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SmartVET HighED

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Examination and study regulations for Building Technology and Renewable Energies degree program with integrated master craftsman training in heating engineering

SmartVET–HighED
Development of a study program with an integrated master craftsman / bachelor's degree

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Introduction of the project

Small and medium-sized enterprises (SMEs) in the European Union are facing a growing challenge: there is a shortage of qualified managers and specialists. This affects economic development and prosperity in the EU. Countries such as Austria and Germany have traditionally relied on vocational training, particularly master craftsman training, to train entrepreneurs and skilled workers. However, master craftsman training is becoming less attractive. Young people more often prefer academic courses of study, which they see as better suited to more global career opportunities. Despite being classified at the same level (6) of the European Qualifications Framework as a bachelor's degree, master craftsman training is often considered less desirable. In addition, the skills and qualifications from master craftsman training are rarely recognized as credits for university studies. The situation is exacerbated by the fact that training in European countries is not uniform and the completion of a master craftsman's qualification is rarely recognized across national borders. Traditional degree courses also have their problems: many students drop out or lack practical skills after graduation. While master craftspeople often have extensive practical experience, they lack business knowledge. Academics, on the other hand, have theoretical knowledge but often lack practical experience. This leads to difficulties for SMEs in finding suitable skilled workers. The SmartVET-HighED project aims to solve these challenges through a combination of master craftsman training and academic studies. This combination is intended to close the gap between specialist practice, theory and vocational knowledge and thus contribute to innovations in vocational training. The dual degree is intended to support future generations by imparting extensive and necessary skills in a manageable amount of time. In addition, the project aims to create EU-wide solutions for education-related challenges through the international transfer of results.[1] The first work package of the project was designed to find a suitable technical orientation for the degree program that addressed the topic of automation. After a comprehensive examination of the framework conditions, the project consortium agreed on a dual study program with integrated vocational training or an integrated master craftsman's degree on the subject of smart building. Following an examination of the country-specific requirements, which also form the basis for Result 3, the second work package dealt with the development of a module handbook for the course and its evaluation. The module handbook also contains a curriculum. Figure 1 shows how the course is structured with integrated vocational, master craftsman and Bachelor's degrees. After 8 semesters and 210 ECTS points, graduates can look back on extensive experience in vocational and higher education and have the opportunity to obtain three degrees.

[1] Vgl. Projektantrag SmartVET-HighED (2021), 5.

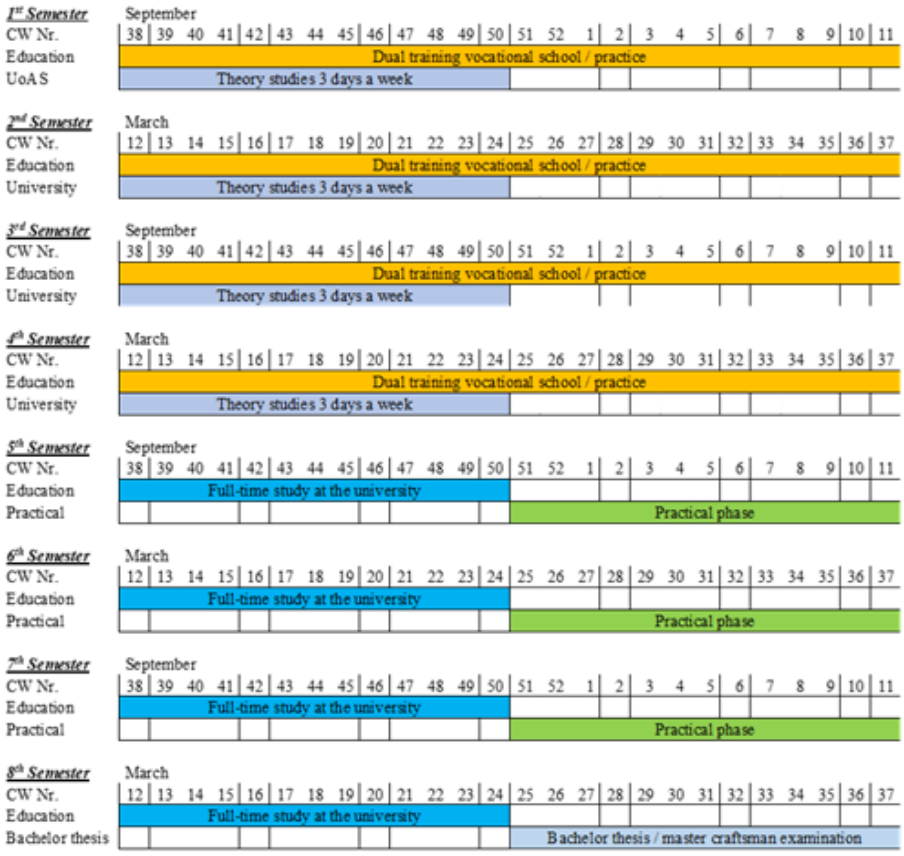

***Figure 1**: Curriculum*

Due to the structure of the dual study program, it is necessary to consider three learning locations. As part of the third work package, the design of examination regulations is essential. This document deals with the examination regulations for a dual bachelor's degree program with an integrated vocational or master's degree in Austria. As can be seen in Figure 1, the legal framework conditions for the different learning venues must be considered when attending a vocational school and completing a Bachelor's degree course. This document is therefore divided into two main sections: The first part (Chapter 1) is devoted to the examination regulations for the Bachelor's degree course using the example of the University of Graz, while the second part (Chapter 2) deals with the examination regulations for the vocational or master craftsman's degree. The combination of these two parts then results in the examination regulations for the dual bachelor's degree program with integrated vocational and master's degree of the Austrian working group.

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Part 1: Examination and study regulations for the Building Technology and Renewable Energies degree program

(applicable for Germany/Lithuania)

§ 1 Scope of application

These Examination and Study Regulations (ESR) apply to the Building Technology and Renewable Energies degree program at the University of Applied Sciences XX (hereinafter referred to as “university”).

§ 2 Aim of study

Teaching and studies should prepare students for their professional field of activity and provide them with the necessary specialist knowledge, skills and methods to enable them to work scientifically and act responsibly in their profession. To this end, a broad-based, scientifically sound qualification as a basis for professional practice is taught in application-oriented teaching in cooperation with suitable companies in professional practice (professional qualification). Students should be enabled to plan, implement and evaluate interventions independently and in cooperation with others, considering scientific findings and recognizing and considering their significance for individuals, society and professional practice.

§ 3 Standard period of study, program structure

(1) The standard period of study is eight (8) semesters.

(2) The standard period of study includes the teaching services of the university, those of the cooperation/practical partners, the practical modules and the examinations. The degree program is dual. Theoretical and practical phases alternate. The chronological sequence can be found in Appendix 1.

(3) The degree program concludes with the passing of all modules defined by this ESR.

(4) The modules required for the degree are listed in Appendix 2.

§ 4 Practical phases

(1) The practical relevance of the study program is primarily ensured by the dual training with the practical phases.

(2) Eight practical phases are integrated into the degree program; these alternate with the theoretical phases. The duration and location of the practical phases are regulated in Annex 1. Students remain enrolled at the university during the practical phases.

(3) The university works together with the practical companies on all issues relating to the practical training of students.

(4) The practical company should only be changed during the course of study for urgent reasons so as not to impair the continuity of the experience.

(5) In each of the first six practical phases, the student must complete a practical assignment (§ 11), which has the status of coursework, and in the seventh practical phase, the Bachelor's thesis (§ 12), which has the status of an examination. On the basis of the practical work or

Bachelor's thesis, a decision is made as to whether the student has successfully completed the respective practical phase. If the practical phase is not recognized, it can be repeated once. The examination board is responsible for the decision.

(6) Students are responsible for obtaining a place for the practical phase. Further details are regulated in the admission and matriculation regulations.

(7) Appendix 2 specifies the minimum coursework and examinations that must be completed in order to properly complete the respective practical phase.

§ 5 Study and examination structure

(1) The university works together with the cooperation/practice partners on all issues relating to the practical training of students.

(2) As a rule, 30 credit points can be earned per semester. The degree program is completed when all associated credit points have been earned, and all modules have been completed. The number of credit points required is listed in Appendix 2.

(3) The course is divided into modules, which are subdivided into module parts. Each module is completed by a module examination, which usually takes place during the semester and in the separate examination week after the lecture period (see Annex 1). Module examinations may also consist of one or more coursework and examinations corresponding to their module parts. The type and scope of module examinations are regulated in Annex 2.

(4) The Bachelor's examination consists of all module examinations including the Bachelor's thesis.

§ 6 Examination dates and deadlines

(1) Students will be informed in good time about the type and number of examinations and coursework to be completed for a module examination as well as the dates and resit dates on which they are to be completed and their modalities and registration deadlines, which are determined by the Examination Board. The same applies to the Bachelor's thesis.

§ 7 General admission requirements

(1) Only students who were enrolled (matriculated) at the university at least in the semester prior to the respective module examination may be admitted to the examination.

(2) The examination board decides on admission. It may only be rejected if

1. the requirements specified in para. 1 are not fulfilled;
2. the documents are incomplete;
3. the candidate has lost his/her right to take the examination by exceeding the deadlines for registering for or taking the respective examination,
4. the Bachelor's examination has been definitively failed.

§ 8 Types of examination and coursework

(1) Prüfungs- und Studienleistungen sind Leistungsnachweise, die

1. orally/practically (§ 9) and/or
2. through written examinations (§ 10) and/or
3. through project work (§ 11) and/or
4. by examination types other than those provided for in Annex 2 and
5. through the Bachelor's thesis (§ 12)

are to be completed. The Examination Board may provide for other controlled examination and study achievements that can be assessed according to the same standards. The type of performance record can be found in Annex 2.

(2) The examinations are graded assessments. Coursework may be assessed or unassessed.

(3) The teaching and examination languages are generally German and English. If required, other languages may also be used for teaching and examinations. The specification for each course is made in the module descriptions, which are announced to the university before the start of the respective semester.

§ 9 Oral/practical examinations

(1) Through oral/practical examinations, students should demonstrate that they recognize the interrelationships of the examination area and are able to classify special questions in these contexts, as well as master the selection, application, implementation and reflection of the practical content. Furthermore, it should be determined whether they have a broad basic knowledge.

(2) Oral/practical examinations, the failure of which leads to the final failure of the module, should be assessed by at least two examiners and can be taken as a group examination or as an individual examination.

(3) The minimum duration of an oral/practical examination should not be less than 15 minutes.

(4) The main subjects and results of the oral/practical examination must be recorded in a protocol.

(5) Students who wish to take the same module examination at a later examination date should be admitted as listeners, depending on the spatial conditions, unless the person to be examined objects. However, admission does not extend to the consultation and announcement of the examination results.

§ 10 Exams

(1) In written examinations, students should demonstrate that they can solve problems and work on topics using the usual methods of their subject in a limited amount of time and with limited resources. The written examination should also determine whether they have the necessary

basic knowledge. Students can be given a choice of topics. Written examinations can be carried out partially or completely using the answer-choice method.

(2) Examination performances in written examinations, where there is no alternative in the event of a final failure, should be assessed by at least two examiners.

(2) The duration of the examinations depends on the number of teaching hours planned for the corresponding module. The planned standard times can be found in Appendix 2.

§ 11 Project work

(1) Project work (homework, case report, portfolio, draft, paper, presentation, experimental work, etc.) is generally used to demonstrate the ability to work in a team and/or to develop, implement and present concepts in a scientifically sound manner. Here, the candidate should demonstrate that they can define objectives for a larger task, develop interdisciplinary solutions and concepts and carry out empirical studies competently in accordance with their level of training.

(2) The respective type and duration of the project work are specified in Annex 2.

(3) In the case of project work carried out in the form of group work, the contribution of the individual examinee must be clearly recognizable and assessable and must meet the requirements of paragraph 1. By way of derogation from sentence 1, a team assignment performed as team work may also be assessed as such with a uniform assessment for all participants in a team after prior notification.

(4) A special form of project work is practical work, which has the status of coursework. The practical work is supervised by two examiners, one of whom must be a professor at the university (see § 20). The second examiner may also be a person with experience in professional practice and training who has at least the qualification to be determined by the Bachelor's examination or an equivalent qualification.

§ 12 Bachelor thesis and colloquium

(1) The Bachelor's thesis, which has the status of an examination, should demonstrate that the candidate is able to work independently on a problem in the relevant subject using scientific methods within a specified period of time. The processing time for the Bachelor's thesis is specified in Annex 1. The Bachelor's thesis is examined by two examiners.

(2) The Bachelor's thesis is an admission-restricted module. Only those who have achieved at least 120 credit points and have completed all modules of the first two semesters are admitted to the Bachelor's thesis.

(3) The Bachelor's thesis is issued by the Examination Office. The topic and date must be recorded. Students may express topic requests. Upon request, the Examination Board will arrange for the Bachelor's thesis to be issued in good time.

(4) The Bachelor's thesis may also take the form of a group thesis if the individual contribution to be assessed is clearly distinguishable and assessable on the basis of the specification of sections, page numbers or other objective criteria that enable clear differentiation and fulfills the requirements of paragraph 1. In the case of group work, the number of group members should not exceed three.

(5) The application for admission to the Bachelor's thesis must be submitted in writing to the Examination Board. The Examination Board may set deadlines for registration. If the relevant documents are not already available at the university, they must be enclosed with the application:

1. proof that the admission requirements have been met,
2. a proposal for first and second examiners,
3. a proposal for the subject area of the Bachelor's thesis
4. and a declaration as to whether the Bachelor's thesis is to be awarded as an individual or group thesis.

(6) At least two copies of the written part of the Bachelor's thesis must be submitted to the examination board by the deadline; the time of submission must be recorded. When submitting the thesis, the candidate must confirm in writing that he/she has written the thesis - in the case of a group thesis, the part of the thesis marked accordingly - independently and has not used any sources or aids other than those specified.

