# ▲Hochschule Harz

Hochschule für angewandte Wissenschaften
Harz University of Applied Sciences

# Diploma Supplement

## Hans Mustermann

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 / 1.2 First Name**

Mustermann, Hans

**1.3 Date, Place of Birth**

1990-01-01, Wernigerode

**1.4 Student ID Number - Enrolment Code**

21800

---

**2. QUALIFICATION**

**2.1 Name of qualification and title conferred (in original language)**

Bachelor of Science (B. Sc.)

**Title Conferred (full, abbreviated; in original language)**

Does not apply

**2.2 Main Field(s) of Study**

Computer Science/E-Administration

**2.3 Institution Awarding the Qualification (in original language)**

Hochschule Harz - Hochschule für angewandte Wissenschaften

**Status (Type and Control)**

University of Applied Sciences / State University

**2.4 Institution Administering Studies (in original language)**

Hochschule Harz - Hochschule für angewandte Wissenschaften

**Status (Type and Control)**

University of Applied Sciences / State University

**2.5 Language(s) of Instruction and Examination**

German

# Hans Mustermann

**3. LEVEL OF THE QUALIFICATION**

**3.1 Level**

Graduate/ first professional qualifying degree with degree thesis

**3.2 Official duration of programme in credits and years**

3 years with 6 semesters, 1 pre-semester and 5 inter-semesters, 180 ECTS

**3.3 Access Requirements**

Before beginning the studies, one of the following conditions for admission must be fulfilled:

- General Higher Education Entrance Qualification
- Specialised Higher Education Entrance Qualification
- General Higher Education Entrance Qualification for Universities of Applied Science
- University Administered Entrance Exam
- A qualification for entrance to higher education deemed equivalent by the Land Saxony-Anhalt.

---

**4. CONTENTS AND RESULTS GAINED**

**4.1 Mode of Study**

Full time, on-campus programme

**4.2 Programme learning outcomes**

The interdisciplinary study programme in Computer Science/E-Administration qualifies professionals who assume responsibilities of providing IT support for administrative processes and public services. They support public authorities in the planning and implementation of e-government projects. Graduates were seconded for studying from their employing public authority.

In detail, competences were achieved in the following areas:

Computer Science Competence
Graduates independently design and implement programmes for specific e-government applications, including content management and database systems, geoinformation applications and mobile apps. They use current technology trends to design network architectures, administrative procedures and citizen-centered online access to public services. As part of this, they take into account e-security specifications and standards.

Administrative Science Competence
With consideration of legal and administrative aspects, graduates assess, optimise and implement the technical requirements for online services and IT solutions. They appropriately apply common methods of project management and economic efficiency analyses. They model administrative processes, identify workflow overlaps and support change processes.

Methodical Competence
Graduates collaborate closely with functional departments to identify and assess relevant IT support problems and derive suitable solution strategies. They select methods and instruments appropriate to the problem and apply them competently.

Systemic Competence
Graduates combine technical and methodological competences and master the complexity of real problems in the field of e-government. This includes the skills to retrieve and interpret necessary information and to derive scientifically sound conclusions from it. They adapt courses of action and approaches to solutions to changing framework conditions and design corresponding development processes in a targeted manner.

Personal Competence
Graduates continue working and learning processes independently and constantly enhance their skills. They reflect on goals and actions against the background of IT-technical, economic, social and cultural effects. They steer team

cooperation, and support teams members' professional and personal development. They formulate and advocate their professional positions in an appropriate and coherent manner.

# Hans Mustermann

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

| Courses taken | Grade | Performance Appraisal | ECTS credits |
|---|---|---|---|
| Introduction to Mathematics | 2,0 | good | 2,5 |
| Mathematics eAdministration I | 1,7 | good | 10 |
| Mathematics eAdministration II | 2,0 | good | 5 |
| Introduction to Practical Computer Science | 2,3 | good | 5 |
| Fundamentals of Computer Science | 1,7 | good | 5 |
| Communication Networks | 2,0 | good | 2,5 |
| IT Cost-Benefit Analysis | 2,0 | good | 5 |
| Introduction to English | | passed | 1 |
| Research and Working Techniques | 2,3 | good | 6,5 |
| Administrative Process Modelling and Geodata Management | 2,3 | good | 5 |
| Law and Administration | 1,7 | good | 5 |
| English | 2,0 | good | 2,5 |
| Programme and Data Structures | 2,0 | good | 10 |
| Computer Networks and Applications in Public Administrations | 2,0 | good | 5 |
| IT Security in Public Administration Networks | 2,3 | good | 5 |
| Database Systems 1 | 2,0 | good | 5 |
| Operating Systems | 2,0 | good | 2,5 |
| Mobile Applications and Infrastructures for Public Administrations | 1,7 | good | 5 |
| Security and Networked Administration / Project Management | 2,0 | good | 7,5 |

