Discipline-Specific Study and Examination Regulations for the Master's Program in Digital Health at the University of Potsdam

Dated December 13, 2017

In the first amended version of the Discipline-Specific Study and Examination Regulations for the Master's Program in Digital Health at the University of Potsdam

Dated February 10, 2021

- non-official consolidated version[1]-

The Faculty Council of the Digital Engineering Faculty at the University of Potsdam has approved on February 10, 2021, the following statute on the basis of §§ 19 para. 1, 22 para. 1-3, 31 in conjunction with § 72 para. 2 no. 1 of the Brandenburg Higher Education Act (BbgHG) of April 28, 2014 (Law and Ordinance Gazette [GVBl.] I/14, [no. 18]), last amended by the Act of September 23, 2020 (GVBl. I/20, [no. 26]) in conjunction with the Ordinance on the Design of Examination Regulations to Guarantee the Equivalency of Studies, Examinations, and Degrees (University Examination Ordinance - HSPV) of March 4, 2015 (GVBl. II/15, [no. 12]), amended by the ordinance of July 7, 2020 (GVBl.II/20, [no. 58]), and the Ordinance on the Accreditation of Studies (StudAkkV) of October 28, 2019 (GVBl. II/19, [no. 90]) and with § 21 para. 2 no. 1 of the Basic Constitution of the University of Potsdam (GrundO) of December 17, 2009 (Bulletin UP no. 4/2010, p. 60) in the Fifth Amended Version of the Basic Constitution of the University of Potsdam (GrundO) of February 21, 2018 (Bulletin UP no. 11/2018, p. 634) and § 1 para. 2 of the new version of the General Study and Examination Regulations for Bachelor and Master's Degree Programs at the University of Potsdam Not Related to Teacher Education (BAMA-O) of January 30, 2013 (Bulletin UP no. 3/2013, p. 35), last amended on December 16, 2020 (Bulletin UP no. 2/2021, p.

[1] This translation is only provided for information purposes. Only the German-language original of these regulations is legally binding.

Content

§ 1 Scope

(1) These regulations apply to the *Digital Health* Master's program of the Digital Engineering Faculty at the University of Potsdam. As discipline-specific regulations, they supplement the revised version of the General Study and Examination Regulations for Bachelor's and Master's Programs (Non-Teaching-Oriented) at the University of Potsdam (BAMA-O).

(2) In the event of a conflict between these regulations and the BAMA-O, the provisions of the BAMA-O shall take precedence over these regulations.

§ 2 Degree

After acquiring the necessary credits and upon presentation of the graduation requirements, the University of Potsdam awards the degree of Master of Science (abbr. "M.Sc.") through the Digital Engineering Faculty.

§ 3 Goal of the Study Program and Professional Relevance

(1) The consecutive Master's program is a science- and research-based study program that imparts in-depth scientific fundamentals, advanced expertise and skills in the field of digital health, as well as specialized methodological skills and social and self-competence.

(2) Graduates of the Master's program possess a wide range of skills and knowledge in theories, concepts, methods, techniques and procedures for the analysis and interpretation, and design and implementation of complex digital systems, networked infrastructures and interoperable

procedures for many domains of medicine, medical research and the healthcare sector, as well as related management and leadership responsibilities. Additionally, they acquire in-depth expert knowledge in the selected specialization areas in digital health. They are able to act responsibly in a team in the planning, executing, evaluating, and directing of the work involved and can effectively communicate the results obtained. They are able to select and apply appropriate solutions and strategies to ethical and legal issues.
Moreover, they are trained in the handling of confidential health data, the protection of privacy and the application of appropriate methods to protect personal and personally identifiable information. They possess strong communication skills in English as a foreign language and are thus able to interact professionally with experts from various fields of healthcare, health management and health research.

(3) The Master's program also provides students with the in-depth knowledge and skills necessary for scientific work, scientifically sound judgement, critical reflection of specialized knowledge and for responsible conduct in the field. Further key skills are provided in the areas of method competency and social and self-competency. In particular, graduates acquire key skills that are required for the analysis and conception of complex digital systems for digital health and their applications, as well as for the assessment of related ethical and legal issues.

(4) Graduates of the Master's program earn a further professional qualification. They are in a position to assume leadership and management positions, particularly where emphasis is placed on the analysis, interpretation, design and construction of complex digital systems, networked infrastructures and interoperable applications in healthcare, health management, and health research (e.g. as an IT/digital health expert in healthcare settings [hospitals, medical offices, government agencies, health insurance agencies, etc.] in health research and management, as an IT consultant in healthcare or as digital health development engineer, IT entrepreneur, etc.). They are also able to carry out independent research and development work, to set up companies with an IT focus or to achieve a subsequent qualification by entering the PhD program.

§ 4 Duration and Structure of the Study Program

(1) The Master's program in *Digital Health* is offered as a single-subject program at the University of Potsdam with 120 credit points. The standard period of study of the Master's program is four semesters.

