

**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

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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§ 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.

(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

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"

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 Forms of Examination (§ 14 APSO-INGI)

Alongside the forms of examination specified in §14 APSO-INGI, an examination may consist of a portfolio-examination. A portfolio-examination is a special form of examination, comprising of a maximum of three components, for which different forms of examination are used, such as a presentation, a written examination and an oral examination. The possible components of the examination are derived from the forms of examination specified in § 14 APSO-INGI. The portfolio-examination cannot exceed the other forms of examination in terms of the work required and level of technical difficulty. The weight to be given to the individual components of the examination shall be determined by the lecturers. The individual components of the examination determine the overall grade for the relevant portfolio-examination in accordance with their weighting. If the Table of Modules specifies “portfolio-examination” for a particular course or module, the lecturer shall determine which examination components will make up the individual components of the portfolio-examination and what weighting they will be given at the beginning of the course.

§ 7 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.

§ 8 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

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

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

§ 10 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.

Hamburg, 23rd May 2019
Hamburg University of Applied Sciences

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.