This is an unofficial version, for reference only, of the Studiengangsspezifische Prüfungs- und Studienordnung des Masterstudiengangs Process Engineering (M.Sc.) an der Hochschule für Angewandte Wissenschaften Hamburg (Hamburg University of Applied Sciences) issued on 23 May 2019 (Hochschulanzeiger no. 141/2019, p. 8). The amendment of 2 December 2021 (Hochschulanzeiger no. 177/2021, p. 22) has been incorporated into this version. The text of the Regulations and of the Amendment as published in the HAW Hamburg official gazette (Hochschulanzeiger) remains the sole definitive and legally binding version of these Regulations.

Course-specific Examination and Study Regulations for the Masters Programme in Process Engineering (M.Sc.) at the Hamburg University of Applied Sciences (Hochschule für Angewandte Wissenschaften Hamburg)

dated 23rd May 2019

amended 2 December 2021

The following version of the "Course-specific Study and Examination Regulations for the Masters Programme in Process Engineering (M.Sc.) at the University of Applied Sciences in Hamburg" was approved by the Executive Board of the Hamburg University of Applied Sciences on 23rd May 2019 pursuant to §108(1) sentence 3 of the Hamburg Higher Education Act of 18th July 2001 (*Hamburgischer Hochschulgesetz* ("HmbHG")) - p.171 HmbGVBl - as last amended on 29th May 2018 (HmbGVBl p.200). The regulations were resolved on 18th April 2019 by the Faculty Board of the Faculty of Life Sciences pursuant to §91(2) no. 1 HmbHG following proposal by the Board of the Department of Process Engineering on 3rd April 2019 pursuant to §16(4) no. 2 and §14(3) no. 2 of the Constitution of the University of Applied Sciences in Hamburg in conjunction with § 92(1) sentence 2 no. 2 and § 92(5) HmbHG.

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Preamble

The Master of Science degree course in Process Engineering at HAW Hamburg is aimed at graduates of [Bachelor's] degree courses in process and chemical engineering and related engineering degree courses. It qualifies graduates for a career in an industrial or academic setting in any area of process engineering. Its graduates meet the formal and academic requirements for doctoral study.

The degree course enables students to design and optimise processes and plan, construct, operate and maintain process plants. During the course, students attain the capacity to define and conduct experiments, select, process and interpret data, and run numerical simulations. They learn to assess the impact of these systems on the environment and on climate change, taking technical, social, economic and ecological considerations into account. Further, they gain skills for systematic reflection on the impact of engineering activities beyond the engineering field and develop the capacity to take these impacts into consideration in their work in awareness of their responsibility as professionals. They additionally attain the ability to familiarise themselves rapidly, methodically and systematically with topics they have not encountered previously.

§ 1 General Provisions

These Examination and Study Regulations govern the Masters Programme in Process Engineering (M.Sc.). These regulations are supplemented by the "Allgemeine Prüfungs- und Studienordnung für Bachelor- und Masterstudiengänge der Ingenieur-, Natur- und Gesundheitswissenschaften sowie der Informatik an der Hochschule für Angewandte Wissenschaften Hamburg" ("APSO-INGI")[1] in each of their the applicable versions.

§ 2 Academic Title and Course Value (§ 3 APSO-INGI)

(1) On completion of the course, the University awards the academic title, "Master of Science (M.Sc.)".

(2) The academic title is awarded upon certification of a total of 300 ECTS credit points ("CP"). The 300 CP comprise the credit points from a prior course of study and the content of this Master's programme.

§ 3 Standard Duration and Structure of the Course (§§ 2, 9 APSO-INGI)

The master's programme comprises 90 CP. The standard duration of the course is one and a half academic years (3 semesters). The third semester is comprised of the master's thesis.

§ 4 Course Content and Credit Points (CP) (§§ 8, 9, 10 APSO-INGI)

(1) Each credit point corresponds to a workload of 30 hours.

(2) At least 60 CP must be acquired in the first academic year. The master's thesis in the third semester comprises 30 CP. The modular structure is shown in Appendix 1 (Table of Modules). The Module Compendium in the current version applicable published on the HAW Hamburg website in the section "regulations for study and teaching" (*"Ordnungen in Studium und Lehre")* applies.

(3) If different forms of examination are listed in the Table of Modules in respect of individual modules, the examiner will make a binding decision about the relevant form of examination at the beginning of the course.

[1] "General Examination and Study Regulations for Bachelors' and Masters' Degree Programmes in Engineering, Science, Life Science and Computer Science at the University of Applied Sciences in Hamburg"

(4) Students have the opportunity to compile up to two modules from the range of masters modules offered by the Hamburg University of Applied Sciences or by other German or foreign universities. It is not possible to exchange the "master's thesis" module or any compulsory modules. Exchanged modules must have at least the same number of credit points as the modules to be replaced; credit can only be given for the amount of credit points applicable to the modules exchanged. The courses combined in exchanged modules must contain at least one examination. Module grades for exchanged modules are produced by weighting examination results for courses according to CP or (where CP is not identified) weekly semester hours. After consent is obtained from the academic advisor, the choice requires approval by the examination committee and the responsible office of the other department or university. Prior examination attempts in modules to be exchanged will be transferred to the new combination.

