Examination and study regulations
for the Master of Information and Electrical Engineering
at the University of Wismar
University of Applied Sciences: Technology, Business and Design

Dated [date issued]

On the basis of section 2, paragraph 1 together with section 13, paragraph 5, section 38, paragraph 1 and section 39, paragraph 1 of the State University Act in the version of the notification of 25 January 2011 (Mecklenburg-Vorpommern State Gazette (MV SG), p. 18), which was most recently amended by Article 6 of the Act from 22 June 2012 (MV SG, pp 208, 211), and section 1, paragraph 2 of the framework examination regulations of the University of Wismar, University of Applied Sciences: Technology, Business and Design of 19 October 2012 (Mecklenburg-Vorpommern Department of Education gazette, p. 1159), which was most recently amended by the second statute to change the framework examination regulations of the University of Wismar, University of Applied Sciences: Technology, Business and Design of 29 September 2013 (University of Wismar Gazette, special edition of 15 November 2013), the University of Wismar, University of Applied Sciences: Technology, Business and Design has issued the following examination and study regulations:

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Appendix 2 Curriculum
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I. General provisions

Section 1
Scope
(Section 1 Framework Examination Regulations)

These examination and study regulations apply to the Master of Information and Electrical Engineering at the University of Wismar, University of Applied Sciences: Technology, Business and Design. The framework examination regulations of the University of Wismar are immediately applicable, provided these examination and study regulations do not contain their own provisions.

II. General

Section 2
Standard period of study
(Section 2 Framework Examination Regulations)

The standard period of study is three semesters. It is divided into two semesters of theory and one semester to prepare the final thesis (Master's thesis).

Section 3
Qualification
(Section 3 Framework Examination Regulations)

Having successfully completed the Master's examination, the academic title Master of Engineering (M.Eng.) is conferred.

III. Examinations

Section 4
Examination board
(Section 5 Framework Examination Regulations)

(1) The examination board is formed by a resolution of the Department of Electrical Engineering and Computer Science. It is responsible for all activities and decisions in the examination system pertaining to examination procedures as well as for other tasks allocated by these regulations. The examination authority is available to the board to manage these activities and decisions.

(2) The examination board is made up of seven members including four professors, one member of the scientific staff and two students. The person responsible for the course in the Department of Electrical Engineering and Computer Science is automatically a member of the examination board.

(3) The examination board is able to make decisions if at least two professors and at least one additional member who is entitled to vote are present. The board's decisions are made by a simple majority. If the vote is tied, the vote of the chair, and in his or her absence the vote of the deputy chair, acts as the casting vote. The student members of the examination board do not have voting rights for material examination decisions, particularly about passing and failing or about the deduction of study periods and examination and study assessments. The student members of the examination board do

not take part in deliberations or resolutions regarding matters that concern the definition of assessment tasks or their own assessment.

Section 5
Types of assessment
(Section 6 Framework Examination Regulations)

(1) The following types of assessment can be included subject to the examination schedule (Appendix 1):

1. Written examinations
2. Oral examinations
3. Assignments
4. Reports
5. Participation in simulation games/case studies
6. Project work
7. Alternative types of assessment can include:
   - online examinations under supervision
   - reports
   - computer programs
   - role plays
   - moderation of discussions
   - colloquia
   - other written work
   - experimental work
   - presentations
   - assignments
   - project work

Alternative types of assessment may also include examinations throughout the semester sat outside the examination period as defined by the University.

(2) By means of oral examinations the candidate shall demonstrate that he or she understands the relationships in the area being examined and can classify specific questions within these relationships. It shall also be assessed whether the candidate has a broad basic knowledge of the area being examined.

(3) A report is delivered within the teaching or learning context of the teaching sessions. It includes an independent systematic review of a subject or issue in the particular teaching session incorporating the pertinent literature. In a brief presentation of 15 to 30 minutes a discussion of the relevant issues is initiated and expanded on.

(4) Project work is intended to provide evidence of the ability to develop, implement and present solutions, guidelines and concepts as well as team work where applicable. The time required for project work is at least two weeks and six months at most. The time required for and the scope of the project work is defined by the relevant teaching staff.

(5) Experimental work includes preparing the theory, setting up and carrying out an experiment as well as the writing a description of the steps involved, the experimental procedure and the results of the experiment.

