Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Examination Regulations

for the

Bachelor's degree course in

Automation and Mechatronics

at

Zittau/Görlitz University of Applied Sciences

as of

06/08/2014

as amended on

05/09/2018

Examination Regulations
for the Bachelor's degree course in Automation and Mechatronics
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According to Section 13(4) in conjunction with Section 34 of the act on the autonomy of higher education institutions in Saxony (Saxon Higher Education Autonomy Act, Sächsisches Hochschulfreiheitsgesetz – SächsHSFG), in the version published on 15 January 2013 (SächsGVBl, p 3), last amended by Article 44 of the act of 26 April 2018 (SächsGVBl, p 198), the Zittau/Görlitz University of Applied Sciences (Hochschule Zittau/Görlitz) has adopted the following Examination Regulations as amended on 05/09/2018 for the Bachelor's degree course in Automation and Mechatronics as statutes.

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Division 1: General provisions

Section 1 Purpose of the Bachelor examination

The Bachelor examination constitutes the degree of the Bachelor programme Automation and Mechatronics, qualifying for a profession. The Bachelor examination determines whether the students have a grasp of the contexts in their subject area, have the ability to apply academic methods and findings and have acquired the thorough specialist knowledge necessary for the transition into professional practice.

Section 2 Academic degree

When the student has successfully passed the Bachelor examination, the Zittau/Görlitz University of Applied Sciences awards the academic degree of “Bachelor of Engineering” (abbreviated: B. Eng.).

Section 3 Standard time to degree, structure and scope of the degree course

(1) The standard time to degree is 7 semesters. For students who have taken part in committees of the University of Applied Sciences as defined by the SächsHSFG, or the student body during at least one electoral term, one semester will not be counted towards the standard time to degree. In case of a multi-year contribution, three semesters will not be counted to the standard time to degree. This applies correspondingly to representatives of the student body on the Student Services organisations’ *(Studentenwerke)* administrative board. For students with children, up to four semesters are not counted towards the standard time to degree, provided they have been applied for as semesters of leave of absence *(Urlaubssemester)* in due time.

(2) The degree course comprises the compulsory modules according to Section 23, including a placement, the Bachelor thesis and the Bachelor thesis defence.

(3) The placement is a supervised study unit with content regulated by the “Practical Experience Regulations for degree courses of the Zittau/Görlitz University of Applied Sciences” *(“Praxisordnung für Studiengänge der Hochschule Zittau/Görlitz”)* and the respective module description, which is held in principle in a company or another institution where the profession is practised.

(4) The degree programme amounts to 210 credit points (hereinafter referred to as “ECTS credits”). Generally, each semester thus corresponds to 30 ECTS credits.

(5) By derogation from subsection (4) sentence 1, international study programmes and inter-university partnerships shall have a ECTS workload pursuant to their respective agreements. Further details are governed by the respective annexes. Normally, the workload should be that of 30 ECTS credits per semester (subsection (4) sentence 2).

Section 4 Structure and deadlines of the Bachelor examination

(1) The Bachelor examination is composed of several modules, each being completed by module examinations. The Bachelor’s examination has been passed with the success completion of the final module.

(2) A module examination encompasses one or more forms of examinations. Among the modules, a distinction is to be made between the compulsory modules and the final module.

(3) The examination procedure and the courses on offer ensure that the Bachelor examination can be completed within the standard time to degree. A Bachelor examination, which is not completed within four course semesters after the standard time to degree has expired, is considered failed. Furthermore, the Bachelor examination is to be marked with “nicht bestanden”, (“failed”), if according to the curriculum no compulsory coursework or no examination was completed during the first four course semesters.

(4) A Bachelor examination with a failing grade can be repeated once within a year. After this deadline has expired, the Bachelor examination is deemed a fail. Admission to a resit examination is only possible upon application and at the next possible examination date. Another resit examination is not permitted.

Section 5 Evaluation of taken examinations, grade calculation for modules and the Bachelor examination

(1) The examiner responsible sets the marks for the individual exams. The following marks or grades respectively must be given for the evaluation of exams:

1	sehr gut (very good)	an outstanding performance;
2	gut (good)	a performance considerably above the average requirements;
3	befriedigend (satisfactory)	a performance corresponding to the average requirements;
4	ausreichend (sufficient)	a performance still meeting the requirements in spite of its shortcomings;
5	nicht ausreichend (not sufficient / failed)	a performance failing to meet the requirements due to considerable shortcomings.

For a differentiated assessment of exams, individual marks can be raised or lowered by 0.3. The following marks cannot be awarded: 0.7, 4.3, 3.7, 5.3.