(7) The candidate explains his/her work in a colloquium. The result of the colloquium must be included in the assessment of the Bachelor's thesis. In the colloquium, it must be demonstrated in a discussion of the Bachelor's thesis that interdisciplinary and problem-related issues from the field of the relevant subject area can be dealt with independently on a scientific basis.

(8) Admission to the colloquium is to be granted as soon as the Bachelor's thesis has been provisionally assessed by one of the two examiners with at least 45% of the complete performance in accordance with §13 Para. 2 or “sufficient” (4.0).

(9) The colloquium is conducted jointly by the examiners of the Bachelor's thesis as an individual or group examination. The duration of the colloquium is usually 30 minutes per examiner.

(10) A joint overall assessment is made by both examiners for the Bachelor's thesis and the final colloquium. The Bachelor's thesis and colloquium are deemed to have been passed if both parts have been assessed with at least 45% or with at least the grade “sufficient/4.0”. If the Bachelor's thesis or colloquium are not passed, both components must be repeated. The repetition is only possible once. § Section 13 (2) to (5) applies accordingly.

§ 13 Assessment of examination and study achievements

(1) The structure of studies and examinations follows the framework of the European Credit Transfer System (ECTS). The following structure-building elements are planned:
   1. upon request, students will receive a “Transcript of Records” (TOR) at the end of a semester and at the end of their studies, which shows all achievements up to a certain point in time and which shows a moving average grade or semester-by-semester average.
   2. Students also receive a “TOR” as a certificate supplement, as well as a Diploma Supplement, which provides information about the university and the German higher education system as well as the content and status of the completed degree program.

(2) The individual examinations and coursework are assessed by the respective examiners using a scale of 0 to 100%, whereby the respective examiners determine a 100% assessment depending on the completeness, scope and quality of the work performed, taking appropriate account of the time available to complete the work.

(3) The conversion to the national grading system (1.0 for “very good” to 4.0 for “sufficient”; “fail” for insufficient performance) is based on Annex 3).

(4) In principle, an examination or coursework is deemed to have been passed if 45% or more of the complete performance is achieved. In the national grading system, this corresponds to a 4.0 or better.

(5) An examination or coursework is deemed to have been passed conditionally if less than 45%, but at least the associated minimum percentage performance specified in Annex 2, is achieved. Failure to pass one of several examinations or coursework results in failure of the module.

(6) If several examinations and/or coursework are planned within the framework of a module, the module assessment is calculated from the weighted average of all passed and conditionally passed performances. The weighting percentages are specified in Annex 2. The module is deemed to have been passed if the weighted average is 45% or more (in the national grading system: 4.0 or better). Passed modules are finally assessed with the grades 1.0 to 4.0 with intermediate steps increased or decreased by 0.3. Ungraded coursework is not included. Grades are to be used in accordance with Annex 3a.

(7) Ungraded coursework is marked as “passed” or “failed”.

(8) An overall grade must be calculated for the Bachelor's examination. This is calculated from all module grades weighted according to credit points.

(9) Beyond the conversion of the German grades into the ECTS, no conversion into another national grading system will be made. In the event of changes in the assessment according to ECTS and the concordance with the German grading system, Annex 3 will be adapted to the applicable regulations.

(10) The evaluation procedure should not exceed four weeks.

§ 14 Failure to attend, withdrawal, deception, violation of regulations

(1) An examination is deemed to have been missed and will be assessed as 0% or “failed” (n.b.) if someone fails to attend an examination date after registering for the examination without a valid reason or does not notify a withdrawal within the specified registration period. The same applies if a written examination is not completed within the specified processing time.

(2) The reason for the absence must be reported immediately in writing and made credible. In the event of illness, a medical certificate must be submitted. In cases of doubt, the examination board may request a medical certificate from a public health officer. If the reason is recognized as valid, the next possible date must be taken. In this case, any examination results already obtained must be considered.

(3) Insofar as compliance with deadlines for the initial registration for examinations, the repetition of examinations, the reasons for missing examinations and for examination performance is affected, the illness of the student is equivalent to the illness of a child to be cared for by them, §§ 3, para. (2) and 6, para. (1) of the Maternity Protection Act, as well as state regulations on parental leave apply accordingly.

(4) If someone attempts to influence the result of their examination by cheating or using unauthorized aids, the examination in question will be graded with 0% or “insufficient” (5.0). Anyone who disrupts the orderly progress of the examination may be excluded from continuing the examination by the respective examiner or invigilator; in this case, the examination will be graded 0% or “fail” (5.0). In serious cases, the examination board may exclude the person being examined from taking further examinations.

§ 15 Passing and failing

(1) A module is passed if the percentage assessment from the weighted average of all passed and conditionally passed partial performances is at least 45%. Unassessed coursework must be passed.

(2) The Bachelor's examination is passed if all module examinations of the Bachelor's examination, their parts and the Bachelor's thesis with colloquium have been passed.

(3) If the examinee has failed a module or module parts or if the Bachelor's thesis was assessed with less than 45% or less than “sufficient” (4.0), the examinee will be informed of this. They must also be informed whether and, if so, to what extent and within what period the module examination can be repeated.

(4) If the candidate has definitively failed the Bachelor's examination, a “Transcript of Records” (§ 13, para. 1) will be issued to him/her, which contains the examinations and coursework completed and their grades, the credit points earned and the missing examinations and coursework and indicates that the Bachelor's examination has been definitively failed.

§ 16 Repetition of module examinations

(1) Examinations may be retaken no more than twice in the event of failure, unless otherwise stipulated in these regulations. Repeat examinations must be taken in the examination period following the unsuccessful attempt. In the case of first-time repeat examinations, students may withdraw from the examination within the deadline set by the Examination Board if the associated course is not offered by the time of the repeat examination.

(2) Passed examinations and coursework cannot be repeated. Conditionally passed performances according to § 13 para. 5 can be repeated with the aim of raising the average grade. Conditionally passed performances do not necessarily have to be repeated if the percentage module assessment from the weighted average of all passed and conditionally passed performances is at least 45%.

(3) Failed coursework can be repeated as often as desired, unless otherwise stipulated in Annex 2.

(4) If the examination is not passed even after multiple retakes or is deemed to have been failed and there is no longer an opportunity to retake the examination in accordance with paragraph 1, the examination has been definitively failed.

(6) The deadlines for repeat examinations are announced on the notice board or in another suitable, customary university manner.

(7) If module examinations consist of several partial examinations, the provisions of paragraphs 1 to 7 apply to these accordingly.

(8) The person affected by incriminating decisions from this ESR may request a review by the Examination Board within a period of one month. Incriminating decisions must therefore be communicated immediately in writing, stating the reasons and providing information on legal remedies.

§ 17 Recognition of examination and study achievements

(1) Examination and study achievements are credited if they have been completed at a German or foreign university in the same or a related accredited degree program.

(2) Examination and study achievements in the degree program that do not fall under para. 1 shall be credited, provided that there is no significant difference in terms of the skills acquired to the achievements that are being replaced. No schematic comparison is to be made, but rather an overall consideration and overall assessment. The regulations of the Lisbon Convention are decisive for the recognition of examination and study achievements that were completed outside the Federal Republic of Germany. This must be observed in conjunction with the explanations of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder and the German Rectors' Conference and their approved equivalence agreements as well as agreements within the framework of university cooperation agreements.

(3) If the requirements of paragraphs 1 and 2 are met, there is a legal entitlement to recognition. If equivalence cannot be established and the result of the credit transfer procedure is contested, the Examination Board, which has the burden of proof that an application does not meet the relevant requirements, shall decide. Students must submit the documents required for credit transfer with their application.

(4) In the case of transfer of credits acquired outside the university, the university will check, on the basis of the documents submitted by the applicant regarding his/her qualifications, whether and to what extent these qualifications are equivalent to parts of the degree course in terms of content and level and can therefore replace them. The assessment is carried out on a case-by-case basis. In the case of homogeneous applicant groups - e.g. within the framework of specific cooperation agreements between higher education institutions and vocational training institutions - the recognition of knowledge and skills acquired outside the higher education sector is carried out on a flat-rate basis.

(5) The university has developed a procedure for determining equivalence for the recognition of externally provided services. The standardized assessment procedure is transparent, comprehensible and binding for all parties involved.

§18 Compensation for disadvantages

(1) If the student provides a medical certificate stating that he/she is unable to take the examination in full or in part in the intended form due to a disability or chronic illness, the examiner must allow equivalent examination work to be completed within an extended processing time or in another form. The same applies to coursework.

§ 19 Examination board

(1) A joint examination board is formed for all degree programmes for the organization of module examinations and the tasks assigned by the ESR. It has five members elected by the Senate, three of whom are professors, one member of staff and one student member. The term of office of the members is 3 years, that of the student member only 1 year. The Examination Board elects the chairperson from the group of professors. The Examination Board may delegate certain tasks incumbent upon it to the chairperson.

(2) The Examination Board has a quorum if the majority of its members, including the chairperson or their representative and another member of the group of professors, are present. The Examination Board passes its resolutions by a majority of the valid votes cast; abstentions are considered votes not cast. In the event of a tie, the chairperson has the casting vote.

(3) The Examination Board ensures that the provisions of the ESR are complied with and ensures that examinations are conducted. The Examination Board makes suggestions for the reform of curricula and examination and study regulations. The Examination Board makes all

decisions within the framework of examination procedures for which no other responsibility is expressly provided for in these examination regulations or by law.

(4) The Examination Board decides on appeal procedures in study and examination matters.

(5) The members of the Examination Committee have the right to attend the examination.

(6) The Examination Board does not meet in public. The members of the Examination Board and their deputies are subject to official secrecy.

(7) An examination office is set up to support the examination board.

§ 20 Examiner and second examiner

(1) As a rule, only professors are authorized to conduct examinations. Lecturers and teaching staff for special tasks may be appointed as examiners if professors are not available as examiners. Persons experienced in professional practice and training who themselves possess at least the qualification to be determined by the examination or an equivalent qualification may also be appointed as examiners.

(2) The names of the examiners will be announced in good time.

(3) Only those who have at least the qualification to be determined by the examination or an equivalent qualification are appointed as second examiners.

(4) Examiners and second examiners are subject to official secrecy.

§ 21 Responsibilities

(1) Responsible for the decision

1. on the consequences of violations of examination regulations (§ 14),
2. on passing and failing (§ 15),
3. on the appointment of examiners (§ 20),
4. on the recognition of missed deadlines (§ 7, para. 2, point 3)
5. on objection procedures (§ 22)
6. on the granting of compensation for disadvantages (§ 18)

the Examination Board in accordance with § 19 Para. 1. The responsibilities can be transferred to the member of the Executive Board responsible for teaching.

(2) Certificates and diplomas are issued by the university. They shall contain the signature of the Chairperson of the Examination Board, the certificates shall also contain the signature of the President.

(3) The head of department is responsible for the recognition of examination and study achievements.

§ 22 Opposition proceedings

(1) Rejection decisions and other onerous administrative acts made in accordance with these examination regulations must be justified in writing, accompanied by information on legal

remedies and published in accordance with Section 41 VwVfG. Appeals against these decisions may be lodged with the Examination Board within one month of receipt of the notification in accordance with Section 68 et seq. of the Administrative Court Regulations.

(2) The examination board decides on the appeal. If the Examination Board does not uphold the objection or if the requirements for a reassessment or retake of the examination are not met, the Senate shall decide on the objection. In any case, the examination board must clarify whether

1. the examination procedure was not conducted properly,
2. the examiner has made an incorrect assumption,
3. generally applicable assessment principles have not been observed,
4. a justifiable and logically justified solution has been assessed as incorrect,
5. the examiner has been guided by irrelevant considerations.

(3) A decision on the appeal should be made within one month. If the appeal is not upheld, the head of the university will notify the appellant.

§ 23 Purpose and implementation of the Bachelor's examination

(1) The Bachelor's examination forms the professional qualification of the Bachelor's degree course. The Bachelor's examination determines whether the candidate has an overview of the context of their subject, has the ability to apply scientific methods and knowledge and has acquired the in-depth specialist knowledge required for the transition to professional practice.

(2) The Bachelor's examination consists of all module examinations including the Bachelor's thesis module. The module examinations are conducted during the semester. The composition of the module examinations and coursework can be found in Annex 2.

§ 24 Degree of completion

If the Bachelor's examination is passed, the academic degree “Bachelor of Engineering” (abbreviated to B.Eng.) is awarded.

§ 25 Bachelor certificate, Bachelor certificate, Transcript of Records and Diploma Supplement

(1) The graduate immediately receives the Bachelor's degree certificate (Annex 4) and a certificate of successful completion of the Bachelor's examination (Annex 4); no application is required. The Bachelor's examination certificate must include the topic of the Bachelor's thesis and its grade as well as the overall grade. The certificate and transcript shall bear the date of the day on which the last examination was completed.

(2) As a further document, the graduate receives a “Transcript of Records” (TOR, Annex 5) in accordance with § 13 Para. 1, which shows that the Bachelor's examination has been passed. This must include:

- the module identifier,

- a description of the module that is as meaningful as possible,
- the number of teaching hours of a module
- the number of credit points earned,
- the module grades achieved,
- the grade point average calculated on a semester-by-semester basis and
- the distribution of the overall grades of the last fifty graduates of a degree program, which allows a relative assessment of the final grade achieved according to the ECT system.

(3) The higher education institution issues a Diploma Supplement (DS, Annex 6) which clearly indicates the assignment to the EQF/DQR and corresponds to the DS model of the German Rectors' Conference.

(4) All certificate documents can also be issued in English at the request of the graduate.