Section 6
Sitting module examinations
(Section 12 Framework Examination Regulations)

(1) Students can enrol in compulsory modules at least one week prior to the start of the teaching. The person responsible for the course in the Department of Electrical

Engineering and Computer Science decides at the suggestion of the teaching staff on the minimum and maximum number of participants in the teaching sessions. These figures must be recorded in the registration documents.

(2) The students select one of the specialist areas offered in the examination schedule (Appendix 1) by the end of the first semester by registering with the examination authority.

(3) Only those candidates who have registered for the module examination by the deadline and have met the formal requirements may have their assessments evaluated. Registration must be submitted to the examination authority using the form provided.

(4) The examination board sets a deadline for registering for an examination.

(5) The evidence of assessment listed in the examination schedule (Appendix 1) forms the admission requirements for participating in the module examinations indicated. The students must be informed in the first week of lectures for the particular subject of the relevant type and scope of the assessment required for admission to a module examination.

Section 7
Evaluation of individual assessments, generation of grades
(Section 16 Framework Examination Regulations)

(1) The grades for the individual assessments are defined by the relevant examiners. The following grades must be used when evaluating assessments:

1.0; 1.3	= excellent	=	an outstanding result;
1.7; 2.0; 2.3	= good	=	a result that is considerably above the average requirements;
2.7; 3.0; 3.3	= satisfactory	=	a result that corresponds to the average requirements;
3.7; 4.0	= fair/pass	=	a result which, despite its defects, still adequately satisfies the requirements;
5.0	= fail	=	a result that does not meet the requirements due to considerable defects.

(2) The evaluation of a written assessment must be published by four weeks at the latest after the assessment was submitted.

(3) If a module examination is made up of several assessments, the module grade is calculated from the mean of the grades for the individual assessments weighted according to the ECTS credits.

Section 8
Standard examination dates and deadlines
(Section 17 Framework Examination Regulations)

(1) The module examinations are generally held during the course. The examination board determines the examination dates at least six weeks beforehand and publishes these dates. The module examinations must be set in each semester immediately after lectures have concluded, generally in a three-week examination period at the end of the semester.

(2) The candidate must be promptly informed of the type and number of assessments required as described in the examination schedule (Appendix 1) and the module examinations to be completed along with the associated assessments and of the dates

when they must be submitted as well as the date of the issue and submission of the Master's thesis. Candidates must also be informed of the dates for resitting each module examination.

Section 9
Resitting examinations
(Section 19 Framework Examination Regulations)

(1) Module examinations that a student fails the first time are considered not to have been taken provided they were sat within the normal study period and during the normal examination period as defined in the examination schedule (Appendix 1) (penalty-free resit possible).

(2) A second attempt to resit a failed module examination is permitted if:

1. there is exceptional hardship,
2. the candidate has passed at least half of all module examinations taken up to that point with at least a grade of 'satisfactory' with no more than three module examinations permitted to be repeated a second time or
3. he or she has only failed one module examination.

The written application to resit an examination must be addressed to the representative of the examination board and submitted to the examination authority.

(3) Allocation of a new Master's topic must be requested six weeks at the latest after notification of the evaluation of the first Master's thesis by the examination board.

IV. Master's thesis, colloquium

Section 10
Master's thesis, colloquium
(Sections 20 and 21 Framework Examination Regulations)

(1) The time permitted to work on a Master's thesis is one semester (26 weeks) and may only be started once 50 credits have been attained. It is usually completed in the third semester. On application to the examination board and following registration with the examination authority, the time to work on the thesis may be extended in justified cases by a maximum of four weeks.

(2) The Master's thesis may be issued and supervised by a professor or another person authorised to examine theses in accordance with section 36 (4) of the State University Act provided this person is employed full-time at the University of Wismar in the Department of Electrical Engineering and Computer Science. The candidate may propose one or more examiners. The proposal does not form the basis of an entitlement.
If the Master's thesis is to be completed in a facility outside the University of Wismar, this requires the agreement of the chair of the examination board.

(3) The Master's thesis may also be completed in the form of group work provided that the contribution to be assessed of the individual candidates can be clearly differentiated and evaluated based on information provided about the sections, page numbers or other objective criteria allowing for clear delineation between candidates.

(4) The Master's thesis must be submitted to the examination authority in triplicate before the deadline in a written format and in a version saved on a medium suitable for electronic data processing. Any work submitted after the deadline will be assessed with the grade 'fail' (5.0).

(5) The assessment procedure shall not exceed four weeks.

(6) The duration of the colloquium is at least 30 minutes and not more than 45 minutes.

