Fachhochschule Südwestfalen
University of Applied Sciences

Fachhochschule Südwestfalen · Postfach 20 61 · 58590 Iserlohn

EINSCHREIBEN

Herrn
Benedikt Kaffanke
Sudermannstr. 26
44137 Dortmund

Iserlohn,
30.07.2014

Bacherlorurkunde, Prüfungszeugnis und Diploma Supplement

Sehr geehrter Herr Kaffanke,

hiermit übersende ich Ihnen Ihre Bachelorurkunde, das Bachelorzeugnis sowie das Diploma Supplement.

Ich wünsche Ihnen für Ihre weitere berufliche Zukunft viel Erfolg.

Mit freundlichem Gruß
Im Auftrag
Przibylla

Anlage

Der Fachausschuss für den Verbundstudiengang Maschinenbau

Dezernat 2
Studierenden-Service

Sonja Przibylla

Telefon
0 23 71 / 566-337
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0 23 71 / 566-253
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przibylla.sonja@fh-swf.de

Standort Iserlohn
Frauenstuhlweg 31
58644 Iserlohn

Fachhochschule Südwestfalen
University of Applied Sciences

Bachelor-Prüfungszeugnis *Exam Certificate*

Name	Benedikt Kaffanke
Geburtsdatum *Date of Birth*	28. September 1965
Geburtsort *Place of Birth*	Dortmund
Prüfungstag *Day of Examination*	25. Juli 2014
Studiengang *Study Course*	Verbundstudiengang Maschinenbau *part-time Mechanical Engineering*
Gesamtnote *Cumulative Grade* *ECTS Grade**	gut (2,5) *good* *C*
Thema der Bachelorarbeit *Subject of Thesis*	Einfluss des Ausgangs- und Werkzeugmaterials auf Umformprozesse zur Herstellung von Verzierungselementen in der Automobilbranche *Effects of source and tool material on metal forming processes for manufacturing of trimming elements in the automobile industry*
Note der Bachelorarbeit *Grade of Thesis*	sehr gut (1,3) *very good*
Note des Kolloquiums *Grade of Colloquium*	sehr gut (1,3) *very good*

Iserlohn, 25. Juli 2014

Der Vorsitzende des Prüfungsausschusses in Vertretung
Chairman of the Board of Examiners by proxy

Fachhochschule Südwestfalen – Standort Iserlohn – Der Prüfungsausschuss Fachbereich Maschinenbau – Iserlohn

Prof. Dr. Martin Skambraks

Fachhochschule
Südwestfalen
Sitz:Iserlohn
Hagen
Iserlohn
Lüdenscheid
Meschede
Soest

Fachhochschule Südwestfalen
University of Applied Sciences

Bachelor-Urkunde *Degree Certificate*

Die Fachhochschule Südwestfalen
verleiht nach erfolgreich abgelegter
Bachelorprüfung den akademischen Grad

South Westphalia University of Applied Sciences
awards after successfully passed exams the degree

Bachelor of Engineering (B.Eng.)

Name	Benedikt Kaffanke
Geburtsdatum *Date of Birth*	28. September 1965
Geburtsort *Place of Birth*	Dortmund
Prüfungstag *Day of Examination*	25. Juli 2014
Studiengang *Study Course*	Verbundstudiengang Maschinenbau *part-time Mechanical Engineering*

Herr Kaffanke ist auf der Grundlage des Ingenieurgesetzes NRW berechtigt, die Berufsbezeichnung "Ingenieur" zu führen.

According to the 'Ingenieurgesetz NRW' (Law of Engineers in Northrhine Westphalia) Mr Kaffanke is entitled to carry the occupational title 'Ingenieur'.