(5) If the Bachelor's examination has been definitively failed, the Examination Board will issue a written notification. The notification contains a “Transcript of Records”, which contains the examinations and coursework completed and their grades as well as the credit points earned and indicates that the Bachelor's examination has been definitively failed.

(6) If a student leaves the university or changes subject area, the Examination Board will issue a “Transcript of Records” upon request, which contains the examinations and coursework completed and their grades, the credit points earned and the missing examinations and coursework and indicates that the Bachelor's examination has not yet been passed.

§ 26 Transitional provisions

(1) Students who are in their second or higher semester at the time these Examination and Study Regulations come into force will be examined in accordance with the regulations in force at the time of enrolment if the Bachelor's examination is taken within the standard period of study in accordance with Section 3 (1) plus two semesters. Upon application and with the approval of the Examination Board, they may also be examined in accordance with the new examination regulations. Students who do not meet the deadline according to sentence 1 will be examined according to the new examination regulations after the deadline has expired.

(2) The Senate may adopt supplementary provisions for the transition. The protection of the confidence of the members of the university must be guaranteed.

(3) The previously applicable examination regulations shall cease to apply irrespective of the provision in paragraph 1.

§ 27 Coming into force

These examination and study regulations come into force on the day after their publication at the university.

Place,

Prof. Dr. YY
Authorized signatory

Part 1 - Appendix 1: Study structure plan

1st Semester	September																								
CW Nr.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11
Education	Dual training vocational school / practice																									
UoAS	Theory studies 3 days a week																									

2nd Semester	March																								
CW Nr.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Education	Dual training vocational school / practice																									
University	Theory studies 3 days a week																									

3rd Semester	September																								
CW Nr.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11
Education	Dual training vocational school / practice																									
University	Theory studies 3 days a week																									

4th Semester	March																								
CW Nr.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Education	Dual training vocational school / practice																									
University	Theory studies 3 days a week																									

5th Semester	September																								
CW Nr.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11
Education	Full-time study at the university																									
Practical	Practical phase																									

6th Semester	March																								
CW Nr.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Education	Full-time study at the university																									
Practical	Practical phase																									

7th Semester	September																								
CW Nr.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11
Education	Full-time study at the university																									
Practical	Practical phase																									

8th Semester	March																								
CW Nr.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Education	Full-time study at the university																									
Bachelor thesis	Bachelor thesis / master craftsman examination																									

Part 1 - Appendix 2: Module overview

Dual training: SHK at vocational school / alternating practice

Semester	Module title	Learning Location	Teaching hours	Total teaching units
1st Semester	Manufacturing components with hand-held tools	Vocational school / practice company	80	240 TU.
	Manufacturing components with machines	Vocational school / practice company	80	
	Manufacture and assemble components	Vocational school / practice company	80	
2nd Semester	Maintaining technical systems	Vocational school / practice company	80	240 TU.
	Installing drinking water systems	Vocational school / practice company	80	
	Installing heat distribution systems	Vocational school / practice company	80	
3rd Semester	Install drainage systems	Vocational school / practice company	60	280 TU.
	Equip sanitary rooms	Vocational school / practice company	60	
	Installing drinking water heating systems	Vocational school / practice company	80	
	Adjusting supply systems and optimizing energy efficiency	Vocational school / practice company	80	
4th Semester	Installing heat generation systems for gaseous fuels	Vocational school / practice company	60	260 TU.
	Installing heat generation systems for liquid and solid fuels	Vocational school / practice company	40	
	Installing resource-saving systems	Vocational school / practice company	40	
	Installing ventilation systems	Vocational school / practice company	60	
	Maintaining technical supply systems	Vocational school / practice company	60	
Apprenticeship examination / completion of training				

DUALE full-time degree course in Building Services Engineering at the university.

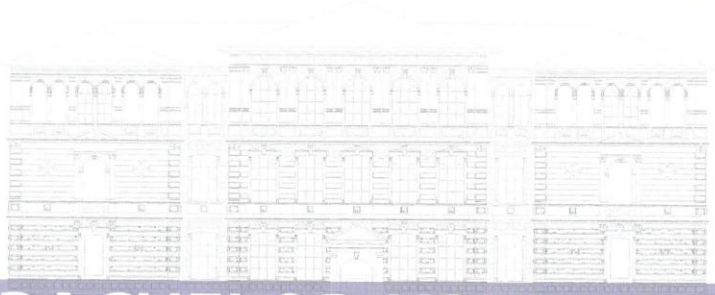
Semester	*Module title*	*Module code*	*Examination / academic achievement*	*Workload (P / S) [h]*	*ECTS*	*Sum ECTS*
1st Semester 3 days a week theoretical studies at the university (13 weeks)	Mathematics 1	MTH1	Written Exam (120 Min.)	100 / 70	6	19
	Chemistry / Materials science	CWK	Written Exam (90 Min.) + Homework	70 / 50	5	
	Construction management	BBL	Written Exam (90 Min.) + Homework	70 / 70	5	
	Key qualification 1	SCQ1	Publication incl. poster	40 / 30	3	
2nd Semester 3 days a week theoretical studies at the university (13 weeks)	Mathematics 2	MTH2	Written Exam (120 Min.)	100 / 70	6	20
	Electrical Engineering	ELE	Written Exam (90 Min.) + Laboratory	70 / 70	5	
	Computer Science	INF	Homework	60 / 80	5	
	Business Administration A	BWLA	Written Exam (90 Min.)	60 / 40	4	
3rd Semester 3 days a week theoretical studies at the university (13 weeks)	Structural analysis	TWL	Written Exam (90 Min.) + Homework	70 / 50	5	19
	Introduction to thermodynamics	TDY	Written Exam + Homework	70 / 30	5	
	Lighting and illumination technology with EELA	LUB / EELA	Written Exam (60 Min.) + Homework	50 / 50	4	
	Industrial Electronics 1	IEL1	Written Exam (90 Min.) + Laboratory	70 / 60	5	
4th Semester 3 days a week theoretical studies at the university (13 weeks)	Building Physics and technical expansion	BTAA	Written Exam (90 Min.) + Laboratory	60 / 60	5	19
	Heat supply	WVG	Written Exam (90 Min.) + Homework	70 / 70	5	
	Automation technology	AUT	Written Exam (90 Min.) + Homework	70 / 60	5	
	Industrial Electronics 2	IEL2	Written Exam (60 Min.) + Homework	60 / 50	4	

Semester	*Module title*	*Module code*	*Examination / academic achievement*	*Workload (P / S) [h]*	*ECTS*	*Sum ECTS*
5th Semester Full-time study Theory phase (13 weeks)	Building construction	BKO	Written Exam (60 Min.) + Homework	70 / 70	5	25
	CAD for BAU, WBI, GTA	CADB	Written Exam (60 Min.) + Laboratory	70 / 70	3	
	Energy and environmental technology	EUT	Written Exam (90 Min.) + Homework	70 / 70	5	
	Software for engineers	SFI	Homework + Elaboration	60 / 80	5	
	Ventilation, air conditioning and refrigeration technology	LKK	Written Exam (60 Min.) + Laboratory	70 / 40	5	
	Technical English 1	TEE1	Presentation (15 Min.)	40 / 20	2	
6th Semester Full-time study Theory phase (13 weeks)	Private building law	PBR	Written Exam (90 Min.) + Homework	60 / 80	5	25
	Energy management	ENM	Written Exam (60 Min.) + Laboratory	70 / 70	5	
	Natural resource management	WUA	Written Exam (60 Min.) + Homework	70 / 70	5	
	BIM project	BIMP	Oral exam (30 Min.) + Project work	70 / 80	5	
	Compulsory elective subject 1 (various options)	WPF1	Lecture or Presentation or Written Exam (45 Min.)	40 / 40	3	
	Technical English 2	TEE2	Written Exam (45 Min.)	40 / 20	2	
7th Semester Full-time study Theory phase (13 weeks)	Control and regulation technology	SRE	Written Exam (90 Min.) + Laboratory	70 / 70	5	24
	Gas and fire protection technology	GUB	Written Exam (60 Min.) + Homework	60 / 60	4	
	TGA project	TGP	Teamwork with results presentation	60 / 70	5	
	Calculation in TGA	KTG	Written Exam (90 Min.) + Homework	70 / 60	5	
	Regenerative heat utilization	RWN	Written Exam (90 Min.) + Homework	70 / 70	5	
8th Semester Full-time study Theory phase (13 weeks)	Project Management	PJM	Written Exam (90 Min.) + Homework	70 / 70	5	16
	Facility Management	FAM	Written Exam (90 Min.) + Homework	90 / 40	6	
	Key qualification 2	SCQ2	Oral Exam	40 / 20	2	
	Compulsory elective subject 2 (various options)	WPF2	Written Exam	40 / 40	3	
8th semester - Bachelor thesis			Lecture (20 Min.)	280	13	
Sum ECTS					**180**	

Part 1 - Appendix 3 : Assessment scheme

1	2	3	4	5
Grade_DE	Grade (math.)	Points	from percent	to percent
0.7	0.667	15	95	100
1.0	1.000	14	90	94
1.3	1.333	13	85	89
1.7	1.667	12	80	84
2.0	2.000	11	75	79
2.3	2.333	10	70	74
2.7	2.667	9	65	69
3.0	3.000	8	60	64
3.3	3.333	7	55	59
3.7	3.667	6	50	54
4.0	4.000	5	45	49
4.3	4.333	4	40	44
4.7	4.667	3	35	39
5.0	5.000	2	30	34
5.3	5.333	1	25	29

Part 1 - Appendix 4: Bachelor certificate (Germany)



BACHELOR-URKUNDE

Die private und staatlich anerkannte Fachhochschule
hochschule 21 in Buxtehude verleiht

Herrn «Vorname» «Nachname»

geboren am «Geburtsdatum» in «Geburtsort»
auf Grund der am «Datum» im dualen Studiengang

«SGBeschreibung»

bestandenen Bachelorprüfung den akademischen Grad

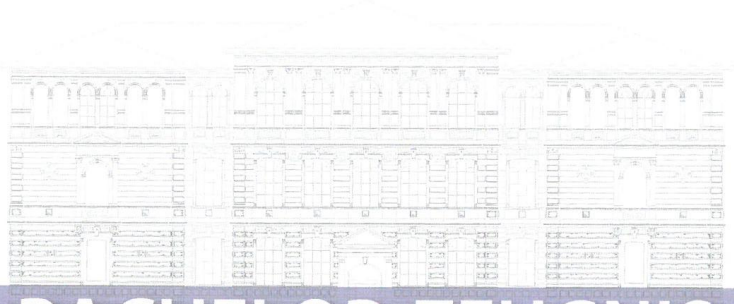
Bachelor of Engineering (B.Eng.)

Buxtehude, «Datum»

Der Präsident der hochschule 21 Der Vorsitzende des Prüfungsausschusses

hochschule 21
genial dual

Part 1 - Appendix 5: Bachelor's degree certificate (Germany)



BACHELOR-ZEUGNIS

«Anrede»	**«Vorname» «Nachname»**
geboren am / in	**«Geburtsdatum»/ «Geburtsort»**
hat am	**«Datum»**
im dualen Studiengang	**«SGBeschreibung»**
die Prüfung zum	**Bachelor of Engineering (B.Eng.)**

an der hochschule 21 in Buxtehude abgelegt und dabei nachfolgende Bewertung erhalten:

Bachelor-Thesis	**«BA_Note»**
Thema	**«BAThema»**
Gesamtnote	**«Gesamtnote»**

Die erbrachten Leistungen sind anliegend aufgeführt.

Buxtehude, «Datum»

Der Vorsitzende des Prüfungsausschusses

hochschule 21
genial dual

Part 1 - Appendix 6: Diploma Supplement (Germany)

Hochschule XX

Diploma Supplement

Dieses Diploma Supplement wurde von der Europäischen Kommission, dem Europarat und Unesco/CEPES entwickelt. Das Diploma Supplement soll hinreichende Daten zur Verfügung stellen, die die internationale Transparenz und angemessene akademische und berufliche Anerkennung von Qualifikationen (Urkunden, Zeugnisse, Abschlüsse, Zertifikate, etc.) verbessern. Das Diploma Supplement beschreibt Eigenschaften, Stufe, Zusammenhang, Inhalte sowie Art des Abschlusses des Studiums, das von der in der Originalurkunde bezeichneten Person erfolgreich abgeschlossen wurde. Die Originalurkunde muss diesem Diploma Supplement beigefügt werden. Das Diploma Supplement sollte frei sein von jeglichen Werturteilen, Äquivalenzaussagen oder Empfehlungen zur Anerkennung. Es sollte Angaben in allen acht Abschnitten enthalten. Wenn keine Angaben gemacht werden, sollte dies durch eine Begründung erläutert werden.

1. Angaben zum Inhaber / zur Inhaberin der Qualifikation

1.1	Familienname	1.2	Vorname
	…		…
1.3	Geburtsdatum (TT/MM/JJJJ), Geburtsort, Geburtsland	1.4	Matrikelnummer oder Code des/der Studierenden
	…		…

2. Angaben zur Qualifikation

2.1	Bezeichnung der Qualifikation (ausgeschrieben, abgekürzt)		Bezeichnung des Titels (ausgeschrieben, abgekürzt)
	Bachelor of Engineering, B.Eng.		Bachelor of Engineering, B.Eng.
2.2	Hauptstudienfach oder -fächer für die Qualifikation		
	Praxisintegrierender Dualer Studiengang Gebäudetechnik und Erneuerbare Energien (Einteilung gemäß BIBB – Bundesinstitut für Berufsbildung)		
2.3	Name der Einrichtung, die die Qualifikation verliehen hat		Status (Typ / Trägerschaft)
	hochschule XX		Staatlich anerkannte private Fachhochschule
2.4	Name der Einrichtung, die den Studiengang durchgeführt hat		Status (Typ / Trägerschaft)
	hochschule XX		Staatlich anerkannte private Fachhochschule
2.5	Im Unterricht / in der Prüfung verwendete Sprache(n)		
	Deutsch, Englisch		

3. Angaben zur Ebene der Qualifikation

3.1	Ebene der Qualifikation	3.2	Dauer des Studiums (Regelstudienzeit)

Der duale Bachelorstudiengang Gebäudetechnik und Erneuerbare Energien ist ein grundständiger wissenschaftlicher Studiengang, der zu einem ersten berufsqualifizierenden akademischen Abschluss führt. Das Studium schafft die Voraussetzungen dafür, dass der Absolvent (in) den Anforderungen der künftigen Berufsausübung unter Anwendung wissenschaftlicher Methoden gerecht wird.	7 Semester entsprechend 3,5 Jahre mit insgesamt 210 ECTS Punkten

3.3 Zugangsvoraussetzung(en)

Allgemeine Hochschulreife (Abitur) oder Fachhochschulreife, vgl. Abschnitt 8.7 oder Meister- oder Technikerabschluss oder vergleichbare ausländische Voraussetzungen und besondere Einschreibevoraussetzungen z.B. Eignungstest.