(2) The Master's program is divided into the following modules:

Bridge Modules	12 CP
Compulsory Modules	24 CP
Elective Modules (Specialization Area)	36 CP
Elective Module (Professional Skills)	6 CP
Digital Health Project Lab (Project)	12 CP
Master's Thesis	30 CP
Total	**120 CP**

§ 5 Academic Coordination: Performance Evaluation

An office of Academic Coordination has been set up for this degree program at the Digital Engineering Faculty, which performs the tasks assigned to the Student Administration Center by the BAMA-O.

§ 6 Modules of the Master's Program

(1) The Master's program in *Digital Health* is made up of the following components:

Identifier	*Title*	*CP*
I Compulsory Modules (36 CP)		
HPI-DH-HS	Health Systems and Sciences for Digital Health	6
HPI-DH-SW	Software Architectures for Digital Health	6
HPI-DH-EC	Ethics, Law and Compliance for Digital Health	6
HPI-DH-DS	Data Science for Digital Health	6
HPI-DH-PL	Digital Health Project Lab	12
II Elective Modules		
1. Specialization Areas (36 CP) *A total of <u>two</u> areas of specialization are to be completed (3 x 6 CP each consisting of Concepts and Methods (C), Technologies and Tools (T) and Specialization (S)).*		
SCAD: Scalable Computing and Algorithms for Digital Health		
HPI-SCAD-C	SCAD – Concepts and Methods	6
HPI-SCAD-T	SCAD – Technologies and Tools	6

HPI-SCAD-S	SCAD – Specialization	6
DICR: Digitalization of Clinical and Research Processes		
HPI-DICR-C	DICR – Concepts and Methods	6
HPI-DICR-T	DICR – Technologies and Tools	6
HPI-DICR-S	DICR – Specialization	6
APAD: Acquisition, Processing and Analysis of Health Data		
HPI-APAD-C	APAD – Concepts and Methods	6
HPI-APAD-T	APAD – Technologies and Tools	6
HPI-APAD-S	APAD – Specialization	6
HDAS: Health Data Security		
HPI-HDAS-C	HDAS – Concepts and Methods	6
HPI-HDAS-T	HDAS – Technologies and Tools	6
HPI-HDAS-S	HDAS – Specialization	6
2. Additional Elective Module (6 CP) *One module is to be chosen from the following HPI-SSK modules.*		
HPI-PSK-CO	Communication Skills	6
HPI-PSKMLE	Management and Leadership	6
HPI-PSKDTB	Design Thinking Basic	6
HPI-PSKDTA	Design Thinking Advanced	6
III Bridge Modules, or additional Elective Modules (12 CP)		
The Examining Board may require students entering the master's program to take one or two of the following bridge modules (max. 12 CP) (cf. Admission Regulations DH§ 5) to supplement missing skills, depending on the student's previous education. Particulars are determined by the Admission Regulations.		
HPI-DHBM-IT	Principles of IT Systems	6
HPI-DHBM-PR	Fundamentals of Programming	6
HPI-DHBM-PM	Introduction to Principles in Medicine	6
HPI-DHBM-HS	Fundamentals of Healthcare Systems	6
Insofar as the Examining Board has not expressed a specific obligation regarding the completion of bridge modules, the student must complete elective modules II. to the extent of up to 12 CP — depending upon the total number of bridge modules required for completion. Modules may not come from the chosen specialization areas.		
IV Master's Thesis (30 CP)		

(2) English is the language of instruction in the *Digital Health* Master's program.

(3) Further information on the modules named in para. 1 can be found in Appendix 1: Module Catalogue of this statute.

(4) A model study plan for these regulations is found in Appendix 2.

§ 7 Master's Thesis

(1) Once the student has earned 72 credit points, the student is entitled to the immediate assignment of a topic for the Master's thesis.

(2) The Master's thesis, including the defense, consists of 30 credit points.

§ 8 Non-Binding Examination ("Freiversuche")

Students are allowed two non-binding examination attempts in the *Digital Health* Master's program, with the exception of the Digital Health Project Lab module.

§ 9 Entry into Effect

(1) These regulations take effect on the day following their publication in the Official Announcements of the University of Potsdam (Bulletin UP).

(2) These regulations apply to all students who are enrolled in the Master program in Digital Health at the University of Potsdam after their entry into effect.

Appendix 1: Module Catalogue

The descriptions of the modules of the study program listed in § 6 para. 1 as well as in the following table are regulated by the statutes for the module catalog of the Digital Engineering Faculty for Bachelor's and Master's degree programs at the University of Potsdam (MK DEF). Supplementary regulations or deviations from the regulations of the MK DEF are also specified in the following table.