Iserlohn, 25. Juli 2014

Der Dekan
Dean

Prof. Dr.-Ing. Franz Wendl

Der Vorsitzende des Prüfungsausschusses in Vertretung
Chairman of the Board of Examiners by proxy

Prof. Dr. Martin Skambraks

Fachhochschule
Südwestfalen
Sitz:Iserlohn
Hagen
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Soest

Fachhochschule Südwestfalen
University of Applied Sciences

Bachelor-Prüfungszeugnis *Exam Certificate*

Modulprüfungen
Module Examinations

Technische Dokumentation *Technical Documentation*	befriedigend *satisfactory*	(3,3)
Elektrotechnik 1 *Electrical Engineering 1*	ausreichend *sufficient*	(3,7)
Elektrotechnik 2 *Electrical Engineering 2*	befriedigend *satisfactory*	(3,0)
Mathematik 1 *Mathematics 1*	sehr gut *very good*	(1,3)
Mathematik 2 *Mathematics 2*	sehr gut *very good*	(1,0)
Mathematik 3 *Mathematics 3*	gut *good*	(2,0)
Technische Mechanik 1 *Engineering Mechanics 1*	befriedigend *satisfactory*	(3,0)
Technische Mechanik 2 *Engineering Mechanics 2*	ausreichend *sufficient*	(4,0)
Technische Mechanik 3 *Engineering Mechanics 3*	sehr gut *very good*	(1,0)
Grundlagen der Informatik *Introduction to Computer Science*	ausreichend *sufficient*	(4,0)
Konstruktionselemente 1 *Mechanical Components 1*	befriedigend *satisfactory*	(3,0)
Konstruktionselemente 2 *Mechanical Components 2*	befriedigend *satisfactory*	(3,3)
Physik *Physics*	ausreichend *sufficient*	(3,7)

Leistungsnoten:	Grading:
sehr gut	very good
gut	good
befriedigend	satisfactory
ausreichend	sufficient

Benedikt Kaffanke
Prüfungstag: 25. Juli 2014
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Fachhochschule Südwestfalen
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Thermodynamik *Thermodynamics*	gut *good*	(2,0)
CAD	sehr gut *very good*	(1,3)
Werkstoffkunde 1 (inkl. Chemie) *Materials Science 1 (plus chemistry)*	gut *good*	(2,3)
Werkstoffkunde 2 (inkl. Chemie) *Materials Science 2 (plus chemistry)*	ausreichend *sufficient*	(4,0)
Fertigungsverfahren Zerspanen 1 *Metal Cutting Technology 1*	gut *good*	(1,7)
Strömungslehre *Hydrodynamics and Aerodynamics*	ausreichend *sufficient*	(4,0)
Werkstoffkunde der Kunststoffe *Polymer Materials Science*	gut *good*	(2,0)
Mess-, Steuerungs- und Regelungstechnik I *Measurement, Control and Closed Loop Systems I*	befriedigend *satisfactory*	(2,7)
Mess-, Steuerungs- und Regelungstechnik II *Measurement, Control and Closed Loop Systems II*	gut *good*	(1,7)
Angewandte Statistik *Applied Statistics*	gut *good*	(2,3)
Fluidtechnik *Fluid Technology*	ausreichend *sufficient*	(3,7)
Fertigungsverfahren Umformen 1 *Manufacturing of Metal Forming 1*	ausreichend *sufficient*	(3,7)
Fertigungsverfahren Kunststoffe 1 *Plastics Manufacturing Processes 1*	ausreichend *sufficient*	(4,0)

Leistungsnoten:	Grading:
sehr gut	very good
gut	good
befriedigend	satisfactory
ausreichend	sufficient

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Industriebetriebslehre *Industrial Management*	befriedigend *satisfactory*	(2,7)
Fabrikplanung *Production Shop Planning*	gut *good*	(2,3)
Fertigungsplanung und -steuerung *Production Planning and Control*	befriedigend *satisfactory*	(2,7)
Arbeitswissenschaften *Ergonomics*	gut *good*	(1,7)
Kostenrechnung *Cost Accounting*	befriedigend *satisfactory*	(2,7)
Qualitätsmanagement *Quality Management*	befriedigend *satisfactory*	(3,0)
Projektmanagement *Project Management*	gut *good*	(2,3)

Leistungsnoten:	Grading:
sehr gut	very good
gut	good
befriedigend	satisfactory
ausreichend	sufficient

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Bachelor-Prüfungszeugnis *Exam Certificate*

*

Prozentualer Anteil der Studierenden, die diese Note erhalten haben *Percentage of successful students normally achieving the grade*		ECTS-Note *ECTS-Grade*
die besten	10%	A
best		
die nächsten	25%	B
next		
die nächsten	30%	C
next		
die nächsten	25%	D
next		
die nächsten	10%	E

Die Berechnung basiert auf einer Vergleichsgruppe von (121) Absolventinnen und Absolventen.