4. ANGABEN ZUM INHALT UND ZU DEN ERZIELTEN ERGEBNISSEN

4.1 Studienform

Vollzeit mit integrierter dualer praktischer Ausbildung.

4.2 Anforderungen des Studiengangs / Qualifikationsprofil des Absolventen / der Absolventin

Das Studium vermittelt ein breit gefächertes Grundlagenwissen mit Schwerpunkten in Planung, Entwurf, Konstruktion, Ausführung und Erhaltung von Bauwerken des Hoch- und Ingenieurbaus, der verkehrstechnischen Infrastruktur sowie anderen baulichen Anlagen.

Das dreijährige Intensivstudium an der Hochschule und im ausgewählten Praxispartner-Betrieb schafft die tragfähige Basis für vielfältige berufliche Aufgaben.

Studierende dieses anwendungsorientierten Bachelor-Studiengangs erhalten das Rüstzeug für eine erfolgreiche berufliche Tätigkeit, zum Beispiel als Vertreter der Bauherren im öffentlichen, gewerblichen und privaten Bereich, als Bauplaner, Statiker oder im Bauunternehmen Funktion sowie in Aufsichts-, Genehmigungs- und Prüfbehörden.

Die Qualifikationseinstufung entspricht im europäischen Qualifikationsrahmen (EQR) der Stufe 6.

4.3 Einzelheiten zum Studiengang

…
Siehe auch Transcript of Records bezüglich schriftlicher und mündlicher Prüfungen sowie des Themas der Abschlussarbeit einschließlich Noten. Die Möglichkeit zur Teilnahme an einem Auslandsstudium/-praktikum besteht. Ergebnisse diesbezüglich werden ebenfalls im Transcript of Records ausgewiesen.

4.4 Notensystem und Hinweise zur Vergabe von Noten	4.5 Gesamtnote

Allgemeines Notenschema (Abschnitt 8.6) „sehr gut“, „gut“; „befriedigend“; „ausreichend“; „nicht bestanden“. Zusätzlich wird das ECTS Notensystem angewendet. Beschreibung der Notenskala 1 = sehr gut, eine hervorragende Leistung, 2 = gut, die erheblich über den durchschnittlichen Anforderungen, 3 = befriedigend, eine Leistung, die durchschnittlichen Anforderungen, 4 = ausreichend, Leistung, die trotz ihrer Mängel noch den Anforderungen genügt, 5 = nicht ausreichend, eine Leistung, die wegen erheblicher Mängel den Anforderungen nicht mehr genügt.	…

5. ANGABEN ZUM STATUS DER QUALIFIKATION

5.1 Zugang zu weiterführenden Studien	5.2 Beruflicher Status
Qualifiziert für die Aufnahme eines Masterprogramms; vgl. Abschnitt 8.4.2	Der Bachelorabschluss berechtigt zur Führung des rechtlich geschützten Titels „Bachelor of Engineering“ (B.Eng.) sowie zur beruflichen Ausübung im Bereich der Bauwirtschaft.

6. WEITERE ANGABEN

6.1 Weitere Angaben	6.2 Informationsquellen für ergänzende Angaben
Qualifiziert für die Aufnahme eines Masterprogramms; vgl. Abschnitt 8.4.2	

7. ZERTIFIZIERUNG

Dieses Diploma Supplement nimmt Bezug auf folgende Original-Dokumente:

		TT	MM	JJJJ
7.1	Urkunde über die Verleihung des Grades vom [Datum]	…	…	…
7.2	Prüfungszeugnis vom [Datum]	…	…	…
7.3	Transcript of Records vom [Datum]	…	…	…

7.4 Datum der Zertifizierung			7.5 Vorsitzender des Prüfungsausschusses
…	…	…	…
TT	MM	JJJJ	…

7.6 Offizieller Stempel/Siegel

…

8. ANGABEN ZUM NATIONALEN HOCHSCHULSYSTEM (1/2)

Die Informationen über das nationale Hochschulsystem auf den folgenden Seiten geben Auskunft über den Grad der Qualifikation und den Typ der Institution, die sie vergeben hat.

INFORMATIONEN ZUM HOCHSCHULSYSTEM IN DEUTSCHLAND[1]

8.1 Die unterschiedlichen Hochschulen und ihr institutioneller Status

Die Hochschulausbildung wird in Deutschland von drei Arten von Hochschulen angeboten[2]

- *Universitäten*, einschließlich verschiedener spezialisierter Institutionen, bieten das gesamte Spektrum akademischer Disziplinen an. Traditionell liegt der Schwerpunkt an deutschen Universitäten besonders auf der Grundlagenforschung, so dass das fortgeschrittene Studium vor allem theoretisch ausgerichtet und forschungsorientiert ist.

- *Fachhochschulen* konzentrieren ihre Studienangebote auf ingenieurwissenschaftliche und technische Fächer, wirtschafts-wissenschaftliche Fächer, Sozialarbeit und Design. Der Auftrag von angewandter Forschung und Entwicklung impliziert einen klaren praxisorientierten Ansatz und eine berufsbezogene Ausrichtung des Studiums, was häufig integrierte und begleitete Praktika in Industrie, Unternehmen oder anderen einschlägigen Einrichtungen einschließt.

- *Kunst- und Musikhochschulen* bieten Studiengänge für künstlerische Tätigkeiten an, in Bildender Kunst, Schauspiel und Musik, in den Bereichen Regie, Produktion und Drehbuch für Theater, Film und andere Medien sowie in den Bereichen Design, Architektur, Medien und Kommunikation.

Hochschulen sind entweder staatliche oder staatlich anerkannte Institutionen. Sowohl in ihrem Handeln einschließlich der Planung von Studiengängen als auch in der Festsetzung und Zuerkennung von Studienabschlüssen unterliegen sie der Hochschulgesetzgebung.

8.2 Studiengänge und -abschlüsse

In allen drei Hochschultypen wurden die Studiengänge traditionell als integrierte „lange“ (einstufige) Studiengänge angeboten, die entweder zum Diplom oder zum Magister Artium führen oder mit einer Staatsprüfung abschließen.

Im Rahmen des Bologna-Prozesses wird das einstufige Studiensystem sukzessive durch ein zweistufiges ersetzt. Seit 1998 besteht die Möglichkeit, parallel zu oder anstelle von traditionellen Studiengängen gestufte Studiengänge (Bachelor und Master) anzubieten. Dies soll den Studierenden mehr Wahlmöglichkeiten und Flexibilität beim Planen und Verfolgen ihrer Lernziele bieten, sowie Studiengänge international kompatibler machen.

Die Abschlüsse des deutschen Hochschulsystems einschließlich ihrer Zuordnung zu den Qualifikationsstufen sowie die damit einhergehenden Qualifikationsziele und Kompetenzen der Absolventen sind im Qualifikationsrahmen für deutsche Hochschulabschlüsse[3] , im Deutschen Qualifikationsrahmen für lebenslanges Lernen (DQR)[4] sowie im Europäischen Qualifikationsrahmen für lebenslanges Lernen (EQR)[5] beschrieben.

Einzelheiten s. Abschnitte 8.4.1, 8.4.2 bzw. 8.4.3. Tab. 1 gibt eine zusammenfassende Übersicht.

8.3 Anerkennung/Akkreditierung von Studiengängen und Abschlüssen

Um die Qualität und die Vergleichbarkeit von Qualifikationen sicher zu stellen, müssen sich sowohl die Organisation und Struktur von Studiengängen als auch die grundsätzlichen Anforderungen an Studienabschlüsse an den Prinzipien und Regelungen der Ständigen Konferenz der Kultusminister der Länder (KMK) orientieren[6]. Seit 1999 existiert ein bundesweites Akkreditierungssystem für Studiengänge unter der Aufsicht des Akkreditierungsrates, nach dem alle neu eingeführten Studiengänge akkreditiert werden. Akkreditierte Studiengänge sind berechtigt, das Qualitätssiegel des Akkreditierungsrates zu führen.[7]

8.4 Organisation und Struktur der Studiengänge

Die folgenden Studiengänge können von allen drei Hochschultypen angeboten werden. Bachelor- und Masterstudiengänge können nacheinander, an unterschiedlichen Hochschulen, an unterschiedlichen Hochschultypen und mit Phasen der Erwerbstätigkeit zwischen der ersten und der zweiten Qualifikationsstufe studiert werden. Bei der Planung werden Module und das Europäische System zur Übertragung und Akkumulierung von Studienleistungen (ECTS) verwendet, wobei einem Semester 30 Kreditpunkte entsprechen.

8.4.1 Bachelor

In Bachelorstudiengängen werden wissenschaftliche Grundlagen, Methodenkompetenz und berufsfeldbezogene Qualifikationen vermittelt. Der Bachelorabschluss wird nach 3 bis 4 Jahren vergeben.
Zum Bachelorstudiengang gehört eine schriftliche Abschlussarbeit. Studiengänge, die mit dem Bachelor abgeschlossen werden, müssen gemäß dem Gesetz zur Errichtung einer Stiftung zur Akkreditierung von Studiengängen in Deutschland akkreditiert werden.[8]
Studiengänge der ersten Qualifikationsstufe (Bachelor) schließen mit den Graden 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.) oder Bachelor of Education (B.Ed.) ab. Der Bachelorgrad entspricht der Qualifikationsstufe 6 des DQR/EQR.

8. ANGABEN ZUM NATIONALEN HOCHSCHULSYSTEM (2/2)

8.4.2 Master

Der Master ist der zweite Studienabschluss nach weiteren 1 bis 2 Jahren. Masterstudiengänge sind nach den Profiltypen „stärker anwendungsorientiert“ und „stärker forschungsorientiert“ zu differenzieren. Die Hochschulen legen für jeden Masterstudiengang das Profil fest.

Zum Masterstudiengang gehört eine schriftliche Abschlussarbeit. Studiengänge, die mit dem Master abgeschlossen werden, müssen gemäß dem Gesetz zur Errichtung einer Stiftung zur Akkreditierung von Studiengängen in Deutschland akkreditiert werden.

Studiengänge der zweiten Qualifikationsstufe (Master) schließen mit den Graden Master of Arts (M.A.), Master of Science (M.Sc.), Master of Engineering (M.Eng.), Master of Laws (LL.M.), Master of Fine Arts (M.F.A.), Master of Music (M.Mus.) oder Master of Education (B.Ed.) ab. Weiterbildende Masterstudiengänge, sowie solche, die inhaltlich nicht auf den vorangegangenen Bachelorstudiengang aufbauen können andere Bezeichnungen erhalten (z.B. MBA). Der Mastergrad entspricht der Qualifikationsstufe 7 des DQR/EQR.

8.4.3 Integrierte „lange“ einstufige Studiengänge: Diplom, Magister Artium, Staatsprüfung

Ein integrierter Studiengang ist entweder mono-disziplinär (Diplomabschlüsse und die meisten Staatsprüfungen) oder besteht aus einer Kombination von entweder zwei Hauptfächern oder einem Haupt- und zwei Nebenfächern (Magister Artium). Das Vorstudium (1,5 bis 2 Jahre) dient der breiten Orientierung und dem Grundlagenerwerb im jeweiligen Fach. Eine Zwischenprüfung (bzw. Vordiplom) ist Voraussetzung für die Zulassung zum Hauptstudium, d.h. zum fortgeschrittenen Studium und der Spezialisierung. Voraussetzung für den Abschluss sind die Vorlage einer schriftlichen Abschlussarbeit (Dauer bis zu 6 Monaten) und umfangreiche schriftliche und mündliche Abschlussprüfungen. Ähnliche Regelungen gelten für die Staatsprüfung. Die erworbene Qualifikation entspricht dem Master.

Die Regelstudienzeit an Universitäten beträgt bei integrierten Studiengängen 4 bis 5 Jahre (Diplom, Magister Artium) oder 3 bis 6,5 Jahre (Staatsprüfung). Mit dem Diplom werden ingenieur-, natur- und wirtschaftswissenschaftliche Studiengänge abgeschlossen. In den Geisteswissenschaften ist der entsprechende Abschluss in der Regel der Magister Artium (M.A.). In den Sozialwissenschaften variiert die Praxis je nach Tradition der jeweiligen Hochschule. Juristische, medizinische, pharmazeutische und Lehramtsstudiengänge schließen mit der Staatsprüfung ab.

Die drei Qualifikationen (Diplom, Magister Artium und Staatsprüfung) sind akademisch gleichwertig und auf der Qualifikationsstufe 7 des DQR/EQR angesiedelt. Sie bilden die formale Voraussetzung zur Promotion. Weitere Zulassungsvoraussetzungen können von der Hochschule festgelegt werden, s. Abschnitt 8.5.