(7) The grade for the colloquium is calculated from the arithmetic mean of the individual assessments. It makes up 25% of the grade for the Master's thesis.

Section 11
Passing the Master's examination and generation of the overall grade
(Section 22 Framework Examination Regulations)

The overall grade is calculated from the grades weighted by ECTS points for all compulsory modules and the electives chosen and the overall grade for the Master's thesis. The module grades make up 80% and the overall grade of the Master's thesis makes up 20% of the overall grade.

V. Study regulations

Section 12
Scope and purpose of the study regulations

The study regulations provide students with information and advice about how to sensibly structure their course. It also provides students with subject-specific advice throughout their course and is used to plan the teaching programme offered by the Department of Electrical Engineering and Computer Science.

Section 13
Course objectives

(1) The Master of Information and Electrical Engineering is structured to follow the Bachelor in Information and Electrical Engineering, which is broad in scope. The Master's study is intended to deepen a student's knowledge in the foundation subjects and teach more extensive theoretical and practical knowledge in the specialist areas. Graduates will:

1. possess a broad, scientifically based foundational knowledge and the necessary specialist knowledge to successfully transition to professional practice,
2. be able to think analytically and act autonomously and methodically, and
3. be able to cooperate with their colleagues, seek solutions in critical discourse, work in teams and convincingly defend their work.

(2) The course contents comply with the latest technological and scientific knowledge. They are based on the principle of unity of teaching and research.

(3) The University of Wismar provides its students with a broadly based specialist knowledge based on applied teaching as well as the ability to identify practical problems accountably, develop possible solutions, critically weigh them up against one another and successfully implement a chosen alternative solution in practice. Taking on accountable tasks requires confidence and enjoyment in making decisions as well as professional expertise. Accordingly, students are also taught key qualifications and encouraged to develop personal awareness. At the end of their study, the students shall be able to work independently on problems to deadlines based on scientific principles and relevant to the application.

Section 14
Course start

The course start date is determined by the relevant provisions in the enrolment regulations of the University of Wismar. Those starting courses can enrol in both the summer and winter semesters.

Section 15
Course structure

(1) The course is divided into modules. Modules are self-contained teaching units which are documented by successfully passing a module examination. Successfully participating in a module examination is a prerequisite for the awarding of credits in accordance with the European Credit Transfer System (ECTS).

(2) Modules can be combined into joint sessions. The relevant responsible examination board makes any decisions regarding this. Combined modules can only be attended jointly.

(3) The number of semester credit hours, the individual modules and the type of teaching sessions each semester can be found in the curriculum (Appendix 2).

Section 16
Course contents

The teaching programme in the Master of Information and Electrical Engineering includes the compulsory and elective modules that are described in more detail in the module handbook.

Section 17
Teaching and learning formats

(1) Teaching sessions include:

1. Lectures: teaching of course materials in lectures
2. Seminars: teaching of course materials in lectures, seminars and supervised project work
3. Tutorials: teaching sessions that build on course materials and go into greater depth using theoretical and practical application
4. Excursions: student trips to companies, institutions, trade fairs, etc.
5. Laboratory practical class

(2) Teaching sessions may also be done as block sessions.

(3) As part of the internationalisation of the courses, modules may also be offered in English.

Section 18
Excursions

(1) Specialist excursions may be included in the study as a type of specialist scientific session which are offered outside the University as independent teaching sessions. Specialist excursions may form part of the teaching module. The overall time required including preparation and follow-up must not exceed 60 hours.

(2) Participation in (completing) excursions is a prerequisite for granting the credits for the particular session.

(3) The teaching staff indicates in a statement to students whether an excursion forms part of the teaching session and whether it is evaluated as an assessment as described in section 5.

Section 19
Course advice

(1) All students may seek advice regarding general issues associated with their studies from the Office of Student and Academic Affairs of the University of Wismar.

(2) The University also provides information as part of its general course advice about additional study opportunities provided by the University.

(3) Advice about course structure including all specific assessment matters is provided by the relevant Department. Students should refer to the course guide, particularly at the start of their course, if they should fail an assessments or change their course.

VI. Concluding regulations

Section 20
Interim regulations

These examination and study regulations apply for the first time to candidates who started their course in the 2014/2015 winter semester.

Section 21
Commencement

The examination and study regulations come into effect after their publication in the gazette of the University of Wismar.

Issued on the basis of the decision of the senate of the University of Wismar of [date of the senate decision].