The calculation is based on a comparative group of (121) graduates.

Leistungsnoten:	Grading:
sehr gut	very good
gut	good
befriedigend	satisfactory
ausreichend	sufficient

Benedikt Kaffanke
Prüfungstag: 25. Juli 2014
Day of Examination

Fachhochschule Südwestfalen
University of Applied Sciences

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 THE QUALIFICATION

1.1. Family Name

Kaffanke

1.2. First Name

Benedikt

1.3. Date, Place, Country of Birth

28. September 1965, Dortmund, Germany

1.4. Student ID Number or Code

10022640

2. QUALIFICATION

2.1. Name of Qualification (full, abbreviated; in original language)

Bachelor of Engineering (B.Eng.)

Title Conferred (full, abbreviated; in original language)

n.a. n.a.

2.2. Main Field(s) of Study

Mechanical Engineering

2.3. Institution Awarding the Qualification (in original language)

Fachhochschule Südwestfalen

Department: Mechanical Engineering, Location: Iserlohn

Frauenstuhlweg 31

D- 58644 Iserlohn

Status (Type/Control)

University of Applied Sciences / State Institution

2.4. Institution Administering Studies (in original language)

[same]

Status (Type/Control)

[same] / [same]

2.5. Language(s) of Instruction/Examination

German

3. LEVEL OF THE QUALIFICATION

3.1. Level

Undergraduate / first degree, with thesis

3.2. Official Length of Programme

4.5 years

3.3. Access Requirements

Entrance qualification for degree courses at Fachhochschulen

4. CONTENTS AND RESULTS GAINED

4.1. Mode of Study

part-time attendance combined with self-study

4.2. Programme Requirements

The course of study is intended to provide the student with the basic and specialist knowledge required to work in the occupation in a self-employed status; it also teaches the methods and theories as well as the qualification and competency necessary for implementing the same, and serves as a comprehensive vocational preparation.

During their university studies, the following structural competencies are to be imparted to the prospective engineers:

- Principles of mathematical/natural sciences (mathematics, information technology, physics, etc.),
- Technical principles (mechanics, thermodynamics, control engineering, electrical engineering, etc.),
- Application-orientated basic skills.

The mathematical/natural sciences and the technical principles serve the student as a permanent basis for the rapid development of new special knowledge. The application-orientated basic knowledge ensures that the student has the requisite occupational skills expected on the employment market.

The university courses leading up to the undergraduate examination shall observe the general aims of the course of study (§ 58 HG) and impart to the students in particular the application-related contents of their field of study on the basis of scientific perceptions and enable them to apply engineering techniques for the analysis of technical processes, to elaborate practice-orientated solutions and, while doing so, to also take into consideration external concerns such as e.g. the optimum selection and the technical-economical utilization of their knowledge and experience.

4.3. Programme Details (in original language)

See transcript for list of courses and grades; and Bachelor Exam Certificate for subjects offered in final examinations (written and oral), and topic of thesis.

4.4. Grading Scheme

According to the regulations governing the bachelor degree examinations, the following grades apply:

"Sehr gut"	"Very good"	1.0 to 1.5
"Gut"	"Good"	1.6 to 2.5
"Befriedigend"	"Satisfactory"	2.6 to 3.5
"Ausreichend"	"Sufficient"	3.6 to 4.0

In addition institutions already use the ECTS grading scheme which operates with the levels A (best 10%), B (next 25%), C (next 30%), D (next 25%) and E (next 10%).

4.5. Cumulative Grade (in original language)

gut

Based on courses (92%) and bachelor thesis (8%); cf. Prüfungszeugnis (Final Examination Certificate)

5. FUNCTION OF THE QUALIFICATION

5.1. Access to Further Study

Master's course of study

5.2. Professional Status

Engineer

6. ADDITIONAL INFORMATION

6.1. Additional Information

http://www.fh-swf.de

6.2. Further Information Sources

n.a.

7. CERTIFICATION

This Diploma Supplement refers to the following original documents:
Bachelorurkunde (Bachelor Degree Certificate) of 25. July 2014
Bachelorprüfungszeugnis (Bachelor Exam Certificate) of 25. July 2014

Certification Date: 25. July 2014

Fachhochschule Südwestfalen – Standort Iserlohn – Der Prüfungsausschuss Fachbereich Maschinenbau

(Official Stamp/Seal)

M. Skambraks

Prof. Dr. Martin Skambraks
Chairman of the Board of Examiners
by proxy

8. NATIONAL HIGHER EDUCATION SYSTEM

The information on the national higher education system on the following pages provides a context for the qualification and the type of higher education that awarded it.