Die Regelstudienzeit an Fachhochschulen (FH) beträgt bei integrierten Studiengängen 4 Jahre und schließt mit dem Diplom (FH) ab. Dieses ist auf der Qualifikationsstufe 6 des DQR/EQR angesiedelt. Fachhochschulen haben kein Promotionsrecht; qualifizierte Absolventen können sich für die Zulassung zur Promotion an promotionsberechtigten Hochschulen bewerben, s. Abschnitt 8.5.

Das Studium an Kunst- und Musikhochschulen ist in seiner Organisation und Struktur abhängig vom jeweiligen Fachgebiet und der individuellen Zielsetzung. Neben dem Diplom- bzw. Magisterabschluss gibt es bei integrierten Studiengängen Zertifikate und zertifizierte Abschlussprüfungen für spezielle Bereiche und berufliche Zwecke.

8.5 Promotion

Universitäten sowie gleichgestellte Hochschulen und einige Kunst- und Musikhochschulen sind promotionsberechtigt. Formale Voraussetzung für die Zulassung zur Promotion ist ein qualifizierter Masterabschluss (Fachhochschulen und Universitäten), ein Magisterabschluss, ein Diplom, eine Staatsprüfung oder ein äquivalenter ausländischer Abschluss. Besonders qualifizierte Inhaber eines Bachelorgrades oder eines Diplom (FH) können ohne einen weiteren Studienabschluss im Wege eines Eignungsfeststellungsverfahrens zur Promotion zugelassen werden. Die Universitäten bzw. promotionsberechtigten Hochschulen regeln sowohl die Zulassung zur Promotion als auch die Art der Eignungsprüfung. Voraussetzung für die Zulassung ist außerdem, dass das Promotionsprojekt von einem Hochschullehrer als Betreuer angenommen wird. Die Promotion entspricht der Qualifikationsstufe 8 des DQR/EQR.

8.6 Benotungsskala

Die deutsche Benotungsskala umfasst üblicherweise 5 Grade (mit zahlenmäßigen Entsprechungen; es können auch Zwischennoten vergeben werden): „Sehr gut“ (1), „Gut“ (2), „Befriedigend“ (3), „Ausreichend“ (4), „Nicht ausreichend“ (5). Zum Bestehen ist mindestens die Note „Ausreichend“ (4) notwendig. Die Bezeichnung für die Noten kann in Einzelfällen und für den Doktorgrad abweichen.

Außerdem findet eine Einstufungstabelle nach dem Modell des ECTS-Leitfadens Verwendung, aus der die relative Verteilung der Noten in Bezug auf eine Referenzgruppe hervorgeht.

8.7 Hochschulzugang

Die Allgemeine Hochschulreife (Abitur) nach 12 bis 13 Schuljahren ermöglicht den Zugang zu allen Studiengängen. Die Fachgebundene Hochschulreife ermöglicht den Zugang zu allen Studiengängen an Fachhochschulen, an Universitäten und gleichgestellten Hochschulen, aber nur zu bestimmten Fächern. Das Studium an Fachhochschulen ist auch mit der Fachhochschulreife möglich, die in der Regel nach 12 Schuljahren erworben wird. Der Zugang zu Studiengängen an Kunst- und Musikhochschulen und entsprechenden Studiengängen an anderen Hochschulen sowie der Zugang zu einem Sportstudiengang kann auf der Grundlage von anderen bzw. zusätzlichen Voraussetzungen zum Nachweis einer besonderen Eignung erfolgen.
Beruflich qualifizierte Bewerber ohne schulische Hochschulzugangs-berechtigung erhalten eine allgemeine Hochschulzugangsberechtigung und damit Zugang zu allen Studiengängen, wenn sie Inhaber von Abschlüssen bestimmter, staatlich geregelter beruflicher Aufstiegsfortbildungen sind (zum Beispiel Meister/in im Handwerk, Industriemeister/in, Fachwirt/in (IHK), Betriebswirt/in (IHK) und (HWK), staatliche geprüfte/r Techniker/in, staatliche geprüfte/r Betriebswirt/in, staatlich geprüfte/r Gestalter/in, staatlich geprüfte/r Erzieher/in. Eine fachgebundene Hochschulzugangsberechtigung erhalten beruflich qualifizierte Bewerber mit einem Abschluss einer staatlich geregelten, mindestens zweijährigen Berufsausbildung und i.d.R. mindestens dreijähriger Berufspraxis, die ein Eignungsfeststellungsverfahren an einer Hochschule oder staatlichen Stelle erfolgreich durchlaufen haben; das Eignungsfeststellungsverfahren kann durch ein nachweislich erfolgreich absolviertes Probestudium von mindestens einem Jahr ersetzt werden.[10]

Die Hochschulen können in bestimmten Fällen zusätzliche spezifische Zulassungsverfahren durchführen.

8.8 Informationsquellen in der Bundesrepublik

-Kultusministerkonferenz (KMK) (Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland) Lennéstr. 6, D-53113 Bonn; Fax: +49(0)228/501-229; Tel.: +49(0)228/501-0

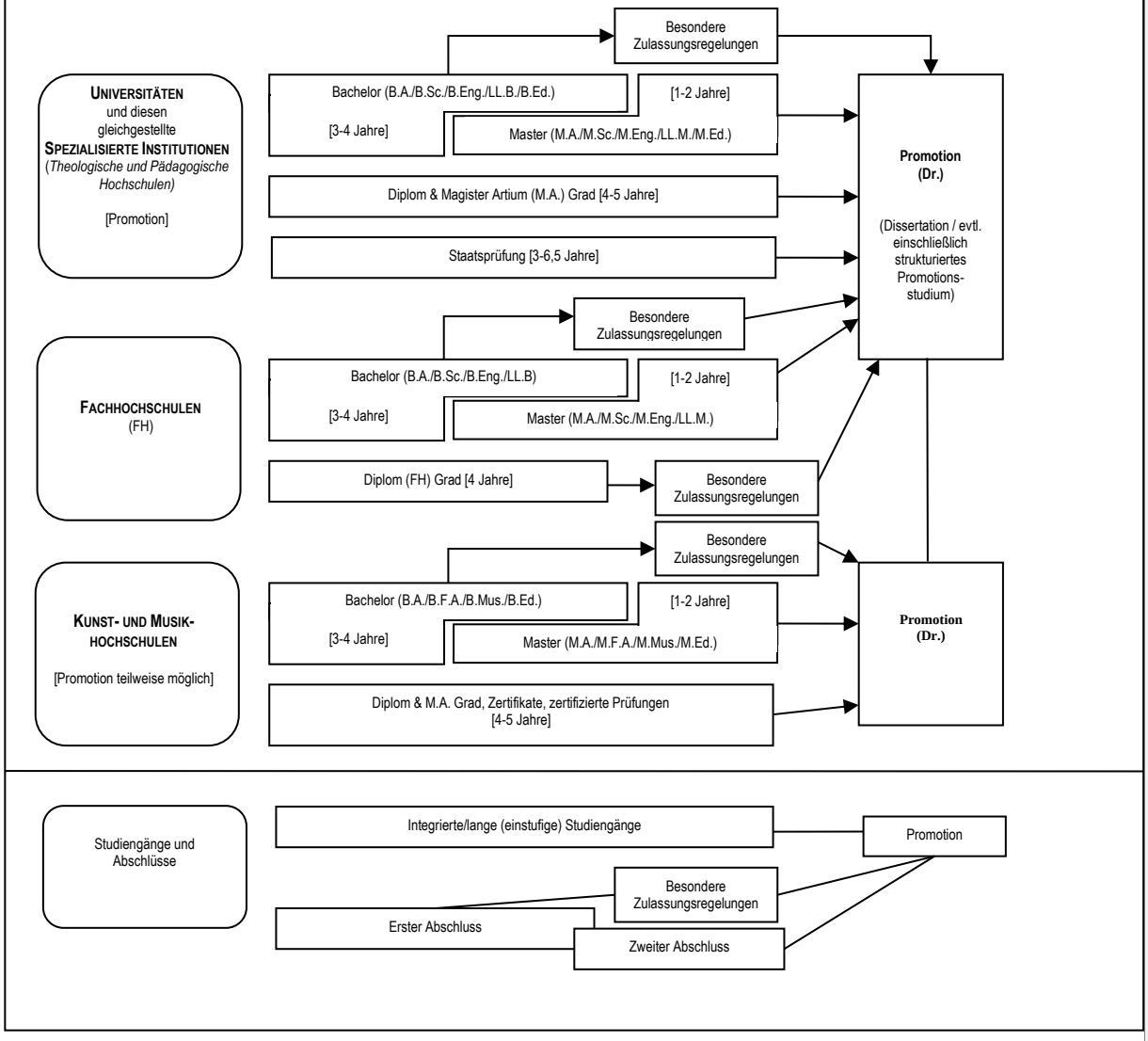
-Zentralstelle für ausländisches Bildungswesen (ZaB) als deutsche NARIC; www.kmk.org; E-Mail: zab@kmk.org

-“Dokumentations- und Bildungsinformationsdienst” als deutscher Partner im Eurydice-Netz, für Informationen zum Bildungswesen in Deutschland (www.kmk.org/doku/bildungswesen.htm; E-Mail: eurydice@kmk.org)

-Hochschulrektorenkonferenz (HRK); Ahrstr. 39, D-53175 Bonn; Fax: +49(0)228/887-110; Tel.: +49(0)228/887-0; www.hrk.de; E-Mail: post@hrk.de

-“Hochschulkompass“ der Hochschulrektorenkonferenz, enthält umfassende Informationen zu Hochschulen, Studiengängen etc. (www.hochschulkompass.de

TAB. 1: INSTITUTIONEN, STUDIENGÄNGE UND ABSCHLÜSSE IM DEUTSCHEN HOCHSCHULSYSTEM



1 Die Information berücksichtigt nur die Aspekte, die direkt das Diploma Supplement betreffen. Informationsstand Januar 2015.

2 Berufsakademien sind keine Hochschulen, es gibt sie nur in einigen Bundesländern. Sie bieten Studiengänge in enger Zusammenarbeit mit privaten Unternehmen an. Studierende erhalten einen offiziellen Abschluss und machen eine Ausbildung im Betrieb. Manche Berufsakademien bieten Bachelorstudiengänge an, deren Abschlüsse einem Bachelorgrad einer Hochschule gleichgestellt werden können, wenn sie von einer deutschen Akkreditierungs-agentur akkreditiert sind.

3 Qualifikationsrahmen für deutsche Hochschulabschlüsse (Be-schluss der Kultusministerkonferenz vom 21.04.2005).

4 Deutscher Qualifikationsrahmen für lebenslanges Lernen (DQR), Gemeinsamer Beschluss der Ständigen Konferenz der Kultus-minister der Länder in der Bundesrepublik Deutschland, des Bundesministeriums für Bildung und Forschung, der Wirtschafts-ministerkonferenz und des Bundesministeriums für Wirtschaft und Technologie (Beschluss der Kultusministerkonferenz vom 15.11.2012). Ausführliche Informationen unter www.dqr.de .

5 Empfehlung des Europäischen Parlaments und des Europäischen Rates zur Einrichtung des Europäischen Qualifikationsrahmens für lebenslanges Lernen vom 23.04.2008 (2008/C 111/01 – Euro-päischer Qualifikationsrahmen für lebenslanges Lernen – EQR).

6 Ländergemeinsame Strukturvorgaben für die Akkreditierung von Bachelor- und Masterstudiengängen (Beschluss der Kultus-ministerkonferenz vom 10.10.2003 i.d.F. vom 04.02.2010).

7 „Gesetz zur Errichtung einer Stiftung ‚Stiftung zur Akkreditierung von Studiengängen in Deutschland'", in Kraft getreten am 26.02.05, GV. NRW. 2005, Nr. 5, S. 45, in Verbindung mit der Vereinbarung der Länder zur Stiftung „Stiftung: Akkreditierung von Studien-gängen in Deutschland" (Beschluss der Kultusministerkonferenz vom 16.12.2004).

8 Siehe Fußnote Nr. 7.

9 Siehe Fußnote Nr. 7.

10 Hochschulzugang für beruflich qualifizierte Bewerber ohne schulische Hochschulzugangsberechtigung (Beschluss der Kultus-ministerkonferenz vom 06.03.2009).

Part 2: Examination regulations for the dual Bachelor's degree program in Austria

This section deals with the examination regulations for the dual Bachelor's degree program in Austria developed as part of the SmartVET-HighED project. Since training-integrated dual study programs are already well established in Germany, the examination regulations from Germany form the basis for the Austrian version.

In the following subchapters, the University Act, the curriculum and the statutes of the University of Graz are compared with the examination regulations from Germany. Based on this analysis, a model curriculum including examination regulations, which takes up the missing elements of the examination regulations from Germany for Austria, is subsequently drawn up, which follows the Austrian legal basis.

Comparison of examination regulations Germany/Austria

Due to the fact that the legal situation surrounding the examination regulations in Austria differs from that in Germany, it was first necessary to collect and examine relevant documents. The University of Graz and its associated laws were used as a basis for this. Unlike in Germany, components of the German examination regulations in Austria are in various legal sources. The University Act (UG), the statutes and the curriculum replace the examination regulations from Germany. Further regulations can be found in the curriculum under §5 Examination Regulations, which can be found in the UG and the statutes. To develop examination regulations that are as uniform as possible for all project partner countries involved, the first step was to compare the examination regulations for the dual degree course in Building Technology and Renewable Energies in Germany with the statutes, the Universities Act (UG) and the curriculum in Austria.

Table 1 shows which regulations of the German examination regulations are regulated in the Austrian University Act, the statutes or the curriculum.