Module ID	Module Title	CP	Type	Prerequisite
HPI-DHBM-IT	Principles of IT Systems	6	CM	cf. MK DEF
HPI-DHBM-PR	Fundamentals of Programming	6	CM	cf. MK DEF
HPI-DHBM-PM	Introduction to Principles in Medicine	6	CM	cf. MK DEF
HPI-DHBM-HS	Fundamentals of Healthcare Systems	6	CM	cf. MK DEF
HPI-DH-HS	Health Systems and Sciences for Digital Health	6	CM	cf. MK DEF
HPI-DH-SW	Software Architectures for Digital Health	6	CM	cf. MK DEF
HPI-DH-EC	Ethics, Law and Compliance for Digital Health	6	CM	cf. MK DEF
HPI-DH-DS	Data Science for Digital Health	6	CM	cf. MK DEF
HPI-DH-PL	Digital Health Project Lab	12	CM	cf. MK DEF
HPI-SCAD-C	Scalable Computing and Algorithms for Digital Health – Concepts and Methods	6	EM	cf. MK DEF
HPI-SCAD-T	Scalable Computing and Algorithms for Digital Health – Technologies and Tools	6	EM	cf. MK DEF
HPI-SCAD-S	Scalable Computing and Algorithms for Digital Health – Specialization	6	EM	cf. MK DEF
HPI-DICR-C	Digitalization of Clinical and Research Processes – Concepts and Methods	6	EM	cf. MK DEF
HPI-DICR-T	Digitalization of Clinical and Research Processes – Technologies and Tools	6	EM	cf. MK DEF
HPI-DICR-S	Digitalization of Clinical and Research Processes – Specialization	6	EM	cf. MK DEF
HPI-APAD-C	Acquisition, Processing and Analysis of Health Data – Concepts and Methods	6	EM	cf. MK DEF
HPI-APAD-T	Acquisition, Processing and Analysis of Health Data – Technologies and Tools	6	EM	cf. MK DEF
HPI-APAD-S	Acquisition, Processing and Analysis of Health Data – Specialization	6	EM	cf. MK DEF
HPI-HDAS-C	Health Data Security – Concepts and Methods	6	EM	cf. MK DEF
HPI-HDAS-T	Health Data Security – Technologies and Tools	6	EM	cf. MK DEF
HPI-HDAS-S	Health Data Security – Specialization	6	EM	cf. MK DEF
HPI-PSK-CO	Professional Skills: Communication Skills	6	EM	cf. MK DEF
HPI-PSKMLE	Professional Skills: Management and Leadership	6	EM	cf. MK DEF
HPI-PSKDTB	Professional Skills: Design Thinking Basic	6	EM	cf. MK DEF
HPI-PSKDTA	Professional Skills: Design Thinking Advanced	6	EM	cf. MK DEF

CP = Number of credit points, CM = Compulsory module, EM = Elective module

Appendix 2: Model Study Plans

a) Model study plan for the Master's program in Digital Health with an obligation to § 5 Admissions Regulations for DH

<table>
<tr><th colspan="2">1 Semester</th><th>2 Semester</th><th>3 Semester</th><th>4 Semester</th></tr>
<tr><td>HPI-DHBM-IT
(6 CP)</td><td>HPI-DHBM-PM
(6 CP)</td><td>HPI-VT1-C
(6 CP)</td><td rowspan="2">HPI-DH-PL
(12 CP)</td><td rowspan="4">HPI-MA
(30 CP)</td></tr>
<tr><td>HPI-DHBM-PR
(6 CP)</td><td>HPI-DHBM-HS
(6 CP)</td><td>HPI-VT2-C
(6 CP)</td></tr>
<tr><td colspan="2">HPI-DH-HS
(6 CP)</td><td>HPI-VT1-T
(6 CP)</td><td>HPI-VT1-S
(6 CP)</td></tr>
<tr><td colspan="2">HPI-DH-SW
(6 CP)</td><td>HPI-VT2-T
(6 CP)</td><td>HPI-VT2-S
(6 CP)</td></tr>
<tr><td colspan="2">HPI-DH-DS
(6 CP)</td><td>HPI-DH-EC
(6 CP)</td><td>HPI-PSK1
(6 CP)</td></tr>
</table>

b) Model study plan for the Master's program in Digital Health without an obligation to § 5 Admissions Regulations DH

<table>
<tr><th>1 Semester</th><th>2 Semester</th><th>3 Semester</th><th>4 Semester</th></tr>
<tr><td>HPI- VT3-C
(6 CP)</td><td>HPI-VT1-C
(6 CP)</td><td rowspan="2">HPI-DH-PL
(12 CP)</td><td rowspan="5">HPI-MA
(30 CP)</td></tr>
<tr><td>HPI- VT3-T
(6 LP)</td><td>HPI-VT2-C
(6 CP)</td></tr>
<tr><td>HPI-DH-HS
(6 CP)</td><td>HPI-VT1-T
(6 CP)</td><td>HPI-VT1-S
(6 CP)</td></tr>
<tr><td>HPI-DH-SW
(6 CP)</td><td>HPI-VT2-T
(6 CP)</td><td>HPI-VT2-S
(6 CP)</td></tr>
<tr><td>HPI-DH-DS
(6 CP)</td><td>HPI-DH-EC
(6 CP)</td><td>HPI-PSK1
(6 CP)</td></tr>
</table>

Notes:

- The model study plans use the module abbreviation from § 6. In addition, HPI-VT1 indicates the first selected area of specialization and HPI-VT2 the second. For example, if the first specialization area is HPI-SCAD, HPI-VT1-C indicates the module HPI-SCAD-C.

- HPI-PSK1 indicates the chosen compulsory elective module from the area of Professional Skills.