Wismar, [date issued]

The Rector
of the University of Wismar
University of Applied Sciences: Technology, Business and Design
[Name]

Appendix 1 Examination schedule

Module		Semester 1		Semester 2		Semester 3		∑ credits
		Assessment AS	CR	Assessment AS	CR	Assessment AS	CR	
M 01	Project Seminar	1) 2)	5					5
M 02	Simulation of Complex Systems	1) 2)	5					5
EM 01	Elective Module I	1) 2)	5					5
M 03	Quality Management			1) 2)	5			5
M 04	Research Seminar			1) 2)	5			5
EM 02	Elective Module II			1) 2)	5			5
Competence Field: Telecommunications and Communications Engineering								
M 05	Microsystems Engineering II	1) 2)	5					5
M 06	Communication Systems	1) 2)	5					5
M 07	Network and Security Management	1) 2)	5					5
M 08	Advanced Topics in Communications			1) 2)	5			5
M 09	Advanced Optical Communications			1) 2)	5			5
M 10	Integrated Circuit Design			1) 2)	5			5
Competence Field: Automation / Mechatronics								
M 11	Advanced Control II	1) 2)	5					5
M 12	Embedded Control Systems II	1) 2)	5					5
M 13	Sensors Systems/Actuators	1) 2)	5					5
M 10	Integrated Circuit Design			1) 2)	5			5
M 14	Selected Aspects in Automation			1) 2)	5			5
M 15	Building Automation			1) 2)	5			5
Competence Field: Electric Power Engineering								
M 13	Sensor Systems/Actuators	1) 2)	5					5
M 16	Energy Conversion	1) 2)	5					5
M 28	Electrical Drive Engineering II	1) 2)	5					5
M 15	Building Automation			1) 2)	5			5
M 18	Grid Operation			1) 2)	5			5
M 19	Power Electronics II			1) 2)	5			5
	Master's thesis incl. colloquium						30	30
∑ Credits		30		30		30		90

As part of the elective modules EM 01 and EM 02, the following electives are offered each year, of which the number required to achieve ten credit points must be successfully completed in the Master's course.

Catalogue of the elective modules in the Master of Information and Electrical Engineering

Elective module	Offered SS / WS	Assessment AS	CR
Microsystems Engineering II	SS	1) 2)	5
Sensor Systems/Actuators	SS	1) 2)	5
Energy Conversion	SS	1) 2)	5
Microprocessor Engineering in Mobile Devices	SS	1) 2)	5
Integrated Circuit Design	WS	1) 2)	5
Advanced Topics in Communications	WS	1) 2)	5
Building Automation	WS	1) 2)	5
Selected Aspects in Automation	WS	1) 2)	5
Parallel and Distributed Systems	WS	1) 2)	5
Power Electronics II	WS	1) 2)	5
Thermal, Air Conditioning and Refrigeration Engineering	SS	1) 2)	5
Video Processing	WS	1) 2)	5
Flow Machines	WS	1) 2)	5
Efficient Energy Management	WS	1) 2)	5
Telecommunications Engineering Project	SS	1) 2)	5
Knowledge-based Systems	WS	1) 2)	5
Electric Power Engineering II	SS	1) 2)	5

1) Oral (20 min) or written (120 min) examination or alternative assessment
2) Internship or certification or discussion or online certification

CR Credits
AS Assessments
M Module
EM Elective module

Electives may only be selected once during the Master's programme. The credit points for a module are accredited in principle only after the module examination has been passed.

Appendix 2 Curriculum

Module		Semester 1		Semester 2		Semester 3		Total credits
		CH L / S / T / P	CR	CH L / S / T / P	CR	CH L / S / T / P	CR	
M 01	Project Seminar	0/2/2/0	5					5
M 02	Simulation of Complex Systems	1/1/0/2	5					5
EM 01	Elective Module I		5					5
M 03	Quality Management			1/1/2/0	5			5
M 04	Research Seminar			0/1/3/0	5			5
EM 02	Elective Module II				5			5
Competence Field: Information and Communication Engineering								
M 05	Microsystems Engineering II	1/1/1/1	5					5
M 06	Communication Systems	1/1/1/1	5					5
M 07	Network and Security Management	1/1/0/2	5					5
M 08	Advanced Topics in Communications			1/1/2/0	5			5
M 09	Advanced Optical Communications			1/1/1/1	5			5
M 10	Integrated Circuit Design			1/1/0/2	5			5
Competence Field: Automation / Mechatronics								
M 11	Advanced Control II	1/1/0/2	5					5
M 12	Embedded Control Systems II	1/1/0/2	5					5
M 13	Sensors Systems/Actuators	1/1/0/2	5					5
M 10	Integrated Circuit Design			1/1/0/2	5			5
M 14	Selected Aspects in Automation			1/1/0/2	5			5
M 15	Building Automation			1/1/1/1	5			5
Competence Field: Electrical Power Engineering								
M 13	Sensor Systems/Actuators	1/1/0/2	5					5
M 16	Energy Conversion	1/2/0/1	5					5
M 28	Electrical Drive Engineering II	1/1/0/2	5					5
M 15	Building Automation			1/1/1/1	5			5
M 18	Grid Operation			1/1/1/1	5			5
M 19	Power Electronics II			1/1/1/1	5			5
	Master's thesis incl. colloquium						30	30
Total credits		30		30		30		90

