

Programme-Specific Examination and Study Regulations for the Consecutive Master Degree Programme

Medical Technology and Healthcare Business (EMMAH) (M.Sc.)

at Hamburg University of Applied Sciences (HAW)

**in Cooperation with Escola Superior de Tecnologia da
Saúde do Porto (IPP)**

**and Université de Lille II - Faculté Ingénierie et
Management de la Santé (ILIS)**

Valid from March 30th, 2017

On March 30th, 2017 the President of Hamburg University of Applied Sciences approved the following “Programme-Specific Examination and Study Regulations for the consecutive Master Degree Programme Medical Technology and Healthcare Business (EMMAH) (M.Sc.) at Hamburg University of Applied Sciences”, which were agreed by the Faculty Council on March 23rd, 2017. This approval is based on Section 108 paragraph 1 sentence 3 of the “Hamburgisches Hochschulgesetz” [Hamburg Higher Education Act] - HmbHG - of July 18th, 2001 (HmbGVBl. [Hamburg Law Gazette] p.171), as amended on July 8th, 2014 (HmbGVBl. p. 269). The agreement of the Faculty Council is based on Section 91 paragraph 2 sentence 1 HmbHG.

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I. Regulations for the overall concept of EMMAH

Section 1 General Provisions

(1) The examination and study program contains general provisions for the overall concept of the consecutive Master's degree course "Medical Technology and Healthcare Business (EMMAH)" and special regulations for the content and structure of the course at the HAW Hamburg. The general examination and study regulations for Bachelor's and Master's degree courses in engineering, natural sciences and health sciences as well as in computer science at the Hamburg University of Applied Sciences are valid for the examination and study services to be provided at HAW Hamburg, as amended.

(2) The course of study is undertaken in cooperation with two European universities:

- a) Escola Superior de Tecnologia da Saúde do Porto — short IPP
- b) Université de Lille II - Faculté Ingénierie et Management de la Santé — short ILIS.

Section 2 Academic degree and value of the study programme (Section 3 GESR-ESLC-BM)

(1) The joint academic degree "Master of Science (M.Sc.)" is awarded in cooperation with the partner universities.

(2) The academic degree is awarded if a total of 300 ECTS credit points (CP) is acquired.

Section 3 Course duration and structure of the programme (Section 29 GESR-ESLC-BM)

(1) The course for the degree of Master of Science amounts to 120 CPs; the standard course duration is two years (4 semesters).

(2) The Master thesis (30 CP) is undertaken in the fourth semester of the programme.

(3) The study programme is offered by the University of Applied Sciences in Hamburg, Germany, the Escola Superior de Tecnologia da Saúde do Porto in Porto, Portugal and the Université de Lille II, Faculté Ingénierie and Management de la Santé, Lille, France. Allocation of the modules to the participating universities is shown in the appendix.

- (4) The applicable legal and procedural rules of the partner universities apply for the modules and module examinations to be completed at the partner universities, as well as the semesters to be delivered in the second and third semesters (see appendix), including the Master thesis modules in the fourth semester at the partner universities.
- (5) The module manuals of the partner universities are published under the following links:
[EMMAH an der IPP](#)
[EMMAH an der ILIS](#)
- (6) If students sit elective subjects, these can be included in the certificate in an elective subject module. The grades of the elective subjects do not contribute to the overall grade (§ 7).

II. Content and structure of the modules undertaken at the HAW Hamburg

Section 4 Course content (Sections 8,9,10 GESR-ESLC-BM)

- (1) The course is composed of lectures, seminars, internships, project work and a Master thesis. The acquisition of key qualifications takes place within this framework.
- (2) The course offers 30 CP per semester. The modules undertaken at the HAW Hamburg (1st and 4th semesters) are listed in the appendix. The module manual in the version dated March 23rd, 2017 is available under the following link: https://www.haw-hamburg.de/fileadmin/user_upload/FakLS/04Studiengang/MA_EMMAH/Module_Handbook_EMMAH_15_03_2017_English.pdf

Section 5 Language (Section 10 GESR-ESLC-BM)

Classes and examinations are held in English only.

Section 6 Master thesis (Section 16 GESR-ESLC-BM)

- (1) General regulations for the Master thesis are established in the document GESR-ESLC-BM (§ 16).
- (2) The time allocated to the Master thesis is 6 months maximum.

(3) The Master thesis can only commence after 60 CPs have been accumulated over the first three semesters of the programme. Exceptions can only be approved by the examination committee.

Section 7 Scope and assessment of the Master examination (Section 21 GESR-ESLC-BM)

The Masters degree is graded based on the examination and study credits of the first three semesters and the Master thesis. The overall grade is calculated with 25% of the Master thesis grade and 75% of the remaining module grades weighted with the respective CPs.

Section 8 Recognition of Examinations

As a derogation of section 24 paragraph 1 sentence 1 and paragraph 2 of the GESR-ESLC-BM document in the version dated June 21st, 2012, examinations as well as periods of study at partner institutions are recognised unless there are significant differences between the acquired knowledge and skills and those to be acquired at the accepting university (Section 40 paragraph 1 HmbHG).

(2) An unfavourable decision shall be justified in writing and accompanied by legal explanation.

