

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 |
| 2.2 | Master of Science (M. Sc) "Food Chain Environments" |
| 2.3 | Main field(s) of study for the qualification |
| | Food Chain in Bioproduct Technology, Agriculture and Dietetics |

- 2.4 **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
- 2.5 **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
- 2.6 **Language(s) of instruction/examination**
Mainly German
- 3 **Information on the level and duration of the qualification**
- 3.1 **Level of qualification**
Second degree with thesis
- 3.2 **Official duration of programme in credits and/or years**
1.5 3 year, full time or (depending on candidate's qualification) 2 years full time including an industrial internship, 16 weeks classes per semester, 30 ECTS credits per semester, one Semester of Master thesis included in semester 3.
- 3.3 **Access requirement(s)**
Bachelor degree of Science & Food Technology, Agriculture or Dietetics including a 1 term (min. 5 month) internship in related industry / institutes / hospitals. Equivalent type of education may be recognized for admission by the examination board.
- 4 **Information on the programme completed and the results obtained**
- 4.1 **Mode of study**
Full-time, 3 years including 1 term for master thesis or (depending on candidate's qualification) 2 years full time including e. g. an industrial internship
- 4.2 **Programme learning outcomes**
Graduates of this course can analyze the diverse challenges in the food chain and develop concepts for solving problems along the food chain. Topics such as the supply of raw materials, food safety, hygiene, logistics, traceability and sustainability, bioeconomy, marketing and corporate management, dietary aspects and alternative diets play a particularly important role. Through the combination of various interdisciplinary skills, graduates understand the individual links in the food chain and can thus design, optimize and implement scientifically sound concepts along the food chain.

Especially in the modules "Interdisciplinary Food Chain Seminar", "Interdisciplinary Project Seminar" and "Master's Thesis with Colloquium", the students deepen their skills in interdisciplinary, self-organized teamwork. According to their individual interests, students can specialize by choosing one of the three specializations "Bioeconomy & Sustainability", "Future Food" and "Quality Management" and by taking compulsory elective modules. The range of courses is supplemented by university-wide events in the so-called "Studium Plus". In the sense of a "Studium Generale", interdisciplinary offers are provided that support the general personality development of the students.

Graduates of the "Bioeconomy & Sustainability" specialization have, among other things, special knowledge and skills in the field of sustainable food production and processes for the production of fine and specialty chemicals. This includes measures for the optimal and resource-saving use of energy and raw materials and the use of residual material flows or new sources of raw materials, which the engineers can later implement practically and technically in the companies.

Graduates of the "Future Food" specialization can, among other things, act as intermediaries or consultants in the development of verifiably health-promoting foods in the food industry. They know the current state of science on the effects of nutrition on the human body in general and of individual bioactive food components in particular. They are able to critically evaluate international primary and secondary literature from epidemiological cohort studies and clinical nutrition research. They know the requirements of the European food safety authority EFSA for the submission of health claim applications and their labelling. They understand international agricultural development, are familiar with the technology and processing of vegetarian food and have working knowledge of marketing and business management.

Graduates of the Quality Management specialization are, among other things, able trace biological, chemical and physical hazards in all areas of the food chain environment and prevent, reduce or eliminate them at the most suitable interfaces. They also know the parameters and methods relevant to quality assurance, so that they can optimally influence quality-related factors along the food chain.

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

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

See "Zeugnis über die Masterprüfung" (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 doctoral studies.

5.2 Access to a regulated profession

The Master-degree entitles its holder to exercise professional work in the food chain, in particular for jobs in the higher management of regional, national and international companies in various industries and positions, most common areas of responsibility:

- Production, quality assurance etc. in farms, the food industry or in healthcare facilities
- Scientific institutes, research facilities and laboratories
- Higher service in public administration
- Business consultings, associations and universities
- Food Supply Chain Management

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»

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.