(2) If a module examination only consists of one individual examination, the mark given for the examination is also the grade of the module. If a module examination is composed of different examinations, the module grade is calculated through the weighted arithmetic mean of the marks of all individual examinations. The weightings of exams shall be in line with Annex 2). In calculating the grade of a module, only the first decimal (after the decimal point) is taken into account. All further digits are deleted without any substitution and without rounding.

(3) An overall grade is calculated for the Bachelor examination. The weighting factors set out in Annex 2) must be observed when aggregating the overall grade of the Bachelor examination. Subsection (2) applies correspondingly for the aggregation of the Bachelor examination's overall grade. The corresponding overall grade is:

with an average up to and including 1.5	sehr gut (very good)
with an average of 1.6 up to and including 2.5	gut (good)
with an average of 2.6 up to and including 3.5	befriedigend (satisfactory)
with an average of 3.6 up to and including 4.0	ausreichend (sufficient)
with an average of 4.1 and more	nicht ausreichend (not sufficient / failed)

(4) If an average mark of 1.2 or better has been achieved in the Bachelor examination, the attribute "sehr gut" (very good) shall be replaced by *"mit Auszeichnung bestanden"* (passed with distinction), which shall be awarded in addition to the overall grade of the Bachelor examination.

(5) With regard to the overall grade in accordance with subsection (3), all final grades shall, in addition to the absolute grading system, be presented in a transcript according to the current version of the ECTS Users Guide.

Section 6 Absence, withdrawal, cheating, breach of rules or regulations

(1) An examination shall be marked with “nicht ausreichend” (Note 5), (not sufficient, (5)) if the student misses an appointment for examination that is binding for them without a substantive reason or if they withdraw without substantive reason from an examination which was begun. The same applies if a written examination was not completed in within the specified examination time or is not handed in for assessment on time.

(2) The reason given for the withdrawal or absence must be reported immediately to the Examinations Office and must be credible. Upon absence due to sickness, pregnancy or maternity leave, the Examinations Office must be provided with a doctor’s note. In cases of doubt, a submission of a doctor’s note by a public health officer can be demanded. With regard to the meeting of deadlines for the first registration for examination, for resit examinations, giving reasons for absence from examinations, and compliance with deadlines and times for examinations, the sickness of the child in the student’s primary care is considered equal to their own sickness. If the reason is accepted, the examination can be completed at the next possible date.

(3) If the student attempts to influence the result of an examination by cheating or the use of non-approved aids, it will be marked with “nicht ausreichend” (Note 5), (not sufficient / failed (5)). A student who interferes with the proper proceedings of an examination can be excluded from the further sitting of the examination by the examiner or invigilator. In this case, the examination will be marked with “nicht ausreichend” (Note 5), (not sufficient / failed (5)). In serious cases, the faculty’s examination committee can exclude the student from completing further examinations. The same applies for compulsory coursework.

(4) The student can within two weeks apply for a re-evaluation of a decision according to subsection (3). The faculty’s examination committee must inform students of decisions that are to their disadvantage, immediately and in writing. Such decisions must be substantiated and include information on the student’s right to appeal.

Section 7 Passing and failing

(1) The Bachelor examination is passed when all module examinations have been passed. It is deemed a fail when the final module’s exam has not been passed or the requirements of Section 4(3) or (4) apply.

(2) A module examination is passed when all examinations of the module have been marked with at least “ausreichend” (Note 4), (sufficient (4)).

(3) Students must be informed about their failed module examinations in the manner that is usually applied in the relevant faculty. Students with a failing grade must be informed whether and, if applicable, to what extent and within what deadline the module examination can be retaken.

(4) A module examination is deemed failed in the final attempt, when the second resit examination was not marked with at least “ausreichend” (Note 4), (sufficient (4)).

(5) If the student fails a module examination in their final attempt, they may continue to sit other examinations until the definite fail of the Bachelor examination has become final.

(6) Students must be informed in writing of their definite fail and the impossibility of a successful completion of the Bachelor course, including information on their right to appeal.

(7) A student who has failed the Bachelor examination in a final attempt shall receive an academic transcript that lists the courses taken and the ECTS credits accrued, including the statement that the Bachelor examination was failed, and that due to the definite fail they have lost their right to take examinations in the respective Bachelor course.

(8) Upon application, the Zittau/Görlitz University of Applied Sciences will provide students who do not complete their degree course with an academic transcript listing the courses taken and the ECTS credits accrued.

Section 8 Recognition of modules, periods of study, learning and academic achievements, transfer of ECTS credits

(1) Modules, examinations and compulsory coursework that have been completed in a degree course at the Zittau/Görlitz University of Applied Sciences will be officially recognized.