(3) Section 24, paragraph 5, sentence 4 of the GESR-ESLC-BM document as amended on June 21st, 2012 (exclusion of the master's thesis and limitation of the scope) shall not apply.

Section 9 Process and certificate

The certificate is awarded when all the examinations and module performances have been completed and a master's degree with the grade of at least "sufficient" has been achieved. It is signed by the Chairman of the Examination Committee.

Section 9 Entry into force

(1) These Examination and Study Regulations shall become effective on the day of their publication in the Hamburg University of Applied Sciences Gazette (Hochschulanzeiger). They shall apply to all students who have begun their course of study as of the winter semester 2017/18.

Hamburg University of Applied Sciences

Hamburg, March 30th, 2017

Annex 1

1. Semester: Modules at Hamburg University of Applied Sciences

No	Module	CP	Pla ce *	Sem ester **	Course	Co urs e Ty pe	SH W	Ex am ina tion Ty pe	Examina tion Form	Gr ou p Siz e
1	Project Seminar in Engineering	5	H	W	Project Seminar in Engineering	PJ	4	?	K, H, R, M	15
2	Data Acquisition and Processing	5	H	W	Data Acquisition	Se U	2	PL	K, H, R; M	20
			H	W	Data Acquisition, Practical Work	Se U	2			20
3	Advanced Biosignal Processing	5	H	W	Biosignal Processing	Se U	2	PL	K, H, R, M	20
			H	W	Advanced Filtering Techniques for Biosignals	Se U	2			
4	Modelling Medical Systems	5	H	W	Modelling Methods	Se U	2	PL	K, H, R, M	20
			H	W	Modelling Tools, Practical Work	Se U	2			
5	Simulation and Virtual Reality in Medicine	5	H	W	Simulation and Virtual Reality in Medicine	Se U	2	PL	H, K, R, M	20
			H	W	Simulation and Virtual Reality in Medicine, Practical Work (SimLab)	Se U	2			20
6	HTA /Regulatory Affairs	5	H	W	Regulatory Affairs	Se U	2	PL	H,K, R	20
			H	W	HTA	Se U	2			20
Gesamt		30					24			

2. Semester: Modules at Escola Superior de Tecnologia da Saúde do Porto

No	Module	CP	Place*	Semester**	Course	Course Type	SHW	Examination Type	Examination Form	Group Size
1	Project Seminar in Health	5	P	S	Project Seminar in Health	PJ	4	?	K, H, R, M	15
2	Medical Imaging Technologies and Devices	5	P	S	Medical Imaging Technologies and Devices	SeU	4	PL	K, H, R; M	20
3	Medical Measurement Techniques	5	P	S	Medical Measurement Techniques	SeU	4	PL	K, H, R, M	20
4	Applied Clinical Imaging	5	P	S	Applied Clinical Imaging	SeU	4	PL	K, H, R, M	20
5	Applied Clinical Signals	5	P	S	Applied Clinical Signals	SeU	4	PL	H, K, R, M	20
6	Human-Technology Interaction on Clinical Environment	5	P	S	Human-Technology Interaction on Clinical Environment	SeU	4	PL	H, K, R	20
Gesamt		30					24			

3. Semester: Modules at Université de Lille II - Faculté Ingénierie et Management de la Santé

No	Module	CP	Place *	Semester **	Course	Course Type	SHW	Examination Type	Examination Form	Group Size
1	Project Seminar in Healthcare Business	5	L	W	Project Seminar in Healthcare Business	PJ	4	?	K, H, R, M	15
2	Principles of Marketing in the Healthcare Business	5	L	W	Principles of Marketing in the Healthcare Business	SeU	4	PL	K, H, R; M	20
3	International Healthcare Marketing and Business	5	L	W	International Healthcare Marketing and Business	SeU	4	PL	K, H, R, M	20
4	Marketing for Innovative Medical Technology	5	L	W	Marketing for Innovative Medical Technology	SeU	4	PL	K, H, R, M	20
5	Legal and regulatory considerations in the HealthCare Industry	5	L	W	Legal and regulatory considerations in the HealthCare Industry	SeU	4	PL	H, K, R, M	20
6	Industrial Purchasing, Outsourcing in the Healthcare Industry	5	L	W	Industrial Purchasing, Outsourcing in the Healthcare Industry	SeU	4	PL	H, K, R	20
	Gesamt	30					24			

4. Semester: Modules at Hamburg University of Applied Sciences

No	Module	CP	Place*	Semester**	Course	Course Type	SHW	Examination Type	Examination Form	Group Size
	Master Thesis	30	3	WiSo	Master Thesis			PL	MT	
	Gesamt	30								

Legend:

SHW = Hours per week attendance during the semester

Course type: ST = Seminar, PJ = Project

Examination type: SL = Test (not graded), PL = Exam (graded), PVL = Advanced test (not graded)

Examination form: K = written exam, M = oral exam / presentation, R = seminar paper, H = homework, P = Project documentation/poster

* Explanation for column "Place": The courses are offered either in Hamburg at Hamburg University of Applied Sciences (H), in Porto at Escola Superior de Tecnologia da Saúde do Porto (P) or in Lille at Université de Lille II - Faculté Ingénierie et Management de la Santé (L).

** Explanation for the column "Semester": Courses are offered once a year, either in winter semester or in summer semester (W or S).