

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 Information identifying the holder of the qualification

- | | | |
|-----|---------------------------|------------------------|
| 1.1 | Family Name(s) | «Name» |
| 1.2 | First Name | «Vorname» |
| 1.3 | Date of birth | «GebDatumL» |
| 1.4 | Student ID number or code | Not of public interest |

2 Information identifying the qualification

- 2.1 Name of qualification and title conferred in original language

Bachelor of Science (B. Sc.) Lebensmitteltechnologie

- 2.2 Main field(s) of study for the qualification

Food Technology

- 2.3 **Name and status of awarding institution** in original language
Hochschule Neubrandenburg – University of Applied Sciences
Hochschule (University of Applied Sciences), State Institution of Mecklenburg-Vorpommern, Germany
- 2.4 **Name and status of institution (if different from 2.3) administering studies** in original language
Hochschule Neubrandenburg – University of Applied Sciences
State Institution of higher education / Mecklenburg-Vorpommern, Germany
- 2.5 **Language(s) of instruction/examination**
Mainly German
- 3 **Information on the level and duration of the qualification**
- 3.1 **Level of qualification**
First degree with thesis
- 3.2 **Official duration of programme in credits and/or years**
7 semesters (3.5 years), 16 weeks classes per semester, 30 ECTS credits per semester, one Semester of industry internship and Bachelor thesis included in semester 7.
- 3.3 **Access requirement(s)**
General higher education entrance qualification or subject restricted higher education entrance qualification for studies at universities of applied sciences or passing the admission examination at Neubrandenburg university of applied sciences.
- 4 **Information on the programme completed and the results obtained**
- 4.1 **Mode of study**
Full time, 1 Semester industry internship period
- 4.2 **Programme learning outcomes**

The program combines all fields of science and technology relevant for processing, quality assurance and distribution of foods, e.g. mathematics/statistics, chemistry, physics, human nutrition, raw materials, microbiology/hygiene, process engineering, packaging, technology of specific food items (meat, fish, dairy, confectionery, cereals, fruits, vegetables, oils), food biotechnology, and supply/waste management. Additional courses cover food and environmental legislation, management and business administration and computer application. Courses comprise lectures, seminar teaching, lab- and pilot-plant work and an internship in industry of one semester. An interdisciplinary education is promoted by case studies and project-related work. The study program will be completed with a bachelor thesis.

The qualification profile of the graduate is characterized by these items: i) knowledge of natural (physics, chemistry, microbiology) and engineering sciences; ii) knowledge of food properties and processing technologies (meat/fish, vegetables, oils, milk, beverages, cereals, beaked products, sweets), business administration; iii) capability to utilize interdisciplinary knowledge to implement operative solutions in food industry.

In addition to the generalist education, students also have the option of setting their own study focus in certain modules and thus specializing. During their studies, students can specialize in the areas of "Vegetarian and Vegan Food", "Quality Management" or "Sustainable Food Production".

The specific qualification goal of the "vegetarian and vegan food" specialization is that students acquire special knowledge and skills in the field of development, production and processing of vegetarian and vegan food.

The specific qualification goal of the "Quality Management" specialization is that students to acquire special knowledge and skills required for quality planning, control, assurance and improvement.

The specific qualification goal of the "Sustainable Food Production" specialization is that students acquire special knowledge and skills in the field of including particular measures for the optimal and resource-saving use of energy and raw materials and the use of residue flows, which the engineers can later implement practically and technically in the companies.

4.3 Programme details, individual credits gained and grades/marks obtained

See "Modulhandbuch" (Transcript) for list of courses and grades;

See "Zeugnis über die Bachelorprüfung" (Final Examination Certificate) for subjects offered in final examinations (written and oral), and topics of thesis, including evaluations.

4.4 Grading system and, if available, grade distribution table

The grading scheme is explained in section 8.6.

4.5 Overall classification of the qualification in original language

Based on weighted average of grades in examination fields. The following differentiations are possible:

| | | | | | | |
|-----|--------------|---|--------------|---|----|------------------|
| 1,0 | sehr gut | / | very good | = | A | 4,0 grade points |
| 1,3 | sehr gut | / | very good | = | A- | 3,7 grade points |
| 1,7 | gut | / | good | = | B+ | 3,3 grade points |
| 2,0 | gut | / | good | = | B | 3,0 grade points |
| 2,3 | gut | / | good | = | B- | 2,7 grade points |
| 2,7 | befriedigend | / | satisfactory | = | C+ | 2,3 grade points |
| 3,0 | befriedigend | / | satisfactory | = | C | 2,0 grade points |
| 3,3 | befriedigend | / | satisfactory | = | C- | 1,7 grade points |
| 3,7 | ausreichend | / | sufficient | = | D+ | 1,3 grade points |
| 4,0 | ausreichend | / | sufficient | = | D | 1,0 grade points |

5 Information on the function of the qualification

5.1 Access to further study

Qualifies to apply for admission to Master-Studies based on the overall classification.