# Hans Mustermann

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

| Courses taken | Grade | Performance Appraisal | ECTS credits |
|---|---|---|---|
| Human-Computer Interaction for Public Administration Purposes | 2,3 | good | 5 |
| Software Engineering for Public Administration Purposes | 1,7 | good | 5 |
| Fundementals of Algorithms | 2,0 | good | 2,5 |
| Object-Oriented Software Technology and Programming Paradigms | 2,3 | good | 2,5 |
| Service-oriented IT Architecture and eGovernment; Web Services and Infrastructures | 1,7 | good | 5 |
| Geographical Information Systems and Image Processing for Public Administration Purposes | 2,0 | good | 5 |
| Programming of Distributed Application Interfaces | 2,3 | good | 2,5 |
| Multimedia | 2,0 | good | 5 |
| Data and Knowledge Management | 2,3 | good | 5 |
| Formal Methods and Process-Oriented Draft | 2,0 | good | 5 |
| eGovernment Seminar | 1,7 | good | 2,5 |
| Team Project | 1,7 | good | 5 |
| Components and Administrative Management | 2,0 | good | 5 |
| Work Placement | | passed | 15 |
| Colloquium | 1,7 | good | 3 |

# Hans Mustermann

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

| Courses taken | Grade | Performance Appraisal | ECTS credits |
|---|---|---|---|
| | | | |
| Bachelor Thesis | 2,0 | good | 12 |
| Theme: Hier steht dann der Titel der Bachelor- bzw. Masterarbeit | | | |
| | | Total ECTS credit points | 180 |

**4.4 Grading Scheme and Grade Distribution of Overall Performances**

The distribution of grades for overall performances has been calculated based on the overall performance results in this programme of study since its opening (2007).
Number of Graduates: 123

| HS Harz grade | Performance | Performance appraisal | Performance appreciation | Grade Distribution | Cumulation |
|---|---|---|---|---|---|
| 1,0 | 95 - 100 % | Very good | An excellent performance | 10 % | 10 % |
| to 1,3 | 90 - 94 % | | | 5 % | 15 % |
| to 1,7 | 85 - 89 % | Good | A performance significantly above average standard | 7 % | 22 % |
| to 2,0 | 80 - 84 % | | | 10 % | 32 % |
| to 2,3 | 76 - 79 % | | | 18 % | 50 % |
| to 2,7 | 72 - 75 % | Satisfactory | An average performance | 15 % | 65 % |
| to 3,0 | 68 - 71 % | | | 13 % | 78 % |
| to 3,3 | 63 - 67 % | | | 12 % | 90 % |
| to 3,7 | 58 - 62 % | Sufficient | A performance which meets minimum requirements despite of shortcomings | 8 % | 98 % |
| to 4,0 | 50 - 57 % | | | 2 % | 100 % |

# Hans Mustermann

**4.5 Overall Classification of the qualification (in original language)**

gut (2,0)

At degree awarding date, this overall performance was among the best 50 % referring to 123 graduates of this study programme since its opening (2007).

---

**5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION**

**5.1 Access to Further Study**

Qualification for admission to study programmes at Master level.

**5.2 Access to regulated professions**

The degree programme fulfils the legal conditions for the first entry-level office to the career path "Service as a computer scientist" of the civil service according to the Regulation on career paths of civil servants in the state of Saxony-Anhalt of 27 January 2010 in the version of 24 June 2019.

---

**6. ADDITIONAL INFORMATION**

**6.1 Additional Information**

**6.2 Further Information Sources**

www.hs-harz.de
phone +49 3943 659-300

---

**7. CERTIFICATION**

**This Diploma Supplement refers to the following original documents:**

Urkunde über die Verleihung des Grades issued on 26.03.2021

Prüfungszeugnis issued on 26.03.2021

Transcript of Records issued on 26.03.2021

Certification Date: 2021-03-26

---

**Chairperson Examination Committee**

**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.

# Hans Mustermann

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

### 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 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, 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 three levels of the HQR correspond to the levels 6, 7 and 8 of the German Qualifications Framework for Lifelong Learning [4] and the European Qualifications Framework for Lifelong Learning [5].