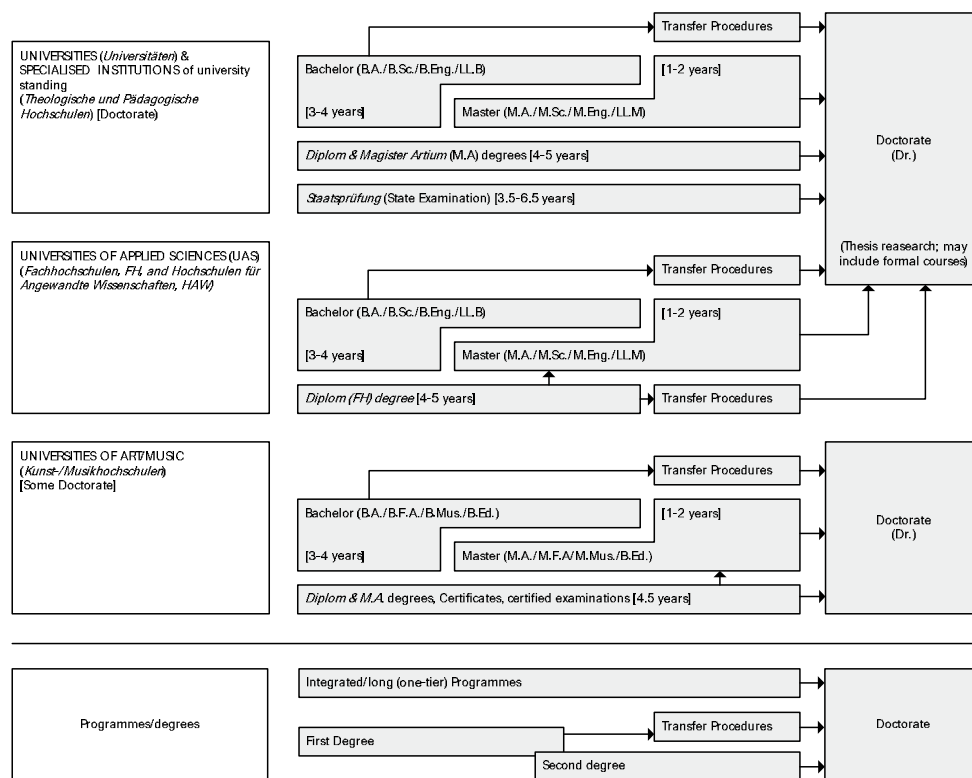
⁹ See note No. 7

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).

Food Chain Environments (Master of Science)

1. Term	Life cycle assessment	Food-Chain Ring Lecture	Interdisciplinary food chain project
	Elective Modul 1*	Elective Modul 2 *	
2. Term	Interdisciplinary project	Global nutrition and planetary health	Advanced Food-Biotechnology and Sustainability
	Elective Modul 3 **	Elective Modul 4**	
3. Term	Master-Thesis		

* Elective module of the summer semester for "Bioeconomy and Sustainability" selectable:

- Current Topics in Non-Food-Products
- Plant protection management and crop analysis in arable farming
- International agricultural development
- Health effects of food

** Elective module of the winter semester for "Bioeconomy and Sustainability" selectable:

- Technology/Processing of vegetarian/vegan food
- Environmental economics / environmental policy
- Seminar Precision Farming / Precision Livestock Farming

* Elective module of the summer semester for "Future Food" selectable:

- Marketing Research Methods
- Labeling and Marketing of Packaging
- International agricultural development
- Health effects of food

** * Elective module of the winter semester for "Future Food" selectable:

- Technology/Processing of vegetarian/vegan food
- Strategic communication along the food cycle
- Business Plan and Operation Research

* Elective module of the summer semester for "Quality Management" selectable:

- Antibiotic Resistance from farm to fork
- Strategic management: decision-making, project management, cooperation
- Health effects of food

** Elective module of the winter semester for "Quality Management" selectable:

- Strategies of Preservation
- Traceability and Process-Analytics
- Methods of Quality- and Project Management
- Management and Business Administration

A total of three of the four compulsory elective modules must be chosen from the modules listed under the respective specialization. The fourth compulsory elective module can also be chosen from the compulsory elective modules of the other specializations.