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

8.1 Types of Institutions and Institutional Status

Higher education (HE) studies in Germany are offered at three types of Higher Education Institutions (HEI).[ii]

- *Universitäten* (Universities) including various specialized institutions, offer the whole range of academic disciplines. In the German tradition, universities focus in particular on basic research so that advanced stages of study have mainly theoretical orientation and research-oriented components.

- *Fachhochschulen* (Universities of Applied Sciences) concentrate their study programmes 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 integrated and supervised work assignments in industry, enterprises or other relevant institutions.

- *Kunst- und Musikhochschulen* (Universities of Art/Music) offer 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.

Higher Education 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 higher education legislation.

8.2 Types of Programmes and Degrees Awarded

Studies in all three types of institutions have traditionally been offered in integrated "long" (one-tier) programmes leading to *Diplom-* or *Magister Artium* degrees or completed by a *Staatsprüfung* (State Examination).

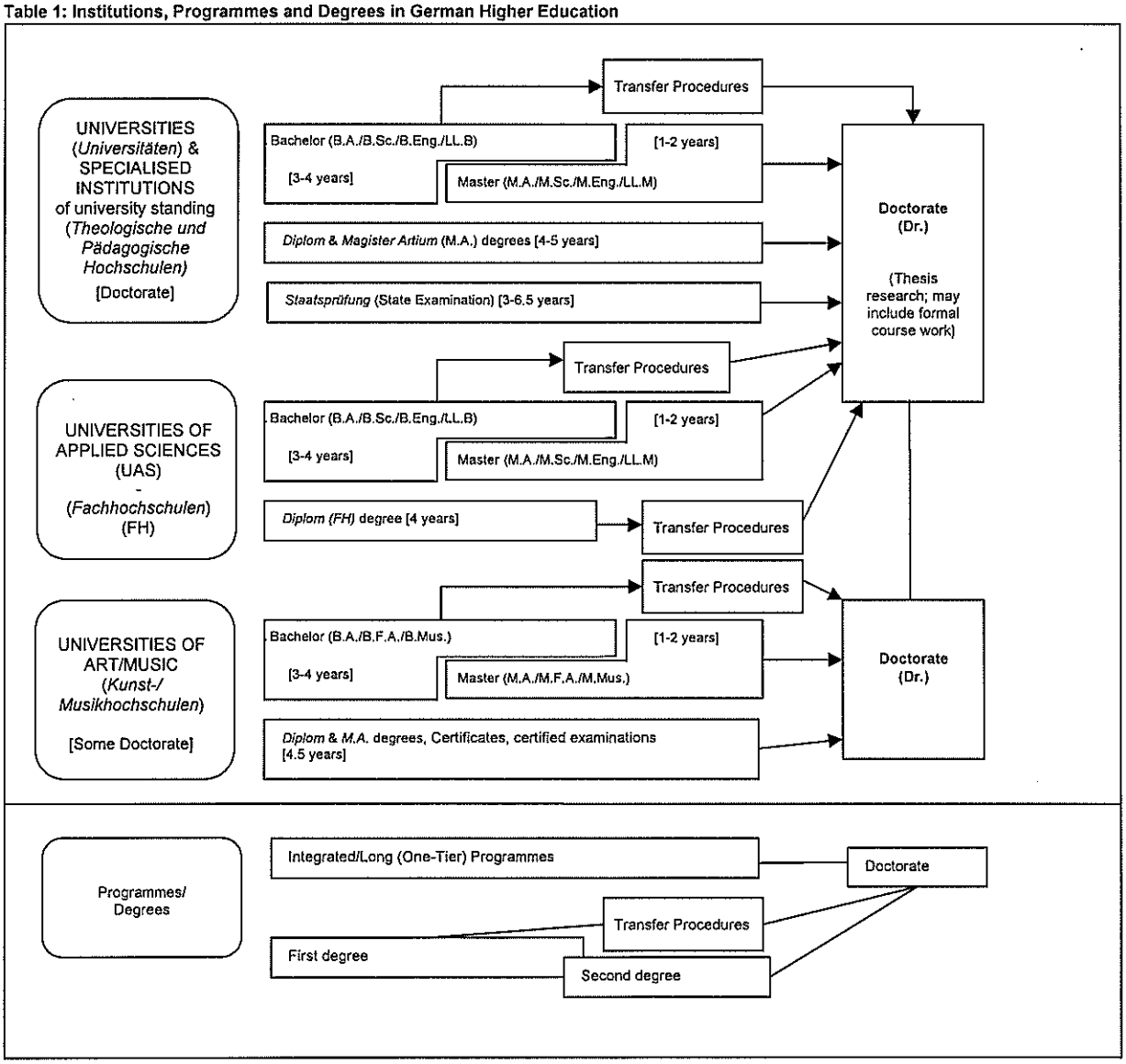
Within the framework of the Bologna-Process one-tier study programmes are successively being replaced by a two-tier study system. Since 1998, a scheme of first- and second-level degree programmes (Bachelor and Master) was introduced to be offered parallel to or instead of integrated "long" programmes. These programmes are designed to provide enlarged variety and flexibility to students in planning and pursuing educational objectives, they also enhance international compatibility of studies.