(2) Modules which were taken at another German or foreign university as well as in state-approved distance learning courses may be recognized upon request, provided there are no significant differences with regard to the skills acquired.
In the recognition of learning and academic achievements, which were performed outside the Federal Republic of Germany, the equivalence agreements approved by the Standing Conference of Ministers for Education *(Kultusministerkonferenz)* and the German Rectors' Conference *(Hochschulrektorenkonferenz),* the Convention on the Recognition of Qualifications in Higher Education in the European Region ("Lisbon Recognition Convention") and agreements within the framework of higher education partnerships must be observed.

(3) Academic achievements attained prior to enrolment in the degree course regulated in these Regulations may be recognized upon request at the beginning of the course. Such achievements may be:

- Documented modules / academic achievements;
- Documented equivalent competence and skills acquired outside the higher education system up to a maximum of 50 per cent of the credits earmarked for the degree course.

(4) Students must submit their respective request for recognition / transfer during the first course semester by 30 November for winter semester admissions or by 30 April for summer semester admissions to the faculty's examination committee. In exceptional and duly justified cases, a request for the recognition of exam achievements may be submitted to the faculty's examination committee no later than two weeks prior to the examination period in which the student would take the corresponding examination on their first attempt. The decision on the recognition and the choice of equivalence assessment will be made by the faculty's examination committee.

(5) When learning achievements are recognized, and the grading systems are comparable, the marks must be transferred and included in the calculation of the overall grade. In the case of non-comparable grading systems, decisions are to be made on a case-by-case basis. It is permissible to mark the credit transfer in the transcript.

(6) The principle of recognition is the rule. If it has been established that the achievements attained cannot not be recognized, the faculty's examination committee must notify the applicant in writing, including a substantiation and information on their right to appeal. Substantive reasons for a denial of credit transfer can be:

1. The academic achievements vary considerably from those of the university accepting the student.
2. The structure of the class or degree course shows significant differences.
3. There are considerable and evident differences in quality.
4. There are significant and evident differences in the learning objective of the degree course.

(7) Upon resuming studies after one or more semesters of leave of absence, the hitherto acquired academic achievements remain to be valid and unchanged. The same applies in the event of continuation or overall recommencement of studies at the Zittau/Görlitz University of Applied Sciences in the same degree course.

§ 9 Faculty's examination committee and central examination committee

(1) An examination committee must be established in the faculty for the tasks assigned by these Examination Regulations. The examination committee comprises:

1. A chair.
2. Their deputy.
3. Two further professors.
4. A member of the faculty's academic staff.
5. Two students.

The members are appointed by the Faculty Council of the Faculty of Electrical Engineering and Computer Science. Authorized representatives shall be appointed for the examination committee's members listed under sentence 2 nos. 3-5. The term of office of members of the examination committee, who are full-time employees at the Zittau/Görlitz University of Applied Sciences is three years; that of the student board members and their representatives is one year. Members may be reappointed. Dismissal is only permitted for cause. If the appointment of a member or their representative has expired, their term of office will be extended until a successor has been appointed.

(2) The examination committee ensures that the Examination Regulations are being observed. It is responsible for the orderly conduct of examinations and takes decisions in the examination procedure. If it is not able to remedy an objection, it forwards it to the central examination committee to give a ruling thereon.

(3) The examination committee shall inform the faculty regularly on the development of examinations and courses, including the writing-up period of graduate theses. The report shall be made publicly available by the Zittau/Görlitz University of Applied Sciences in a suitable manner. The examination committee provides the academic planning committee with suggestions for reforming Degree Course Regulations/academic calendars and Examination Regulations.

(4) The examination committee may delegate the performance of its duties to the chair or to one or more members, excluding the student members. This does not apply to the decision on appeals and the report to the faculty.

(5) The examination committee constitutes a quorum if, in addition to the chair or their deputy and two professors, at least another member entitled to vote is present. The examination committee takes its decisions by simple majority. In the event of a tie, the chair's vote is decisive. The student members of the examination committee do not take part in the decision-making on the evaluation and recognition of course and examination credits.

(6) The members of the examination committee are entitled to be present during examinations.

(7) The meetings of the examination committee are not public. The members of the examination committee and their deputies are sworn to secrecy. If they are not public service employees they must be sworn to secrecy by the chair.

(8) The Zittau/Görlitz University of Applied Sciences has established a Central Examination Committee. It comprises the Vice-Rector or Vice-Rector for Academic Affairs & International Relations respectively as chair, the chairs of the faculty's examination committees, and the head of Student Services & International Relations.