Germany	**Austria**		
Examination regulations	**UG**	**Statutes**	**Curriculum**
Scope of application	X		
Study objective	X		
Standard period of study, course structure			X
Practical phases		X	
Study and examination structure			X
Examination dates and deadlines		X	
General admission requirements	X		
Types of examination and coursework		X	
Oral and practical examinations		X	
Written examinations		X	
Project work		X	
Bachelor's thesis and colloquium	X		X
Examination and coursework		X	
Failure, withdrawal, cheating and breach of regulations		X	
Passing and failing		X	
Repeating module examinations		X	
Recognition of examination and study achievements	X	X	
Compensation for disadvantages		X	
Examiners	X		
Appeal procedure	X		
Purpose and conduct of the Bachelor's examination			X
Degree	X		X
Bachelor's certificate, Bachelor's diploma, transcripts of records and diploma supplement	X		
Transitional provisions		X	
Entry into force	X		

***Table 1**: Comparison of the examination regulations in Germany with Austrian legal sources*

This comparison shows that the following legal regulations do not exist in the Austrian legal sources examined:

- Examination board
- Second examiners
- Responsibilities

To ensure that the examination regulations for the SmartVET-HighED project are as standardized as possible for Germany and Austria, a curriculum was developed for Austria that deals with the three regulations not mentioned above in §5 of the examination regulations.

Academic degrees in Austria

While developing the model curriculum, it was also necessary to examine the academic degree with which the bachelor's program developed in the Smart-VET HighED project should be completed. There are various academic degrees in Austria, whereby the bachelor's degrees are subdivided as follows:[2]

- Bachelor of Arts (BA oder B.A.)
- Bachelor of Engineering (BEng oder B.Eng.)
- Bachelor of Science (BSc oder B.Sc.)

The Bachelor of Arts degree is primarily awarded in the humanities, cultural sciences, linguistics, social sciences and economics. In contrast, the Bachelor of Science degree is awarded in technical and engineering fields as well as in economics. Specifically, the title "Bachelor of Engineering" is awarded exclusively in the context of engineering and technology.[3]

When selecting the academic degree for a degree program, a meaningful connection should be made to the degree program or the course content. The recommendation of the BMBWF on the use of academic degrees serves as a guide here.[4]

Due to the content of the course, the BEng (Bachelor of Engineering) is the most suitable for completing the SmartVET-HighED course. This follows the view from Germany.

[2] Vgl. Stepstone.at, (2023).
[3] Vgl. studieren.at (2023).
[4] Vgl. BMBWF, (2020).

Sample curriculum of the dual Bachelor's degree program

This subchapter presents the model curriculum for the SmartVET- HighED project. The University Act (UG) and the statutes of the University of Graz form the legal basis for the engineering bachelor's degree program. The model curriculum was developed based on existing curricula at the University of Graz and, together with the statutes and regulations of the UG, forms the examination regulations for the dual Bachelor's degree program of the Austrian Working Group.

§ 1 Subject, qualification profile and relevance of the degree program

(1) Subject of the study program

The dual study program SmartVET-HighED with integrated master/bachelor's degree focuses on smart building, building technology and renewable energies. The following vocational training courses can be chosen as an option:

- - Heating engineer
- - Electrical engineer
- - Plumber (sanitary)

Teaching and studies should prepare students for their professional field of activity and provide them with the necessary specialist knowledge, skills and methods to enable them to work scientifically and act responsibly in their profession. In addition to professional practice, the course offers methodological knowledge in mathematics, electrical engineering, computer science and construction. In addition, aspects of business administration, chemistry/materials science and thermodynamics are discussed and demonstrated.

(2) Qualification profile and skills

After completing the SmartVET-HighED Bachelor's degree program, graduates can:

- apply mathematical and scientific principles in practice, solve problems and develop new methods in technical and scientific fields.
- analyze, design and optimize complex technical systems, considering materials science, electrical engineering and mechanics.
- develop software solutions, apply data structures and algorithms and program in various programming languages.
- integrate business management concepts into technical projects and company processes.
- plan, implement and monitor construction projects.
- communicate effectively, lead teams and manage conflicts in a professional environment.
- apply laboratory and measurement techniques and critically analyze data.
- apply sustainable technologies, energy efficiency and ecological assessment methods in practice.

(3) Need and relevance of the degree program for science and the job market

Graduates can find employment in the following areas, for example:

Building technology; Renewable energy; Environmental technology, Building automation, Electrical installation, Construction project management, etc

§ 2 General provisions

(1) Eligibility requirements

A general university entrance qualification is required for the dual study program, which can be defined as follows:

- An Austrian school-leaving examination certificate, an Austrian school-leaving and diploma examination certificate or an Austrian certificate for the Berufsreifeprüfung, as well as certificates equivalent to these by international agreement.
- An Austrian certificate confirming the award of a university entrance qualification for a specific group of courses at a university, teacher training college or university of applied sciences.
- A certificate of completion of at least three years of study (on a full-time basis or 180 ECTS credits) at a recognized domestic or foreign post-secondary educational institution.
- A confirmation of the positive assessment of the entrance examination in the artistic studies.
- An “IB Diploma” according to the regulations of the “International Baccalaureate Organization”.
- A European Baccalaureate certificate in accordance with Art. 5 para. 2 of the Convention defining the Statute of the European Schools, Federal Law Gazette III No. 173/2005.

The general university entrance qualification can also be proven by a foreign qualification, provided there is no significant difference to the Austrian general university entrance qualification. There is no significant difference if the

- qualification in the issuing country provides access to all sectors of higher education,
- the duration of schooling is at least twelve years and
- general education content predominates, as demonstrated by the completion of six general education subjects at upper secondary level.

If the schooling period according to the above criteria is not fulfilled, the Rectorate may prescribe up to four supplementary examinations, which must be taken before admission.

In addition to the statutory admission requirements, proof of German/English language skills must be provided to successfully complete the course. The exact form of proof is determined in accordance with a regulation issued by the Rectorate.

(2) Duration and structure of the degree program

The Bachelor's degree program with a workload of 210 ECTS credits comprises eight semesters.

Module abbreviation and module	ECTS
Module A: Mathematics 1	6
Module B: Chemistry/Materials Science	5
Module C: Construction Management A	5
Module D: Mathematics 2	6
Module E: Electrical Engineering	5
Module F: Computer Science	5
Module G: Business Administration A	4
Module H: Structural Engineering	5
Module I: Introduction to Thermodynamics	5
Module J: Lighting and Illumination Technology with EELA	4
Module K: Industrial Electronics 1	5
Module L: Building Physics and Technical Construction	5
Module M: Heat Supply	5
Module N: Automation Technology	5
Module O: Industrial Electronics 2	4
Module P: Building Construction A	5
Module Q: CAD for Construction	3
Module R: Energy and Environmental Technology	5
Module S: Software for Engineers	5
Module T: Ventilation, Air Conditioning and Refrigeration Technology	5
Module U: Technical English 1	2
Module V: Private Building Law	5
Module W: Energy Management	5
Module X: Natural Resource Management	5
Module Y: BIM Project	5
Module Z: Technical English 2	2
Module AA: Control Engineering 1	5
Module AB: Gas and Fire Protection Technology	4
Module AC: TGA Project	5
Module AD: Calculation in TGA	5
Module AE: Regenerative Heat Generation	5
Module AF: Project Management	5
Module AG: Facility Management	6
Module: Key Qualification 1 (WPF)	3
Module: Key Qualification 2 (WPF)	2
Module: Compulsory elective subject 1	3
Module: Compulsory elective 2	3
Practical phases	31
Bachelor's thesis	12

***(3)* Academic degree**

Graduates of the Bachelor's degree program are awarded the academic degree “Bachelor of Engineering”, abbreviated to BEng.

***(4)* Number of possible participants in courses and ranking criteria**

For pedagogical-didactic and spatial reasons, due to the number of devices/apparatus or for safety reasons, the number of participants for the individual course types may be limited:

Course type	Number of participants
Lecture with exercise (VU)	60
Laboratory exercise (LU)	6
Projects (PT)	6

If the specified maximum number of participants is exceeded, students are admitted to the courses in accordance with the criteria of the ranking procedure of the responsible institution specified in the current version of the Senate guidelines on the allocation of course places in courses with a limited number of participants.

§ 3 Structure and organization of the study program

***(1)* Modules and exams**

The modules and examinations are listed below with the module title, course title, course type, ECTS credits (ECTS), contact hours (KStd.) and the recommended semester assignment (recommended semester). The module descriptions can be found in the appendix.

Module	Module title	Type	ECTS	KStd.	Sem.
Semester 1					
Module A	Mathematics 1	VU	6	8	1
Module B	Chemistry/materials science	VU	5	6	1
Module C	Construction management A	VU	5	6	1
Module	Key qualification 1 (WPF)	VU	3	3	1
Semester 2					
Module D	Mathematics 2	VU	6	8	2
Module E	Electrical engineering	VU	5	6	2
Module F	Computer science	VU	5	5	2
Module G	Business administration	VU	4	6	2
Semester 3					
Module H	Structural engineering	VU	5	6	3
Module I	Introduction to thermodynamics	LU	5	6	3
Module J	Lighting and lighting technology with EELA	VU	4	3	3
Module K	Industrial electronics 1	LU	5	6	3
Semester 4					
Module L	Building physics and technical expansion	VU	5	5	4
Module M	Heat supply	LU	5	6	4
Module N	Automation technology	LU	5	6	4
Module O	Industrial electronics 2	VU	4	5	4
Semester 5					

Module P	Building construction A	VU	5	6	5
Module Q	CAD for construction	LU	3	6	5
Module R	Energy and environmental technology	VU	5	6	5
Module S	Software for engineers	VU	5	5	5
Module T	Ventilation, air conditioning and refrigeration technology	VU	5	6	5
Module U	Technical English 1	VU	2	3	5
Semester 6					
Module V	Private construction law	VU	5	5	6
Module W	Energy management	VU	5	6	6
Module X	Natural resource management	VU	5	6	6
Module Y	BIM project	PT	5	6	6
Module Z	Technical English 2	VU	2	3	6
Semester 7					
Module AA	Control and regulation technology 1	LU	5	6	7
Module AB	Gas and fire protection technology	PT	4	5	7
Module AC	TGA project	VU	5	5	7
Module AD	Calculation in TGA	VU	5	6	7
Module AE	Regenerative heat generation	VU	5	6	7
Semester 8					
Module AF	Project management	VU	5	6	8
Module AG	Facility management	VU	6	7	8
Module:	Key qualification (WPFI)	VU	2	3	8
Module:	Compulsory elective subject 1		6		6
Module:	Compulsory elective subject 2		5		8
	Practical phases		31		1-8
	Bachelor's thesis		12	330	8

(2) Options

1. students have the opportunity to select courses from compulsory elective modules I and II amounting to 11 ECTS in the sense of an individual focus through courses from the Building Services Engineering DUAL degree programs, but above all also from compulsory elective modules offered by other degree programs at the university 21. The aim is to broaden the subject matter and gain an insight into other engineering degree programs. In some cases, the scope of these modules is larger than the actual WPF, with a corresponding allocation of credit points. This additional workload is organized in the students' timetable. This may only be approved if it does not interfere with the objective of academic professional training.

(3) Registration requirement(s) for attending courses/compulsory practical training

Module title/course title		Recommended prerequisite	
		Module title	**Course title**
Mode D	Mathematics 2	Module A	Mathematics 1
Mode I	Introduction to thermodynamics	Module A	Mathematics 1 and Mathematics 2
Mode J	Light and lighting technology	Module D	Electrical Engineering and Industrial Electronics
Mode O	Industrial electronics	Module D Module E	Electrical Engineering
Mode L	Building physics and technical construction	Module K	Building Construction 1
Mode M	Heat supply	Module O	Building Physics and Technical Construction, Thermodynamics, Mathematics 1
Mode N	Automation technology	Module E	Electrical Engineering, Industrial Electronics 1 and 2, Computer Science
Mode O	Industrial electronics 2	Mode K	Industrial electronics 1
Mode S	Software for engineers	Mode F	Computer science
Mode T	Ventilation, air conditioning and refrigeration technology	Mode L	Building physics and technical expansion, thermodynamics
Mode W	Energy management	Mode I Mode I	Heat supply, regenerative heat generation, industrial electronics
Mode X	Natural resource management	Mode M	Thermodynamics, automation technology
Module Y	BIM project	Mode AE	Building construction, building physics and technical expansion, CAD for construction, electrical engineering, lighting and lighting technology, ventilation, air conditioning and refrigeration technology, heat supply, regenerative heat generation
Module Z	Technical English 2	Mode K	Technical English 1

***(4)* Bachelor thesis**

In this Bachelor's degree program, a Bachelor's thesis must be completed as part of the course “Bachelor's thesis”. The Bachelor's thesis is an independent, written piece of work and must be completed in the 8th semester of the degree program. The Bachelor's thesis must be thematically assigned to one of the courses of the previous semesters 1-8 in accordance with § 3 (1).

(5) Bachelor examination

During the Bachelor's thesis, a final Bachelor's examination must be taken in the 8th semester.

(6) Practical phases

1. The practical relevance of the study program is primarily ensured by the dual training with the practical phases.
2. The curriculum of this degree program is designed as a dual study program. During the first four semesters, students are given the opportunity to complete in-company training in companies as well as further education at a vocational school alongside their university studies. The period from the fifth to the seventh semester is characterized by the integration of practical phases. The specific duration and timing of these practical phases are precisely regulated in the appendix (module handbook). During the practical phases, the student remains enrolled at the university.
3. The university cooperates with the practice companies in all matters relating to the practical training of students.
4. The final modalities of the practical phases include giving a presentation and writing a project report. The exact weighting is specified in detail in the appendix (module handbook).