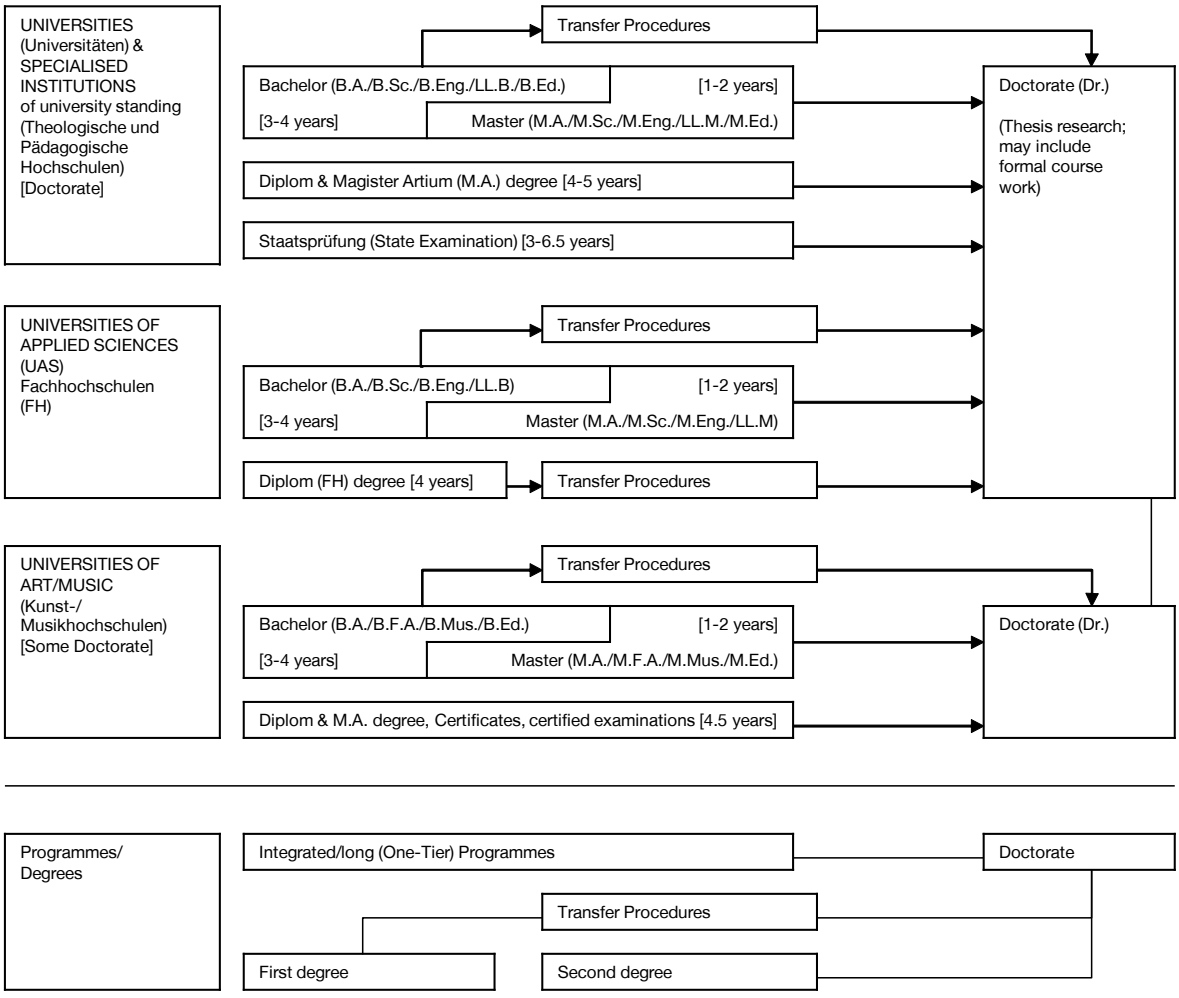
For details cf. Sec. 8.4.1, 8.4.2, and 8.4.3 respectively. Table 1 provides a synoptic summary.

### 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]

# Hans Mustermann

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 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.

# Hans Mustermann

**8.4.1 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.

**8.4.2 Master**

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.

**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 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.

# Hans Mustermann

**8.5 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.

**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, 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 gebrüfte/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.

# Hans Mustermann

**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-53117 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, programmes of study, etc. (www.higher-education-compass.de)

---

[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).

[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.

[9] See note No. 7.

[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).