§ 5 Language (§ 10 APSO-INGI)

Courses and examinations are held in the English language. For certain modules, it is possible to specify German as the language in which courses and examinations are held. These exceptions are specified in the module descriptions contained in the module compendium. If these are not optional modules, it will be ensured that the modules offered in German are also offered in English each year, so that it is also possible to complete the course in English within the standard duration of study. Modules in which courses and examinations are held in German may also be chosen as exchange modules in accordance with § 4 (4).

§ 6 Master's Thesis (§ 16 APSO-INGI)

(1) The period for completion of the master's thesis is 6 months.
(2) The master's thesis may only be commenced when 45 CP have been earned from the first academic year. Exceptions hereto may be approved by the examination committee.

§ 7 Scope and Assessment of the Master's Examination, Registration and De-registration Periods (§§ 18, 21 APSO-INGI)

(1) In addition to the completion of a master's thesis which is graded at least "adequate", successful graduation is conditional upon the successful completion of modules comprising 60 CP from the modules listed in Appendix 1 (Table of Modules). All modules listed as compulsory in Appendix 1 must have been successfully completed and account must be taken of the stipulation relating to optional compulsory modules also mentioned in Appendix 1.
(2) 35 percent of the overall grade is made up from the master's thesis and 65 percent of the overall grade is made up from the average mark of the remaining modules weighted according to their credit points.
(3) If a module consists of several examinations, the module grade is calculated from the individual examination results weighted in accordance with their credit points or – where CP are not indicated – weekly semester hours.
(4) The examination committee can specify registration and de-registration periods for examinations in the electronic examination data administration system

§ 8 Procedure and Certificate (§ 30 APSO-INGI)

The certificate is issued following application to the chairman of the examination committee.

§ 9 Entry into Effect

These regulations shall come into effect on the date they are published in the Hochschulanzeiger (*university journal*) of the Hamburg University of Applied Sciences. They shall apply to all students who commence their studies from the Summer Semester of 2020.

Appendix 1 – Table of Modules

No.	Module		CP	Offered*	Course	Type of Course	Hrs/wk	Type of Examination	Form of Examination	Size of Group
1	P	Mathematics	5	WiSo	Numerical Mathematics	SeU	2	PL	K, M, PF	20
				WiSo	Numerical Mathematics	Prak	2			
2	P	Digital Plant Design	5	So	Data Acquisition and Processing incl. Lab. Work	SeU	2	PL	K, H, R, M, PF	20
				So	Digital Plant Design incl. Lab. Work	SeU	2			
3	P	Advanced Instrumentation and Automation	5	So	Advanced Instrumentation and Automation incl. Lab. Work	SeU	4	PL	K, H, R, M, PF	20
4	P	Optimization	5	Wi	Process Optimization and Simulation	SeU	2	SL	LA, H, PF	20
				Wi	Process Optimization and Simulation Lab	Prak	2			
5	P	Business Skills	5	Wi	Project Finance	SeU	2	SL	K, H, R, M	20
				Wi	Project Management	SeU	2	PL	K, H, R, M	20
6	WP	** Advanced Thermodynamics and Separation Processes	5	Wi	Thermal Separation Processes	SeU	2	PL	K, H, R, M	20
				Wi	Adv. Thermodynamics	SeU	2			
7	WP	** Advanced Solids Processing and Reaction Engineering	5	So	Transport and storage of Solids, incl. Lab. Work	SeU	2	PL	K, H, R, M, PF	20
				So	Chem. Reaction Engineering	SeU	2			
8	WP	** Engineering	5	Wi	Plant Engineering	SeU	2	PL	K, H, R, PF	20
				Wi	Process and Plant Safety	SeU	2	PL	H, K, R, M	
9	WP	** Multiphysics Simulation	5	Wi	Computational Simulation Techniques	SeU	2	PL	H, K, R, M, PF	20
				Wi	Multiphysics Simulation incl. Lab. Work	SeU	2			
10	W		5	So	Failure analysis incl. Lab. Work	SeU	2	PL	H, K, R, M, PF	20

		Materials and Corrosion		Wi	Advanced Materials and Corrosion incl. Lab. Work	SeU	2			
11	W	Environmental Technologies	5	Wi	Recycling technologies	SeU	2	PL	H, K, R, M, PF	20
				So	Advanced Wastewater Treatment	SeU	2	PL	H, K, R, M, PF	
12	W	Bioenergy - Biofuels	5	So	Bioenergy - Biofuels	SeU	4	PL	H, K, R, M	20
13	W	Plant Operation	5	So	Maintenance	SeU	2	PL	H, K, R, M, PF	20
				So	Asset Management	SeU	2			
14	W	Project Work	5	WiSo	Project Work	Pj	4	PL	Pj	1-4
15	P	Master Thesis	30	WiSo	Master Thesis			PL	MT	
		Gesamt	**90**							

P: Compulsory module
WP: Compulsory optional module
W: Optional module
SeU: Teaching in seminars
Prak: Internship
Pj: Project
CP: Credit Point
SWS: Hours per week during the semester
PL: Examination results (graded)
SL: Academic study (not graded)
LA: Laboratory examination
K: Written examination
H: Coursework
R: Presentation
M: Oral examination
MT: Master's Thesis
PF: Portfolio-examination

* Notes on the "Offered" column: Courses are offered either once per academic year, i.e. either in the winter or summer semester (Wi or So), or in both the winter and summer semesters (WiSo).

** Notes on the compulsory optional modules: At least one module from module group 6/7 and one module from group 8/9 must be taken.