 EC	
	Medical Skills 1	TMI0004 3 EC				Medical Skills 2	TMI0005 3 EC		
Imaging and Intervention									
Year 1	Advanced Image Acquisition	Molecular Imaging and Therapy	Radiation Protection	Radiation Therapy	Advanced Image Processing	Image guided interventions	Biomaterials and tissue biomechanics	Computer assisted reconstructive surgery	
	TMI1001 5 EC	TMI1002 5 EC	TMI1003 5 EC	TMI1004 5 EC	TMI1005 5 EC	TMI1006 5 EC	TMI1007 5 EC	TMI1008 5 EC	
	Patient case 1	Patient case 2	Patient case 3	Healthcare organisation and regulation	Advanced Programming	Patient case 4	Patient case 5	BROK & Ethics	
Track: I&I	TMI1011 1,5 EC	TMI1012 1,5 EC	TMI1013 1,5 EC	TMI0001 2,5 EC	TMI0002 2,5 EC	TMI1014 1,5 EC	TMI1015 1,5 EC	TMI0003 1,5 EC	
	Medical Skills 1	TMI0004 3 EC				Medical Skills 2	TMI0005 3 EC		
Year 2	Cross clinical internship	Internship 1		Internship 2		Internship 3			
	IM2—	13 EC		13 EC		13 EC		13 EC	
both tracks	Medical Skills 3	IM2— 8 EC							
Year 3	Literature review and Master Thesis								
	IM3—	60 EC							



7. Registration of examinations in OSIRIS
a. Year 1, all tracks.

coursecode	Course title	track	EC	%	min. grade	
TM10001	Healthcare organisation and regulation	S&S; I&I	2,5		6,0	
		T1	Final grade- Exam and assignments	2,5	100	exam/products
TM10002	Advanced programming	S&S; I&I	2,5		6,0	
		T1	Assignments	2,5	100	products
TM10003	Brok and Ethics	S&S; I&I	1,5		6,0	
		T1	Final grade- Exam and assignments	1,5	100	exam/products
TM10004	Medical Skills 1	S&S; I&I	3		V	
		T1	Final grade - skills and assessment	3	100	practicum/reports /product
TM10005	Medical Skills 2	S&S; I&I	3		V	
		T1	Final grade - skills and assessment	3	100	practicum/reports /product

coursecode	Course title	track	EC	%	min. grade	
TM11001	Advanced Image Acquisition	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11002	Molecular Imaging and Therapy	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11003	Radiation Protection	I&I	5		6,0	
		T1	Final grade- Exam	5	100	exam/product
TM11004	Radiation Therapy	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11005	Advanced Image Processing	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11006	Image Guided Interventions	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11007	Biomaterials and Tissue Biomechanics	I&I	5		6,0	
		T1	Assignments	5	100	products
TM11008	Computer Assisted Reconstructive Surgery	I&I	5		6,0	
		T1	Final grade- Exam and assignments	5	100	exam/product
TM11011	Patient case 1	I&I	1,5		V	
		T1	Final grade – skills and assignments	1,5	100	practicum
TM11012	Patient case 2	I&I	1,5		V	
		T1	Final grade – skills and assignments	1,5	100	practicum
TM11013	Patient case 3	I&I	1,5		V	
		T1	Final grade – skills and assignments	1,5	100	practicum
TM11014	Patient case 4	I&I	1,5		V	
		T1	Final grade – skills and assignments	1,5	100	practicum
TM11015	Patient case 5	I&I	1,5		V	
		T1	Final grade – skills and assignments	1,5	100	practicum

coursecode	Course title	track	EC	%	min. grade
TM12001	Advanced Signal Acquisition	S&S	5		6,0

			T1	Final grade- Exam and assignments	5	100	written	
TM12002	Sensing of Neurophysiological Signals	S&S			5			6,0
			T1	Final grade- Exam and assignments	5	100	written	
TM12003	Electrostimulation of Neurophysiological systems	S&S			5			6,0
			T1	Final grade- Exam and assignments	5	100	written	
TM12004	Drug Sensing and Delivery	S&S			5			6,0
			T1	Final grade- Exam and assignments	5	100	written	
TM12005	Advanced Signal Processing	S&S			5			6,0
			T1	Final grade- Exam and assignments	5	100	written	
TM12006	Extramural Sensing and Virtual Stimulation	S&S			5			6,0
			T1	Final grade- Exam and assignments	5	100	written	
TM12007	Sensing and Stimulation of Circulation and Ventilation: Acute and Chronic Care	S&S			10			6,0
			T1	Final grade- Exam and assignments	10	100	written	
TM12011	Patient case 1	S&S			1,5			V
			T1	Final grade – skills and assignments	1,5	100	practicum	
TM12012	Patient case 2	S&S			1,5			V
			T1	Final grade – skills and assignments	1,5	100	practicum	
TM12013	Patient case 3	S&S			1,5			V
			T1	Final grade – skills and assignments	1,5	100	practicum	
TM12014	Patient case 4	S&S			1,5			V
			T1	Final grade – skills and assignments	1,5	100	practicum	
TM12015	Patient case 5	S&S			1,5			V
			T1	Final grade – skills and assignments	1,5	100	practicum	

- b. Year 2, all tracks.
Available 1 September 2018.
 - c. Year 3, all tracks.
Available 1 September 2019.
8. Registering the tracks and compiling the examination programme;
- a. When students register for the MSc programme, they need to indicate their track and specialisation of interest.
 - b. At the start of the programme, students need to determine their examination programme in consultation with the relevant track coordinator. This is called the Student's progress review in Osiris.
 - c. No amendments can be made to the track core courses in the study programme. Any amendments made to the profile core courses and elective courses in the study programme should be approved by the relevant track coordinator and the Board of Examiners and then passed on to the Service Desk for processing.
 - d. Prior to the start of the Final Thesis, students need to present the title, a time schedule and the name(s) of the supervisor(s) of the Final Thesis to the Board of Examiners for approval.