As part of the elective modules EM 01 and EM 02, the following electives are offered each year, of which the number required to achieve ten credit points must be successfully completed in the Master's course.

Catalogue of the elective modules in the Master of Information and Electrical Engineering

Elective module	Offered SS / WS	CH L / S / T / P	CR
Microsystems Engineering II	SS	1/1/1/1	5
Sensors Systems/Actuators	SS	1/1/0/2	5
Energy Conversion	SS	1/2/0/1	5
Microprocessor Engineering in Mobile Devices	SS	1/0/1/2	5
Integrated Circuit Design	WS	1/1/0/2	5
Advanced Topics in Communications	WS	1/1/2/0	5
Building Automation	WS	1/1/1/1	5
Selected Aspects in Automation	WS	1/1/0/2	5
Parallel and Distributed Systems	WS	1/1/0/2	5
Power Electronics II	WS	1/1/1/1	5
Thermal, Air Conditioning and Refrigeration Engineering	SS	3/0,5/0/0,5	5
Video Processing	WS	1/1/0/2	5
Flow Machines	WS	2/0/2/0	5
Efficient Energy Management	WS	2/1,5/0/0,5	5
Telecommunications Engineering Project	SS	0/0/4/0	5
Knowledge-based Systems	WS	2/0/2/0	5
Electrical Power Engineering II	SS	1/1/1/1	5

CR Credits CH Credit hours L Lecture
S Seminar T Tutorial P Practical class
M Module EM Elective module

Electives may only be selected once during the Master's programme. The credit points for a module are accredited in principle only after the module examination has been passed.

Appendix 3

———————— Diploma Supplement ————————————

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

1. HOLDER OF QUALIFICATION

1.1 Family Name:
N.N.

1.2 First Name:
N.N.

1.3 Date, Place, Country of Birth:
N.N.

1.4 Student ID Number or Code:
not of public interest

2. QUALIFICATION

2.1 Name of Qualification (full, abbreviated; in original language):
Master of Engineering (M.Eng.)
Title Conferred (full, abbreviated; in original language):
Master of Information and Electrical Engineering

2.2 Main Field(s) of Study:
Information and Electrical Engineering

2.3 Institution Awarding the Qualification (in original language):
Hochschule Wismar, University of Applied Sciences: Technology, Business and Design
Status (Type / Control)
University of Applied Sciences / State Institution

2.4 Institution Administering Studies:
[same]

2.5 Language of Instruction/Examination:
German and English

3. LEVEL OF THE QUALIFICATION

3.1 Level:

Graduate / second degree (1.5 years), with thesis

3.2 Official Length of Program:

1.5 years (90 Credit Points), full time

3.3 Admission Requirements:

B. degree or "Diplom" (the German "Diplom-Ingenieur (FH) or "Diplom-Ingenieur") in Electrical engineering or in a related area of study, from a national or international institution of higher education.

4. CONTENTS AND RESULTS GAINED

4.1 Mode of Study:

Professional studies, 1,5 years

4.2 Program Requirements:

The Master programme curriculum consists of three examination areas: compulsory subjects and compulsory choice subjects. In the Master programme, comprehensive examinations are executed at the completion of the examination area. These examinations test students on the subjects covered in the respective course modules. A comprehensive examination consists of a set of examinations on the course content of the individual modules, this can also be taken in the form of a team or group examination. Students have to collect 90 credit points (CP) in total, including 30 CP credit points for the Master thesis.

4.3 Program Details:

See certificate of Examination (Masterzeugnis) for a complete list of modules and the Master's thesis including grades.