For details cf. Sec. 8.4.1, 8.4.2, and 8.4.3 respectively. Table 1 provides a synoptic summary.

8.3 Approval/Accreditation of Programmes and Degrees

To ensure quality and comparability of qualifications, the organization of studies and general degree requirements have to conform to principles and regulations established by the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany (KMK).[iii] In 1999, a system of accreditation for programmes of study has become operational under the control of an Accreditation Council at national level. All new programmes have to be accredited under this scheme; after a successful accreditation they receive the quality-label of the Accreditation Council.[iv]

Table 1: Institutions, Programmes and Degrees in German Higher Education



8.4 Organization and Structure of Studies

The following programmes apply to all three types of institutions. Bachelor's and Master's study courses may be studied consecutively, at various higher education institutions, at different types of higher education institutions and with phases of professional work between the first and the second qualification. The organization of the study programmes makes use of modular components and of the European Credit Transfer and Accumulation System (ECTS) with 30 credits corresponding to one semester.

8.4.1 Bachelor

Bachelor degree study programmes lay the academic foundations, provide methodological skills and lead to qualifications related to the professional field. The Bachelor degree is awarded after 3 to 4 years.
The Bachelor degree programme includes a thesis requirement. Study courses leading to the Bachelor degree must be accredited according to the Law establishing a Foundation for the Accreditation of Study Programmes in Germany.[v]
First degree programmes (Bachelor) lead to Bachelor of Arts (B.A.), Bachelor of Science (B.Sc.), Bachelor of Engineering (B.Eng.), Bachelor of Laws (LL.B.), Bachelor of Fine Arts (B.F.A.) or Bachelor of Music (B.Mus.).

8.4.2 Master

Master is the second degree after another 1 to 2 years. Master study programmes must be differentiated by the profile types "more practice-oriented" and "more research-oriented". Higher Education Institutions define the profile of each Master study programme.
The Master degree study programme includes a thesis requirement. Study programmes leading to the Master degree must be accredited according to the Law establishing a Foundation for the Accreditation of Study Programmes in Germany.[vi]
Second degree programmes (Master) lead to Master of Arts (M.A.), Master of Science (M.Sc.), Master of Engineering (M.Eng.), Master of Laws (L.L.M), Master of Fine Arts (M.F.A.) or Master of Music (M.Mus.). Master study programmes, which are designed for continuing education or which do not build on the preceding Bachelor study programmes in terms of their content, may carry other designations (e.g. MBA).

8.4.3 Integrated "Long" Programmes (One-Tier): *Diplom* degrees, *Magister Artium, Staatsprüfung*

An integrated study programme is either mono-disciplinary (*Diplom* degrees, most programmes completed by a *Staatsprüfung*) or comprises a combination of either two major or one major and two minor fields (*Magister Artium*). The first stage (1.5 to 2 years) focuses on broad orientations and foundations of the field(s) of study. An Intermediate Examination (*Diplom-Vorprüfung* for *Diplom* degrees; *Zwischenprüfung* or credit requirements for the *Magister Artium*) is prerequisite to enter the second stage of advanced studies and specializations. Degree requirements 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*. The level of qualification is equivalent to the Master level.