5.2 Access to a regulated profession

The Bachelor-degree in an engineering discipline entitles its holder to exercise professional work in the field of engineering for which the degree was awarded, in particular for jobs in regional, national and international companies in various industries and positions, most common areas of responsibility:

- Production, product development, quality assurance
- Scientific institutes, research facilities and laboratories

- Public service (e.g. food control)
- Business consultings, associations and universities

6 Additional information

6.1 Additional information

Dean
 Fachbereich Agrarwirtschaft und Lebensmittelwissenschaften
 Hochschule Neubrandenburg
 University of Applied Sciences
 Brodaer Straße 2
 17033 Neubrandenburg
 Germany-

6.2 Further information sources

On the institution: www.hs-nb.de

7 Certification

This Diploma Supplement refers to the following original documents:

| | |
|---|--------------|
| Urkunde über die Verleihung des Bachelorgrades (Bachelor Certificate) dated | «PruefDatum» |
| Zeugnis über die Bachelorprüfung (Final Examination Certificate) dated | «PruefDatum» |
| Notenspiegel (Transcript of Records) dated | «PruefDatum» |

Certification Date: 1. November 2018

Official Stamp/Seal

Chairwoman/Chairman Examination Committee

8 Information on the German Higher Education System¹

8.1 Types of Institutions and Institutional status

Higher education (HE) studies in Germany are offered at three types of Higher Education Institutions (HEI).²

- *Universitäten* (Universities) including various specialised 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 (FH)/Hochschulen für Angewandte Wissenschaften (HAW)* (Universities of Applied Sciences, UAS) 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 an application-oriented focus of studies, which includes 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-recognised institutions. In their operations, including the organisation of studies and the designation and award of degrees, they are both subject to higher education legislation.

8.2 Types of Programs 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, two-tier degrees (Bachelor's and Master's) have been introduced in almost all study programmes. This change is designed to enlarge variety and flexibility for students in planning and pursuing educational objectives; it also enhances international compatibility of studies.

The German Qualifications Framework for Higher Education Qualifications (HQR)³ describes the qualification levels as well as the resulting qualifications and competences of the graduates. The

¹ The information covers only aspects directly relevant to purposes of the Diploma Supplement.

² *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 recognised as an academic degree if they are accredited by the Accreditation Council.

³ German Qualifications Framework for Higher Education Degrees. (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany of 16 February 2017).

three levels of the HQR correspond to the levels 6, 7 and 8 of the German Qualifications Framework for Lifelong Learning⁴ and the European Qualifications Framework for Lifelong Learning⁵. 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 organisation 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).⁶ In 1999, a system of accreditation for Bachelor's and Master's programmes has become operational. All new programmes have to be accredited under this scheme; after a successful accreditation they receive the seal of the Accreditation Council.⁷

8.4 Organization and Structure of Studies

The following programmes apply to all three types of institutions. Bachelor's and Master's study programmes 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 organisation 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.

Bachelor

Bachelor's degree programmes lay the academic foundations, provide methodological competences and include skills related to the professional field. The Bachelor's degree is awarded after 3 to 4 years.

The Bachelor's degree programme includes a thesis requirement. Study programmes leading to the Bachelor's degree must be accredited according to the Interstate study accreditation treaty.⁸

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.), Bachelor of Music (B.Mus.) or Bachelor of Education (B.Ed.).

The Bachelor's degree corresponds to level 6 of the German Qualifications Framework/ European Qualifications Framework.

Master

⁴ German Qualifications Framework for Lifelong Learning (DQR). Joint resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany, the German Federal Ministry of Education and Research, the German Conference of Economics Ministers and the German Federal Ministry of Economics and Technology (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany of 15 November 2012). More information at www.dqr.de

⁵ Recommendation of the European Parliament and the European Council on the establishment of a European Qualifications Framework for Lifelong Learning of 23 April 2008 (2008/C 111/01 – European Qualifications Framework for Lifelong Learning – EQF).

⁶ Specimen decree pursuant to Article 4, paragraphs 1 – 4 of the interstate study accreditation treaty (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany of 7 December 2017).