4.4 Grading Scheme:

General grading scheme cf. Sec. 8.6

4.5 Overall Classification (in original language):

Based on weighted average of grades in examination fields.

ECTS – Grading Table

The reference quantity constitutes "*xx*" completed courses in the period from "*dd/mm/yyyy*" until "*dd/mm/yyyy*". The grading table is created after the completion of each semester; this means the graduates of the current semester are not included.

Grade	As a percentage %	Number	Grade range
1,0 to 1,5	x	x	very good
1,6 to 2,5	x	x	good
2,6 to 3,5	x	x	satisfactory
3,6 to 4,0	x	x	sufficient

The individual values are shortened to two decimal places. The sum of percentages may therefore differ slightly from 100%.

5. FUNCTION OF THE QUALIFICATION

5.1 Access to Further Study:
Qualifies to apply for admission for doctoral studies.

5.2 Professional Status:
The M.Eng. degree qualifies graduates for registration in the official German listing of a professional Electrical engineer.

6. ADDITIONAL INFORMATION

6.1 Additional Information:
-

6.2 Further Information Sources:
On the institution: www.hs-wismar.de
On the programme: eui.fiw.hs-wismar.de/
For national information sources cf. Sect. 8.8

7. CERTIFICATION OF THE SUPPLEMENT

This Diploma Supplement refers to the following original documents:
Awarded Masters Degree Certificate (Master-Urkunde)
Master Degree Certification (Master-Zeugnis)

Certification Date: «PruefDatum»

_____
Chairman
Examination Committee

(Official Stamp/Seal)

8. National Higher Education System: Germany

The information on the national higher education system on the following pages provides a context for the qualification and the type of higher education institution that awarded it (DSDoc 01/03.00).

8. INFORMATION ON THE GERMAN HIGHER EDUCATION SYSTEM [1]

8.1. Types of Institutions and Institutional Control

Higher education (HE) studies in Germany are offered at three types of *Hochschulen* [2]

- *Universitäten* (Universities), including various specialized institutions, comprise the whole range of academic disciplines. In the German tradition, universities are also institutional foci of, in particular, basic research, so that advanced stages of study have strong theoretical orientations and research-oriented components.
- *Fachhochschulen* (Universities of Applied Sciences): Programs concentrate in engineering and other technical disciplines, business-related studies, social work, and design areas. The common mission of applied research and development implies a distinct application-oriented focus and professional character of studies, which include one or two semesters of integrated and supervised work assignments in industry, enterprises or other relevant institutions.
- *Kunst- and Musikhochschulen* (Colleges of Art/Music, etc.) offer graduate studies for artistic careers in fine arts, performing arts and music; in such fields as directing, production, writing in theatre, film, and other media; and in a variety of design areas, architecture, media and communication.

[1] The information covers only aspects directly relevant to purposes of the Diploma Supplement. All information as of 1 Jan 2000.

[2] Hochschule is the generic term for higher education institutions.

HE institutions are either state or state-recognized institutions. In their operations, including the organization of studies and the designation and award of degrees, they are both subject to HE legislation.