§ 4 Examination regulations

(1) **Examination board**

1. A joint examination board is formed for all degree programmes for the organization of examinations and assigned tasks. It has five members elected by the Senate, three of whom are professors, one member of staff and one student member. The term of office of the members is three years, that of the student member only one year. The Examination Board elects the chairperson from the group of professors. The Examination Board may delegate certain tasks incumbent upon it to the chairperson.
2. The Examination Board has a quorum if the majority of its members, including the chairperson or their representative and another member of the group of professors, are present. The Examination Board passes its resolutions by a majority of the valid votes cast; abstentions are considered votes not cast. In the event of a tie, the chairperson has the casting vote.
3. The Examination Board ensures that the provisions of the ESR are complied with and ensures that examinations are conducted. The Examination Board makes suggestions for the reform of curricula and examination and study regulations. The Examination Board makes all decisions within the framework of examination procedures for which no other responsibility is expressly provided for in these examination regulations or by law.
4. The Examination Board decides on appeal procedures for study and examination matters.
5. The members of the Examination Board have the right to attend the examination.

6. The Examination Board does not meet in public. The members of the Examination Board and their deputies are subject to official secrecy.
7. An Examination Office is set up to support the Examination Board.

***(2)* Second examiner**

Only those who have at least the qualification to be determined by the examination or an equivalent qualification are appointed as second examiners.

***(3)* Responsibilities**

Responsible for the decision

1. on the consequences of violations of examination regulations,
2. on passing and failing the examination,
3. on the appointment of examiners,
4. on the recognition of missed deadlines,
5. on objection procedures,
6. on the granting of compensation for disadvantages,

is the Examination Board in accordance with § 5 Para. 1. The responsibilities can be transferred to the member of the Presidential Board responsible for teaching. Certificates and diplomas are issued by the university. They contain the signature of the Chair of the Examination Board, the certificates also contain the signature of the President.

§ 5 Entry into force of the curriculum and transitional provisions

This curriculum comes into force on DD.MM.YYYY. (Curriculum 202X)

Examination regulations for the dual Bachelor's degree program

Due to the legal requirements in Austria, it was necessary to develop differentiated examination regulations in contrast to those of the Germany/Lithuania working group. In addition to the model curriculum presented in Chapter 3, the examination regulations for the Bachelor's degree program of the Austrian working group are supplemented by the statutes and the University Act. Enclosed you will find links to the current versions of these two laws. Due to the volume, the documents have not been added as an appendix to this file:

Statutes: https://static.uni-graz.at/fileadmin/sowi/Studium/Satzung_Studienrechtliche_Bestimmungen_2023.pdf

University Act: https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20002128&FassungVom=2024-11-14

Part 2 - Summary

The analysis of the examination regulations for the Building Services Engineering and Renewable Energies degree program by the working group from Germany/Lithuania has shown that the Austrian situation regarding examination regulations differs significantly from that in Germany. Unlike in Germany, the examination regulations for the dual study program in Building Technology and Renewable Energies can be found in various legal sources (UG, statutes and curriculum). With the aim of creating examination regulations that are as uniform as possible for all participating project partner countries and thus for the SmartVET-HighED Bachelor's degree program, the German examination regulations were compared with the Austrian legal sources. This showed that the majority of the regulations in the legal sources cited are equivalent to the German examination regulations. Only the examination board, regulations on second examiners and certain responsibilities were not represented as standard in the UG, statutes and curriculum and were supplemented in the model curriculum under §5 of the examination regulations.

By considering the missing regulations in the model curriculum, it has been possible to create a legal basis for the dual study program in Austria that corresponds to that in Germany. The model curriculum, the statutes and the Universities Act thus together form the examination regulations for the dual Bachelor's degree program in Austria. In the second part, reference is made to the situation of the examination regulations for the vocational and master craftsman's degree in the dual study program.

Part 3: Ordinance on the master craftsman examination job profile and on the examination requirements in parts I and II of the master craftsman examination in the plumbing and heating engineering trade (Master Plumber and Heating Engineer Ordinance - InstallateurHeizungsbauerMstrV)

Date of issue: 17.07.2002

Full quote:

"Installateur- und Heizungsbauermeisterverordnung vom 17. Juli 2002 (BGBl. I S. 2693), die zuletzt durch Artikel 2 Absatz 41 der Verordnung vom 18. Januar 2022 (BGBl. I S. 39) geändert worden ist"

English:

“Master Plumber and Heating Engineer Ordinance of July 17, 2002 (BGBl. I p. 2693), last amended by Article 2 (41) of the Ordinance of January 18, 2022 (BGBl. I p. 39)”

Status: Last amended by Art. 2 para. 41 V of 18.1.2022 I 39

Explanations of the master craftsman examination regulations in the plumbing and heating trades are published in the Federal Gazette.

Input formula

Based on Section 45 of the Crafts Code in the version published on September 24, 1998 (Federal Law Gazette I p. 3074), which was amended by Article 135 No. 3 of the Ordinance of October 29, 2001 (Federal Law Gazette I p. 2785), the Federal Ministry of Economics and Technology decrees in agreement with the Federal Ministry of Education and Research.

§ 1 Structure and content of the master craftsman examination

The master craftsman examination for plumbers and heating engineers comprises the following independent examination parts:

1. The examination of the masterly execution of the usual work (Part I),

2. the examination of the required theoretical knowledge (Part II),

3. the examination of the necessary business management, commercial and legal knowledge (Part III) and

4. the examination of the required vocational and occupational pedagogical knowledge (Part IV).

§ 2 Master craftsman examination job profile

(1) The master craftsman's examination in the plumbing and heating trade establishes that the candidate is capable of independently managing a craft business, performing management tasks in the areas of technology, business administration, personnel management and development, carrying out training and independently implementing his professional skills and adapting them to new requirements in these areas.

(2) For the purpose of the master craftsman examination, the following activities, knowledge and skills are attributed to the plumbing and heating trades as holistic qualifications relating to installations and systems for the supply and disposal of gas, water, air, heat and other energies and media, including sanitary facilities:

1. Determine customer requirements, advise customers, conduct order negotiations and set order targets, calculate services and prepare quotations,

2. Perform tasks of technical and commercial business management, business organization, personnel planning and personnel deployment, in particular considering company training and further training, quality management, liability, occupational health and safety, occupational safety and environmental protection, including the use of low-solvent or water-based solvent-free products; use information systems,

3. Carry out orders, considering production techniques and maintenance alternatives, compliance with job-related legal regulations and recognized rules of technology as well as personnel requirements and training; organize, plan and monitor order processing and order handling, including construction site facilities,

4. plan, construct, commission, modify, maintain and monitor technical building systems and systems for energy collection, energy conversion and energy storage, in particular considering safety and health-related precautionary measures; consider and apply techniques for the rational use of energy,

5. master manual and mechanical machining and processing methods as well as assembly and joining techniques,

6. Consider material properties in planning, design and execution,

7. carry out computer-aided technical calculations, of heat demand, cooling load and building pipe network dimensioning,

8. Create documentation, in particular technical work plans, sketches and technical drawings, also using computer-aided systems,

9. carry out and document technical measurements and tests, in particular those required by law,

10. plan and manufacture electrical, electronic, hydraulic, mechanical and pneumatic control, regulation, conveying and monitoring equipment; use data systems and data transmission devices, diagnostic, measuring and testing systems,

11. Examine, assess and document building structures and technical building systems in terms of building physics, structural engineering, legal, ecological and economic aspects,

12. Carry out troubleshooting and fault finding, master measures to eliminate faults and malfunctions, evaluate and document results,

13. Accept and record services, hand over to the customer, invoice and carry out post-calculation.

§ 3 Structure, duration and passing of Part I

(1) Part I of the master craftsman examination comprises a master craftsman examination project and a related technical discussion.

(2) The preparation of the master craftsman examination project should not take longer than four working days and the technical discussion should not take longer than 30 minutes.

(3) The master craftsman examination project and the technical discussion are assessed separately. The examination performances in the master craftsman examination project and the technical discussion are weighted at a ratio of 3:1. This is used to form an overall assessment.

(4) The minimum requirement for passing Part I of the master craftsman examination is an overall sufficient examination performance, whereby the examination must not have been assessed with less than 30 points in either the master craftsman examination project or the technical discussion.

§ 4 Master examination project

(1) The candidate must carry out a master craftsman examination project that corresponds to a customer order. In doing so, the candidate should demonstrate that they can plan, carry out and complete a customer order in the plumbing and heating trade, considering the technical regulations and statutory provisions and economic and ecological aspects, as well as prepare quotations. The master craftsman examination project should be carried out in various task blocks relating to plants and systems for the supply and disposal of gas, water, air, heat and other energies and media, including sanitary facilities. The examination board specifies task blocks taking into account the candidate's suggestions. On this basis, the candidate must submit the draft, including a time schedule, to the master craftsman examination board for approval.

(2) The following task is to be carried out as a master craftsman examination project: Design, plan, calculate and cost a technical building system for plumbing and heating engineering,

including control and regulation components. Installation and service work must be carried out on this basis. This involves checking the safety of supply and disposal lines and putting them into operation, electrically connecting and commissioning regulation, control or conveying equipment, measuring and adjusting a heat generation system and creating measurement logs and test reports.

(3) The master craftsman examination project according to paragraph 2 consists of:

1. Design, planning, calculation and costing documents,

2. Execution of installation and service work including acceptance and handover documentation.

The design, planning, calculation and costing documents are weighed at a total of 50 percent, the assembly and service work carried out, including acceptance and handover documentation, at 50 percent.

§ 5 Specialist discussion

A technical discussion is held based on the examination performance in the master craftsman examination project. The candidate should demonstrate that he/she can demonstrate the technical relationships on which the master craftsman examination project is based, that he/she can justify the course of the master craftsman examination project and present work-related problems associated with the master craftsman examination project and their solution and is able to take new developments into account in the process.

§ 6 Structure, duration and passing of Part II

(1) The examination in Part II is intended to demonstrate that the candidate can analyze and evaluate problems and identify and document suitable solutions by combining technological, safety, process and procedural, materials engineering, mathematical and economic knowledge.

(2) Examination subjects are:

1. safety and maintenance technology,

2. systems engineering,

3. order processing,

4. operational management and organization.

(3) In the examination subject according to paragraph 2 no. 1, one task must be completed for each of the qualifications listed in letters a and b, which must be case-oriented; in each of the examination subjects according to paragraph 2 no. 2 to 4, at least one task must be completed, which must be case-oriented.

1. safety and maintenance technology

The candidate should demonstrate that he/she is able to solve tasks and problems in safety and maintenance technology from the point of view of hazard-related precautions, in particular with regard to safety and hygiene. The qualifications listed below can be combined in the task:

a) Develop, evaluate and correct solutions for tasks relating to gas and flue gas systems, in particular for safety fittings in pipes and on appliances, for the serviceability of the system and for the supply of combustion air,

b) Developing, evaluating and correcting solutions for tasks in drinking water, non-drinking water and drainage systems, in particular the retention of harmful substances as well as leak testing and securing the inlet points below the backflow level;

2. systems engineering

The candidate should demonstrate that he/she is able to work on tasks and problems as well as maintenance solutions in the field of plant and building systems engineering, taking into account economic, technological, ecological and hygienic aspects in an installation and heating engineering company. They should assess and describe technical plant and equipment issues. The task should combine several of the qualifications listed below:

a) Develop, evaluate and correct solutions for tasks in the areas of structure and function of supply and disposal systems for gas, water, air, heat, other energies and media as well as sanitary facilities, their components and assemblies, in particular in the areas of gas-fired heat generation systems and drinking water supply systems,

b) Develop, evaluate and correct solutions for tasks in the field of system, control and regulation technology,

c) Assess the types and properties of materials and supplies and assign them to their intended use,

d) Describe problems of material processing and joining techniques, develop, evaluate and correct solutions,

e) calculate technical and physical variables, pipelines and ducts as well as the design of system components,

f) select and assess procedures, testing and measuring techniques for functional tests, in particular for hydraulic balancing, including troubleshooting;

3. Order processing

The candidate should demonstrate that he is able to initiate and complete the process-related measures necessary for the technical and economic success of a plumbing and heating company in a customer-oriented manner. The task should combine several of the qualifications listed below:

a) plan order fulfillment processes,

b) evaluate methods and procedures of work planning and organization, taking into account assembly technology and the use of materials, equipment and personnel,

c) describe quality assurance aspects when accepting orders and implementing orders in the internal information system,

d) develop, evaluate and correct technical work plans, also using electronic data processing systems,

e) award and monitor subcontracts,

f) describe damage assessment of technical building systems and their components, propose repair alternatives and determine the necessary processing; carry out preliminary and final costing;

4. Operational management and organization

The candidate should demonstrate that he/she is able to perform operational management and organization tasks in a plumbing and heating company. The task should combine several of the qualifications listed below:

a) determine operational costs, taking into account business management correlations,

b) design and implement personnel development and management concepts,

c) design marketing measures for customer care and the acquisition of new customers,

d) assess information and communication systems with regard to their operational application possibilities,

e) plan and present operational quality management,

f) apply job-related legal regulations and recognized rules of technology,

g) assess liability in the construction and maintenance of systems and services,

h) Present the requirements of occupational safety, health protection and environmental protection; assess potential hazards and define measures to avert and eliminate hazards,

i) plan and present operating and warehouse equipment and logistics.

(4) The examination in Part II must be conducted in writing. It should not take longer than twelve hours in total. The duration of the examination must not exceed six hours per day.

(5) If at least 30 and less than 50 points have been achieved in no more than two of the examination subjects mentioned in paragraph 2, a supplementary oral examination may be held in one of these examination subjects if this enables Part II of the master craftsperson examination to be passed.

(6) The minimum requirement for passing Part II of the master craftsperson examination is an overall satisfactory examination performance. After the candidate has passed Part II of the master craftsman examination, the master craftsman examination board shall issue a certificate of the result of the examination in the examination subject in accordance with Paragraph 2 Number 1. The examination in Part II is not passed if

1. one examination subject has been assessed with less than 30 points or

2. two examination subjects have been assessed with less than 50 points each after the supplementary examination has been carried out.