⁷ Interstate Treaty on the organization of a joint accreditation system to ensure the quality of teaching and learning at German higher education institutions (Interstate study accreditation treaty) (Decision of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany of 8 December 2016), Enacted on 1 January 2018.

⁸ See note No. 7

Master is the second degree after another 1 to 2 years. Master's programmes may be differentiated by the profile types "practice-oriented" and "research-oriented". Higher Education Institutions define the profile.

The Master's degree programme includes a thesis requirement. Study programmes leading to the Master's degree must be accredited according to the Interstate study accreditation treaty.⁹

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.), Master of Music (M.Mus.) or Master of Education (M.Ed.). Master's programmes which are designed for continuing education may carry other designations (e.g. MBA).

The Master's degree corresponds to level 7 of the German Qualifications Framework/ European Qualifications Framework.

**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 specialisations. 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's level.

- Integrated studies at *Universitäten (U)* last 4 to 5 years (*Diplom* degree, *Magister Artium*) or 3.5 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 and pharmaceutical professions are completed by a *Staatsprüfung*. This applies also to studies preparing for teaching professions of some *Länder*. The three qualifications (*Diplom*, *Magister Artium* and *Staatsprüfung*) are academically equivalent and correspond to level 7 of the German Qualifications Framework/European Qualifications Framework. 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)/Hochschulen für Angewandte Wissenschaften (HAW)* (Universities of Applied Sciences, UAS) last 4 years and lead to a *Diplom (FH)* degree which corresponds to level 6 of the German Qualifications Framework/European Qualifications Framework. Qualified graduates of FH/HAW/UAS 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 organisation, depending on the field and individual objectives. In addition to *Diplom/Magister* degrees, the integrated study programme awards include certificates and certified examinations for specialised areas and professional purposes.

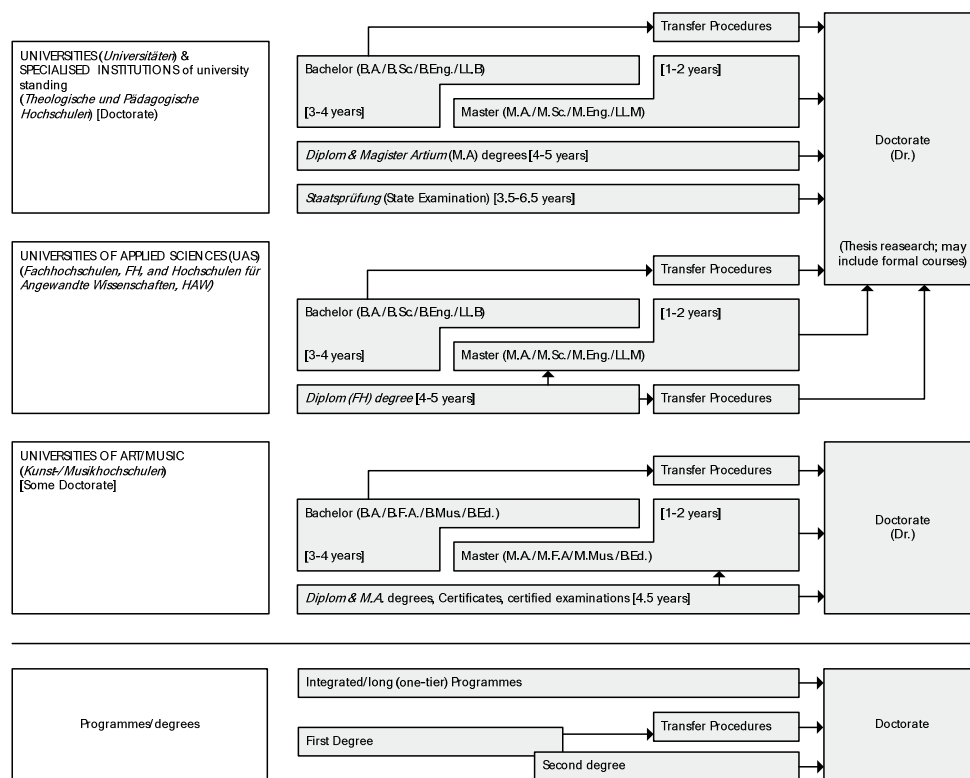
⁹ See note No. 7

Doctorate

Universities as well as specialised institutions of university standing, some of the FH/HAW/UAS and some Universities of Art/Music are doctorate-granting institutions. Formal prerequisite for admission to doctoral work is a qualified Master's degree (UAS and U), a *Magister* degree, a *Diplom*, a *Staatsprüfung*, or a foreign equivalent. Comparable degrees from universities of art and music can in exceptional cases (study programmes such as music theory, musicology, pedagogy of arts and music, media studies) also formally qualify for doctoral work. Particularly qualified holders of a Bachelor's degree 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.