Article 2 – Electives

Not applicable

Article 3 – Internships

1. Students who will start with their internships in the second year need to fulfil the following admission requirements:
 - 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.
 - 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.
2. Only in special cases the education board may deviate from the admission requirements mentioned above.
3. Further information and procedures will be available before August 2018.

Article 4 – Thesis

1. The final subject included in the examination programme is a master thesis
2. The graduation work consists of a thesis project, a thesis report and a thesis presentation. The thesis report includes a summary.
3. The project is subject to a strict planning and timetable; specific dates and deadlines need to be set for the kick off, mid-term and green light evaluations as well as for the final assessment and presentation of the project.
4. Before embarking on the thesis project the student must present the composition of the graduating committee for approval by the board of examiners.
5. The student is allowed to start the thesis project once when the first year master programme is completed or when not more than 6 credits may not have been completed yet.
6. If the student does not meet the criteria as indicated in paragraph 5, the chair of the graduating committee may give exceptional access to the master thesis. If parties fail to reach agreement, the board of examiners decides.
7. Any changes made to the approved graduating committee should be presented to the board of examiners.
8. Further stipulations regarding the thesis are included in the Rules and Guidelines laid down by the board of examiners.

Article 5 - The frequencies, times and sequences of the exams

1. The program has the intention of taking exams on working days.
2. Examination will be given twice a year. The first time during or as soon as possible after the education period in which the subject is offered, the second time in the recapture period,
3. Examinations organized by external parties may deviate. Communication will be done by the coordinator of the track and/or course.
4. Examinations for practical exercises, assignments and projects are offered once a year. If a student cannot participate due to special circumstances, the student should contact the course coordinator on individual base.

Article 6 – Deviate from the examination programme

1. The board of examiners may allow students to deviate from the examination programme.
2. Any deviations from the examination programme can have consequences for the possibility to obtain a BIG-register annotation.

Article 7 – The free study programme

1. Students are free to compile examination programmes that are rounded off with a final degree audit. Such a programme needs prior approval by the board of examiners and must consist entirely or mainly of subjects given in conjunction with the degree programme but it can be complemented with other subjects.
2. The preliminary approval referred to in paragraph 1 must be presented to the board of examiners by the student in the form of a justified request.

Article 8 – The Honours Programme Master

1. The Honours Programme Master (HPM) will allow individual students to excel and thus deliver a performance that is significant above the performance of average students. HPM students will be producers/directors of their own master program, rather than being a consumer of a program that already exists. In addition to the regular master program, an additional 20 ECTS needs to be earned and there is a very large freedom in how to obtain this extra 20 ECTS.
2. The HPM is intended for students that:
 - finished their bachelor programme within 4 years with an average grade of at least 7,5
 - have another reason to participate
3. For details regarding the content of the programme the application procedure, and the selection criteria one is referred to honourscommittee-3mE@tudelft.nl.

Chapter 2 – Examinations, Internships and practicals

Article 9 – Practical

1. Practical must be completed before students participate in the examination unless otherwise is indicated in the study guide pertaining to that particular subject.

Article 10 – 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.

Article 11 – Assessment of (cross)clinical internships

1. Information available about internship assessments will be published before September 2018.

Chapter 3 – Transitional rules

Article 12 – Transitional rules current year

Not applicable

Article 13 – Transitional rules previous years

Not applicable

Chapter 4 – LEIDEN-DELFT-ROTTERDAM specifics

Article 14 – Code of conduct

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](#)'.

Article 15 – Use of services Leiden-Delft-Rotterdam

1. Students are fully qualified students at all three institutions and can therefore use the educational facilities offered at the institution concerned as long as the campus card and certificate of registration can be shown.
2. Students may use the services of the postgraduate institution (TU Delft), considering the services of the Career and Counselling Services and the (faculty) Student Council. An overview of these services can be found at: - <http://studenten.tudelft.nl/informatie/academische-ondersteuning/>
3. Students only have the opportunity to claim TU Delft's offered stock options, more information can be found at <http://studyabroad.3me.tudelft.nl/>

Chapter 6 – Professional Practice

Article 16 - Denial of access to education and examinations regarding possible incapacity for professional practice

1. If, in the event of serious deficiencies in the field of professional conduct and / or actions, the student is potentially unfit to indicate a possible incapacity for the occupation as a technical medicine professional, the Iudicium Abeundi procedure will enter into force. (WHW Art. 7.42a).
2. Completion of the procedure Iudicium Abeundi can be found in the procedure description at <http://onderwijs.3me.tudelft.nl/reglementen>.

Article 17 – Possibility of registration in the Dutch BIG-Register

1. After successful completing of the Masters' Technical Medicine the student is able to register him or 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.
2. More information about the BIG-register can be found online, <https://english.bigregister.nl/>.

Established by the Dean of the Faculty of Technology 3mE (TU Delft), on behalf of the Dean of the Leiden University Medical Center and the Dean of Erasmus MC Rotterdam.