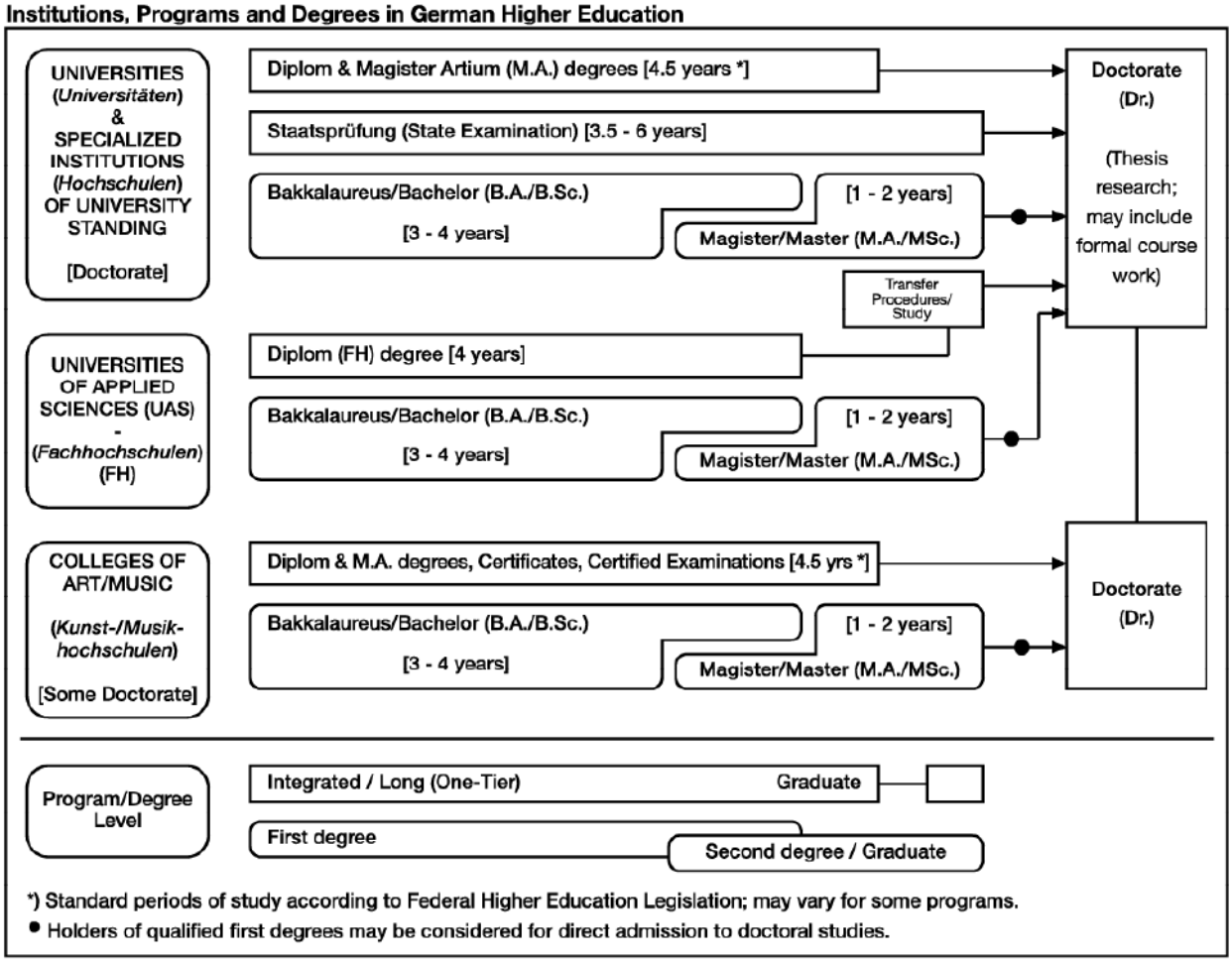
8.2 Types of programs and degrees awarded

- Studies in all three types of institutions are traditionally offered in integrated "long" (one-tier) programs leading to *Diplom-* or *Magister Artium* degrees or completion by a *Staatsprüfung* (State Examination).
- In 1998, a new scheme of first- and second-level degree programs (*Bakkalaureus*/Bachelor and *Magister*/Master) was introduced to be offered parallel to or *in lieu* of established integrated "long" programs. While these programs are designed to provide enlarged variety and flexibility to students in planning and pursuing educational objectives, they enhance also international compatibility of studies.
- For details cf. Sec. 8.41 and Sec. 8.42, respectively. Table 1 provides a synoptic summary.

8.3 Approval/Accreditation of Programs and Degrees

To ensure quality and comparability of qualifications, the organization of studies and general degree requirements have to conform to principles and regulations jointly established by the Standing Conference of Ministers of

Institutions, Programs and Degrees in German Higher Education



Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany (KMK) and the Association of German Universities and other Higher Education Institutions (HRK). In 1999, a system of accreditation for programs of study has become operational under the control of an Accreditation Council at national level. Programs and qualifications accredited under this scheme are designated accordingly in the Diploma Supplement.

8.4 Organization of Studies

8.41 Integrated "Long" Programs (One-Tier):

Diplom* degrees, *Magister Artium*, *Staatsprüfung

Studies are either mono-disciplinary (single subject, *Diplom* degrees, most programs completed by a *Staatsprüfung*) or comprise a combination of either two major or one major and two minor fields (*Magister Artium*). As common characteristics, in the absence of intermediate (first-level) degrees, studies are divided into two stages. The first stage (1.5 to 2 years) focuses - without any components of general education - on broad orientations and foundations of the field(s) of study including propaedeutical subjects. An Intermediate Examination (*Diplom-Vorprufung* for *Diplom* degrees; *Zwischenprüfung* or credit requirements for the M.A.) is prerequisite to enter the second stage of advanced studies and specializations. Degree requirements always include submission of a thesis (up to 6 months duration) and comprehensive final written and oral examinations. Similar regulations apply to studies leading to a *Staatsprüfung*.