The doctoral degree corresponds to level 8 of the German Qualifications Framework/ European Qualifications Framework.

Table 1 Institutions, Programmes and Degrees in German Higher Education



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, grade distribution tables as described in the ECTS Users' Guide are used to indicate the relative distribution of grades within a reference group.

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. Specialised variants (*Fachgebundene Hochschulreife*) allow for admission at *Fachhochschulen (FH)/Hochschulen für Angewandte Wissenschaften (HAW) (UAS)*, universities and equivalent higher education institutions, but only in particular disciplines. Access to study programmes at *Fachhochschulen (FH)/Hochschulen für Angewandte Wissenschaften (HAW) (UAS)* is also possible with a *Fachhochschulreife*, which can usually be acquired after 12 years of schooling. Admission to study programmes at Universities of Art/Music and comparable study programmes at other higher education institutions as well as admission to a study programme in sports may be based on other or additional evidence demonstrating individual aptitude.

Applicants with a qualification in vocational education and training but without a school-based higher education entrance qualification are entitled to a general higher education entrance qualification and thus to access to all study programmes, provided they have obtained advanced further training certificates in particular state-regulated vocational fields (e.g. *Meister/Meisterin im Handwerk, Industriemeister/in, Fachwirt/in (IHK), Betriebswirt/in (IHK) und (HWK), staatlich geprüfte/r Techniker/in, staatlich geprüfte/r Betriebswirt/in, staatlich geprüfte/r Gestalter/in, staatlich geprüfte/r Erzieher/in*). Vocationally qualified applicants can obtain a *Fachgebundene Hochschulreife* after completing a state-regulated vocational education of at least two years' duration plus professional practice of normally at least three years' duration, after having successfully passed an aptitude test at a higher education institution or other state institution; the aptitude test may be replaced by successfully completed trial studies of at least one year's duration.¹⁰

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];
Graurheindorfer Str. 157, D-53113 Bonn; Phone: +49[0]228/501-0; www.kmk.org; E-Mail: hochschulen@kmk.org
- Central Office for Foreign Education (ZaB) as German NARIC; www.kmk.org; E-Mail: zab@kmk.org
- German information office of the *Länder* in the EURYDICE Network, providing the national dossier on the education system; www.kmk.org; E-Mail: Eurydice@kmk.org
- *Hochschulrektorenkonferenz (HRK)* [German Rectors' Conference]; Leipziger Platz 11, D-10117 Berlin; Phone: +49 30 206292-11; www.hrk.de; E-Mail: post@hrk.de
- "Higher Education Compass" of the German Rectors' Conference features comprehensive information on institutions, programs of study, etc. (www.higher-education-compass.de)

¹⁰ Access to higher education for applicants with a vocational qualification, but without a school-based higher education entrance qualification (Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany of 6 March 2009).

Study Program „Food Technology“ (Bachelor of Science)

| | | | |
|------------------------|---|--|--|
| 1. Term | Introduction to Engineering | Human Nutrition & Food Science 1 | Physics |
| | 1st Bachelor Project | Chemistry | Mathematics and Statistics |
| 2. Term | Human Nutrition & Food Science 2 | Introduction to Food Technology | Technical Thermodynamics & Fluid Mechanics |
| | Food-Physics | | Food Law / Food Legislation |
| 3. Term | Microbiology | English for Food Technologists | Process Engineering 1 |
| | Sensory Evaluation of Food | Technology of Packaging | Business Economics & Cost Calculation |
| 4. Term | Quality Management and Food Hygiene | Sustainable Supply and Environmental Technology | Business Management/ Management |
| | Dairy Technology | Process Engineering 2 | Food Chemistry |
| 5. Term | Meat- and Fish-Technology | Technology of Vegetables, Fruits & Oils | Technology of Confectionary & Beverages |
| | Electives • Fermentation Technology • Biomass to Energy Technology • Interdisciplinary Project Seminar | | 2nd Bachelor Project |
| 6. Term | Industrial Biotechnology | Electives • Quality Management in Food Production • Sustainable Food Production • Vegan and Vegetarian Food | |
| | Technology of Cereals and Vegan Substitute Products | | |
| Internship in Industry | | | |
| 7. Term | Advanced Academic Procedures | Bachelor Thesis | |
| | | | |