Footnote

(+++ § 6 para. 5 and 6: For application see § 8 +++)

§ 7 General examination and procedural regulations, further regulations for the master craftsman examination

(1) The provisions of the Master Craftsman Examination Procedure Ordinance remain unaffected.

(2) The examination in parts III and IV of the master craftsman examination shall be determined in accordance with the General Master Craftsman Examination Ordinance of October 26, 2011 (Federal Law Gazette I p. 2149) in the currently valid version.

§ 8 Transitional provision

The provisions of Section 6 (5) and (6) do not apply to examination procedures commenced by December 31, 2011. These will be completed in accordance with the previous regulations.

§ 9 Entry into force, expiry

This ordinance shall enter into force on January 1, 2003.

Part 4: Examination regulations for professional and master craftsman qualifications (Austria)

After the first part of the examination regulations dealt with the dual Bachelor's degree program using the example of the University of Graz, this section is dedicated to the vocational and master's degree integrated into the degree program. In the following, the professions integrated into the degree program for Austria are briefly presented once again and special features of the degrees and the legal situation, especially regarding the duration of studies, are outlined. Subchapter 1 deals with the vocational schools and the creditability of individual parts with Matura. Subchapter 2 deals with the master craftsman examination in Austria, followed by a conclusion (subchapter 3) on the examination regulations for integrated vocational training and the integrated master craftsman qualification.

Vocational training for the dual study program

This section is dedicated to the examination regulations for the dual vocational qualification. Similar to the Bachelor's degree, there are also regulations for vocational qualifications that must be taken into account. In the course of this chapter, an attempt is made to highlight the special features of credit transferability, before the examination regulations for the relevant training occupations are then presented.

Integrated dual training occupation

The apprenticeship in installation and building services engineering, structured as a modular apprenticeship, includes a basic module in installation and building services engineering and requires the selection of a main module in gas and sanitary engineering, heating engineering or ventilation engineering. For further specialization, an additional main module or one of the special modules in bathroom design, eco-energy technology, control and regulation technology or building services planning can be selected.[5]

Regular duration of vocational training and vocational school

The regular duration is three years for a basic module and a main module. If a basic module is combined with a main module and a special module or with two main modules, the duration of vocational training and vocational school is extended to four years.[6]

Duration of vocational training for people with a school-leaving certificate

For graduates of a general or vocational secondary school, the apprenticeship period can be shortened by one year, provided that the training company has given its consent and the basic

[5] Vgl. § 1 Abs. 1 ff. Rechtsvorschrift für Installations- und Gebäudetechnik – Ausbildungsverordnung.
[6] Vgl. WKO (2023a).

apprenticeship period of the person being trained lasts at least three years. This regulation also applies to persons who have successfully completed a vocational secondary school of at least three years' duration, another apprenticeship with a final apprenticeship examination or a skilled worker examination in an agricultural or forestry apprenticeship occupation.[7]

Duration of vocational school attendance with Matura

The duration of vocational school attendance with Matura must be discussed with the respective vocational school. As a rule, graduates of an AHS or BHS without a specialization in building technology can skip one level of vocational school so that they can complete the vocational school diploma in the shortened apprenticeship period. In addition, high school graduates can be exempted from individual subjects upon application if they already have the relevant prior knowledge.

In the case of a specialization in plumbing, heating and ventilation technology, such as graduates of the HTL Pinkafeld with a specialization in building, energy and environmental technology, the HTL Mödling with a specialization in building technology, the HTL Vöcklabruck with a specialization in building technology or the HTL Jenbach with a specialization in energy and building technology, the vocational school training is completely omitted and the graduate can start the LAP with immediate effect.

Persons who have already reached the age of 18 and can credibly demonstrate that they have acquired the skills and knowledge required for a specific apprenticeship occupation by means other than an apprenticeship or have already completed more than half of the apprenticeship period and had no opportunity to continue the interrupted apprenticeship can apply for exceptional admission to the final apprenticeship examination.[8] For this reason, completion of the final apprenticeship examination is not necessarily linked to attendance at a vocational school.

Recognition of parts of vocational school with Matura

In the case of a qualification from a higher general education or intermediate or higher vocational school, part of the regular apprenticeship period can be replaced, especially in the case of specialized school education. This only applies if the school education was so specialized that the students have already acquired relevant knowledge and skills that are specific to the occupational field in question. Due to this previous qualification, the students should either be able to complete the remaining training period more efficiently or even be able to advance directly to the final examination of the profession.[9]

The maximum amount of credit is one and a half years for apprenticeships of up to three years and two years for apprenticeships of more than three years. This means that between one and a half and two years can be credited for apprenticeships in installation and building services

[7] Vgl. WKO (2023b).
[8] Vgl. WKO (2019).
[9] Vgl. § 28 Abs. 1 BAG.

engineering. In addition, only school periods corresponding to at least the 10th grade can be credited. Crediting is carried out via an application by the authorized apprentice to the Provincial Vocational Training Advisory Board. The Provincial Vocational Training Advisory Board decides on the actual amount of credit to be awarded. Further research has shown that for the modular apprenticeship in installation and building services engineering, the following can be credited upon completion.[10]

- the same applies to the years of apprenticeship to be credited at the Higher Vocational College for Building Services Engineering (5-year course),
- the first year of training can be credited to the higher technical college for mechanical engineering (5-year course),
- the first year of training can be credited to the technical college for mechanical engineering production technology,
- the first year of training can be credited to the technical college for mechanical and plant engineering.

Regulations on vocational school visits

In Austria, vocational school attendance can be year-round, i.e. at least one full school day or at least two half school days per week, course-based, i.e. for at least eight weeks, or seasonal, i.e. blocked for a specific time of year.[11]

The training institutes for the specific apprenticeship as an installation and building technician are:[12]

- - Vocational school Mattersburg (Burgenland)
- - Vocational school Spittal a.d. Drau (Carinthia)
- - Zistersdorf Vocational School (Lower Austria)
- - Linz Vocational School (Upper Austria)
- - Provincial vocational school Hallein (Salzburg)
- - Provincial vocational school Graz (Styria)
- - Private vocational school Graz (Styria)
- - Tyrolean vocational school for installation and sheet metal technology (Tyrol)
- - Provincial vocational school Bregenz (Vorarlberg)
- - Vocational school for sanitary, heating and air conditioning technology (Vienna)

The provincial curriculum for the apprenticeship occupation of installation and building services engineering stipulates that three school levels with at least 360 teaching hours per school level must be attended for a three-year apprenticeship. The teaching is divided into three courses of 9 1/3 weeks each.

[10] Vgl. WKO (2018), 1ff.
[11] Vgl. BMBWF (2023).
[12] Vgl. Ausbildungskompass (2023a).

In the case of a four-year apprenticeship, four school levels with at least 360 teaching hours per school level must be completed. Accordingly, teaching is divided into four courses of 9 1/3 weeks each.[13]

Examination regulations for dual training

The Austrian legislator also allows little leeway in the examination regulations for integrated vocational training and the existing legal sources must be taken into account as specified. For the dual study program with integrated vocational training, the training regulations for the dual training occupation of installation and building services engineering must be taken into account. As with the examination regulations for the dual Bachelor's degree course, reference is made to the current version of the training regulations:
Training regulations for installation and building technology: RIS - Installations- und Gebäudetechnik-Ausbildungsordnung - Bundesrecht konsolidiert, Fassung vom 14.11.2024

Master craftsman examinations

In the eighth and final semester, students have the opportunity to take a master's examination. This section briefly describes the specializations and the structure of the examination.

Integrated master craftsman examination

The master craftsman's examination in heating technology and the master craftsman's examination in ventilation technology are eligible for the dual study program. In addition to the independent trades, there are also regulated trades for which a certificate of competence is required. In one trade, this is primarily the master craftsman examination, in other regulated trades it is the qualification examination. For this reason, the qualification examination is offered for the regulated trade of gas and sanitary engineering.[14]

In addition to the guidelines for admission, the examination regulations for the master craftsman examinations in heating technology and ventilation technology include the examination content, assessment criteria and procedures. The examination includes both theoretical and practical parts, which aim to provide comprehensive knowledge in the planning, installation, maintenance and inspection of ventilation systems. Business and legal knowledge is also required. The examination regulations also define how examinations are assessed and the conditions for retaking them. Anyone who has reached the age of 18 is entitled to take the master craftsman examination in heating technology (ventilation technology). The title acquired is “Master Craftsman in Heating Engineering (Ventilation Engineering)”. The time it takes to achieve the final qualification varies individually and depends on personal progress and successful completion of the examination requirements.[15]

[13] Vgl. Bundesministerium für Bildung, Wissenschaft und Forschung (2020)
[14] Vgl. WKO (2023a)
[15] Vgl. AMS Ausbildungskompass (2023)

The master craftsman examination in ventilation technology or heating technology is divided into the following modules:

- **Module 1 - Professional practical examination:** This module consists of two parts. Part A comprises the test work at the level of the final apprenticeship examination. Part B concerns the technical and practical knowledge and skills required for company management, particularly in the areas of installation technology and measurement and control technology.
- **Module 2 - Subject-specific oral examination:** This module also contains two parts. Part A includes a technical discussion at the level of the final apprenticeship examination, while Part B focuses on management, quality management and safety management.
- **Module 3 - Theoretical written examination**: Here, knowledge of specialist calculation, commercial written communication and specialist knowledge is tested.
- **Module 4 - Instructor examination:** This module is based on the relevant provisions of the Vocational Training Act.
- **Module 5 - Business audit:** This examination is based on the entrepreneur examination regulations and covers knowledge that is important for company management

Recognition of parts of the master craftsman examination in the Bachelor's degree program and vice versa

The master craftsman examination in ventilation technology and heating technology includes module one: technical practical examination and module two: technical oral examination, which are divided into parts A and B respectively. It also includes module three: theoretical written examination, module four: instructor examination and module five: Entrepreneur examination.[16]

If, after completing a relevant bachelor's degree, you wish to take a master's examination in the field of ventilation technology or heating technology, you have the option of crediting module one part A, module two part A and module 3.[17]

In this context, the term “relevant to the field” refers to a thematic or content-related match in the field of ventilation or heating technology. If a course of study or training is described as relevant to the subject, this means that the content and skills taught are directly tailored to the specified subject areas and provide relevant preparation for professional activities in this field.[18]

To evaluate the transferability of master craftsman modules after successful completion of the master craftsman examination as part of a corresponding bachelor's degree course, an investigation was carried out into the bachelor's degree course in Building and Energy Technology at the Burgenland University of Applied Sciences. The results of this study showed that the recognition of content must be coordinated directly with the university.[19]

[16] Vgl. § 3 Meisterprüfungsordnung Handwerk Lüftungstechnik/Heizungstechnik.
[17] Vgl. § 3 Meisterprüfungsordnung Handwerk Heizungstechnik/Lüftungstechnik.
[18] Vgl. Ausbildungskompass (2023b).
[19] Vgl. FH Burgenland (2023).

Optional preparation measures

Obtaining a master craftsman title in AT is a formal qualification, i.e. a qualification anchored in law, but for which no master craftsman training, master craftsman course or master craftsman course is provided for in the formal education system. Although for a small number of specialties - such as baker, confectioner, butcher and dressmaker[20] - master classes or master schools do not count as prerequisites for acquiring a qualification, nor do they conclude with a master craftsman's examination.[21] The distinction between industrial master craftsman and foreman is required here. For the training to become a foreman, a foreman school must be attended, which, however, does not conclude with the master craftsman's examination and therefore the title master craftsman or master craftswoman may not be used. A successfully completed master craftsman's examination is required for the industrial master craftsman.[22]

Examination regulations for master craftsman examinations

Provisions relating to the master craftsman examination in Austria can be found in the master craftsman examination regulations. A master craftsman's degree in heating or ventilation technology is possible for the dual study program. Accordingly, reference is also made to the master craftsman examination regulations for these two specialist areas for the examination regulations:

Ordinance of the Federal Guild of Plumbing, Heating and Ventilation Technicians on the Master Craftsman's Examination for the Craft of Heating Engineering (Heating Engineering - Master Craftsman's Examination Ordinance). Based on §§ 24 and 352a Para. 2 of the Trade Regulation Act 1994 - GewO 1994, last amended by Federal Law Gazette I No. 65/2020: RIS - Heizungstechnik-Meisterprüfungsordnung 2021-0.247.836 (BMDW/Gewerberecht) - Qualifikationen gemäß Gewerbeordnung und HBB-Gesetz

Ordinance of the Federal Guild of Plumbing, Heating and Ventilation Technicians on the Master Craftsman's Examination for the Craft of Ventilation Technology (Ventilation Technology - Master Craftsman's Examination Regulations) Based on §§ 24 and 352a para. 2 of the Trade Regulation Act 1994 - GewO 1994, Federal Law Gazette No. 194/1994, last amended by Federal Law Gazette No. I 65/2020: RIS - Lüftungstechnik-Meisterprüfungsordnung 2021-0.247.557 (BMDW/Gewerberecht) - Qualifikationen gemäß Gewerbeordnung und HBB-Gesetz

Conclusio Part 4

The examination regulations for professional and master craftsman qualifications are also clearly regulated in Austria. It is therefore not necessary or even possible to deal with deviating regulations. The research on vocational school visits shows that a shortened duration is possible for people with a Matura and therefore the curriculum presented in Figure 1 seems

[20] Vgl. WIFI Wien (2022).
[21] Vgl. bildungsportal.at (2022).
[22] Vgl. hokify.at (2022).

appropriate. The same applies to the master craftsman's examination and the crediting of individual modules. Overall, the structure of the degree program and the corresponding modules of the module handbook are well applicable to Austrian laws.

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