- Integrated studies at *Universitäten (U)* last 4 to 5 years (*Diplom* degree, *Magister Artium*) or 3 to 6.5 years (*Staatsprüfung*). The *Diplom* degree is awarded in engineering disciplines, the natural sciences as well as economics and business. 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 (*Diplom*, *Magister Artium* and *Staatsprüfung*) are academically equivalent. They qualify to apply for admission to doctoral studies. Further prerequisites for admission may be defined by the Higher Education Institution, cf. Sec. 8.5.

- Integrated 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 apply for admission to doctoral studies at doctorate-granting institutions, cf. Sec. 8.5.

- Studies at *Kunst- and Musikhochschulen* (Universities of Art/Music etc.) are more diverse in their organization, depending on the field and individual objectives. In addition to *Diplom/Magister* degrees, the integrated study programme awards include Certificates and certified examinations for specialized areas and professional purposes.

8.5 Doctorate

Universities as well as specialized institutions of university standing and some Universities of Art/Music are doctorate-granting institutions. Formal prerequisite for admission to doctoral work is a qualified Master (UAS and U), a *Magister* degree, a *Diplom*, a *Staatsprüfung*, or a foreign equivalent. Particularly qualified holders of a Bachelor or a *Diplom (FH)* degree may also be admitted to doctoral studies without acquisition of a further degree by means of a procedure to determine their aptitude. The universities respectively the doctorate-granting institutions regulate entry to a doctorate as well as the structure of the procedure to determine aptitude. Admission further requires the acceptance of the Dissertation research project by a professor as a supervisor.

8.6 Grading Scheme

The grading scheme in Germany 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.
In addition institutions may already use the ECTS grading scheme, which operates with the levels A (best 10 %), B (next 25 %), C (next 30 %), D (next 25 %), and E (next 10 %).

8.7 Access to Higher Education

The General Higher Education Entrance Qualification (*Allgemeine Hochschulreife*, *Abitur*) after 12 to 13 years of schooling allows for admission to all higher educational studies. Specialized variants (*Fachgebundende Hochschulreife*) allow for admission to particular disciplines. Access to *Fachhochschulen* (UAS) is also possible with a *Fachhochschulreife*, which can usually be acquired after 12 years of schooling. Admission to Universities of Art/Music may be based on other or require additional evidence demonstrating individual aptitude.
Higher Education Institutions may in certain cases apply additional admission procedures.

8.8 National Sources of Information

- *Kultusministerkonferenz (KMK)* [Standing Conference of the 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; Phone: +49[0]228/501-0
- Central Office for Foreign Education (ZaB) as German NARIC; 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 (www.kmk.org/doku/bildungswesen.htm; E-Mail: eurydice@kmk.org)
- *Hochschulrektorenkonferenz (HRK)* [German Rectors' Conference]; Ahrstrasse 39, D-53175 Bonn; Fax: +49[0]228/887-110; Phone: +49[0]228/887-0; www.hrk.de; E-Mail: sekr@hrk.de
- "Higher Education Compass" of the German Rectors' Conference features comprehensive information on institutions, programmes of study, etc. (www.higher-education-compass.de)

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[i] The information covers only aspects directly relevant to purposes of the Diploma Supplement. All information as of 1 July 2005.

[ii] *Berufsakademien* are not considered as Higher Education Institutions, they only exist in some of the *Länder*. They offer educational programmes in close cooperation with private companies. Students receive a formal degree and carry out an apprenticeship at the company. Some *Berufsakademien* offer Bachelor courses which are recognized as an academic degree if they are accredited by a German accreditation agency.

[iii] Common structural guidelines of the *Länder* as set out in Article 9 Clause 2 of the Framework Act for Higher Education (HRG) for the accreditation of Bachelor's and Master's study courses (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany of 10.10. 2003, as amended on 21.4.2005).

[iv] "Law establishing a Foundation 'Foundation for the Accreditation of Study Programmes in Germany'", entered into force as from 26.2.2005, GV. NRW. 2005, nr. 5, p. 45 in connection with the Declaration of the *Länder* to the Foundation "Foundation: Foundation for the Accreditation of Study Programmes in Germany" (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany of 16.12.2004.

[v] See note No. 4.

[vi] See note No. 4.