- Studies at *Universities* last usually 4.5 years (*Diplom* degree, *Magister Artium*) or 3.5 to 6 years (*Staatsprüfung*). The *Diplom* degree is awarded in engineering disciplines, the exact/natural and economic sciences. In the humanities, the corresponding degree is usually the *Magister Artium* (M.A.). In the social sciences, the practice varies as a matter of institutional traditions. Studies preparing for the legal, medical, pharmaceutical and teaching professions are completed by a *Staatsprüfung*.
  The three qualifications are academically equivalent. As the final (and only) degrees offered in these programs at graduate-level, they qualify to apply for admission to doctoral studies, cf. Sec. 8.5.
- Studies at *Fachhochschulen (FH)* /Universities of Applied Sciences (UAS) last 4 years and lead to a *Diplom (FH)* degree. While the *FH*/UAS are non-doctorate granting institutions, qualified graduates may pursue doctoral work at doctorate-granting institutions, cf. Sec. 8.5.
- Studies at *Kunst- and Musikhochschulen* (Colleges of Art/Music, etc.) are more flexible in their organization, depending on the field and individual objectives. In addition to Diplom/Magister degrees, awards include Certificates and Certified Examinations for specialized areas and professional purposes.

8.42 First/Second Degree Programs (Two-tier): *Bakkalaureus*/Bachelor, *Magister*/Master degrees

These programs apply to all three types of institutions. Their organization makes use of credit point systems and modular components. First degree programs (3 to 4 years) lead to *Bakkalaureus*/Bachelor degrees (B.A., B.Sc.). Graduate second degree programs (1 to 2 years) lead to *Magister*/Master degrees (M.A., M.Sc.). Both may be awarded in dedicated form to indicate particular specializations or applied/professional orientations (B./M. of ... ; B.A., B.Sc. or M.A., M.Sc. in ...). All degrees include a thesis requirement.

8.5 Doctorate

Universities, most specialized institutions and some Colleges of Art/Music are doctorate-granting institutions. Formal prerequisite for admission to doctoral work is a qualified *Diplom* or *Magister*/Master degree, a *Staatsprüfung*, or a foreign equivalent. Admission further requires the acceptance of the Dissertation research project by a supervisor. Holders of a qualified *Diplom (FH)* degree or other first degrees may be admitted for doctoral studies with specified additional requirements.

8.6 Grading Scheme

The grading scheme usually comprises five levels (with numerical equivalents; intermediate grades may be given): "*Sehr Gut*" (1) = Very Good; "*Gut*" (2) = Good; "*Befriedigend*" (3) = Satisfactory; "*Ausreichend*" (4) = Sufficient; "*Nicht ausreichend*" (5) = Non-Sufficient/Fail. The minimum passing grade is "*Ausreichend*" (4). Verbal designations of grades may vary in some cases and for doctoral degrees. Some institutions may also use the ECTS grading scheme.

8.7 Access to Higher Education

The General Higher Education Entrance Qualification (*Allgemeine Hochschulreife, Abitur*) after 12 to 13 years of schooling gives access to all higher education studies. Specialized variants (*Fachgebundene Hochschulreife*) allow for admission to particular disciplines. Access to *Fachhochschulen*/(UAS) is also possible after 12 years (*Fachhochschulreife*). Admission to Colleges of Art/Music may be based on other or require additional evidence demonstrating individual aptitude.

8.8 National Sources of Information

- *Kultusministerkonferenz* (KMK) [Standing Conference of Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany] - Lennéstrasse 6, D-53113 Bonn;
  Fax: +49/[0]228/501-229; with
  - Central Office for Foreign Education (ZaB) as German NARIC and ENIC; www.kmk.org; E-Mail: zab@kmk.org
  - "Documentation and Educational Information Service" as German EURYDICE-Unit, providing the national dossier on the education system (EURYBASE, annual update, www.eurydice.org; E-Mail eurydice@kmk.org).
- *Hochschulrektorenkonferenz* (HRK) [Association of German Universities and other Higher Education Institutions]. Its "Higher Education Compass" (www.higher-education-compass.hrk.de) features comprehensive information on institutions, programs of study, etc. Ahrstrasse 39, D-53175 Bonn; Fax: +49/[0]228 / 887-210; E-Mail: sekr@hrk.de