(9) The committees' responsibilities are set forth in Section 30.

Section 10 Examinations Office

(1) The Zittau/Görlitz University of Applied Sciences has established an Examinations Office. It is responsible for enforcing the Examination Regulations in addition to the resolutions and decisions of the examination committee. The Examinations Office supports the work of the individual examination committees. The members of the Examinations Office and all employees of the Zittau/Görlitz University of Applied Sciences dealing with examination matters are sworn to secrecy.

(2) The responsibilities are set forth in Section 30.

Section 11 Examiners and observers

(1) Examiners are permitted to evaluate examination performance; observers are entitled to give advice. The chair of the faculty's examination committee appoints examiners and observers.

(2) Eligible to examine are persons who themselves have completed the relevant Bachelor examination or an equivalent or higher examination, or who have gained a comparable qualification and, unless there are compelling reasons that require an exception to be made, who have also engaged in independent, self-reliant teaching activities at a higher education institution. In accordance with the peculiarity of the university examination, lecturers with a specified function as well as persons experienced in professional practice and training may be appointed as examiners. If there are several examiners, at least one of the examiners shall have taught in the subject matter at hand.

(3) Eligible to observe examinations are persons who themselves have completed the relevant Bachelor examination or an equivalent examination, or who have gained a comparable qualification.

(4) The names of the examiners shall be made known to the students taking the exam in due time.

(5) For the examiners and observers Section 9(7) applies.

Division 2: Modules, module examinations, compulsory coursework and examinations

Section 12 Modules

Modules according to Section 4(1) and (2) shall be completed by passed module examinations in accordance with Section 7(2). A module examination consists of one or more examinations. The corresponding examinations are assigned to the modules in Annex no 1).

Section 13 General admission criteria for module examinations

(1) Module examinations can only be taken by those who

1. have been admitted to the relevant degree course at the Zittau/Görlitz University of Applied Sciences on the basis of a general higher education entrance qualification, a subject-linked university entrance qualification, a university of applied sciences entrance qualification, a master craftsman's certificate *(Meisterprüfung)* related to the degree subject or on the basis of a qualification for access deemed equivalent by the University or by a government agency; and
2. Have completed the compulsory coursework required (according to Sections 17 et seq) within the relevant module.

(2) Admission to module examinations may only be denied if

1. The requirements listed in subsection (1) and Section 2 of the Degree Course Regulations have not been met.
2. The required documents have not been fully submitted.
3. One or more of the reasons of rejection listed in Section 18(2) and (3) SächsHSFG apply; or
4. The student, pursuant to Saxon State Law, has lost their right to take examinations by exceeding the deadlines according to Section 4(3) and (4).

Section 14 Registration and de-registration for module examinations

(1) By virtue of enrolment or re-enrolment, the student is by the Examination Office's own motion automatically registered for the module examinations designated in the academic and examination calendars for the current semester, the appropriate compulsory coursework and the examinations. Students shall undertake to register for elective core modules, optional modules and for free attempts in examinations. Registration for elective core modules and optional modules shall be made to the faculty; registration for free attempts shall be made to the University's Examinations Office.

(2) Students may de-register from a module examination. De-registration shall be made in writing to the University's Examinations Office at the latest two weeks before beginning of the respective examination period. In this case, the student shall be automatically registered for the next examination or resit examination.

(3) Students shall be automatically registered for resitting failed examinations during semesters of leave of absence. Participating in further examinations is possible. In this case, the student shall register for the examination. The sitting of exams according to Section 15 is not permitted during semesters of leave of absence.

Section 15 Free attempt

(1) Upon registration by the student and if the admission criteria are met, module examinations may be taken before the recommended deadline in accordance with Section 14(1). In this case, a failed module examination is regarded not taken (free attempt). A single examination that has been marked with at least "ausreichend" (Note 4), ("sufficient" (4)) as part a module examination will be recognized during a retake module examination.

(2) In order to improve the grade, a passed module examination may be retaken once at the next regular examination date at the request of the student. If the module examination includes several examinations, all examinations shall be retaken. The better module grade shall be considered.

(3) When determining the times with regard to the observance of the point when the free attempt is taken, the following shall not be taken into account:

1. Semesters of leave of absence.
2. Semesters of study abroad unless they have been recognized equal to a course semester at the Zittau/Görlitz University of Applied Sciences; and
3. Semesters at the Zittau/Görlitz University of Applied Sciences spent in other degree courses if no credit transfer to the Bachelor course has been carried out.

Section 16 Retaking module examinations

(1) A failed module examination can be retaken once within a year after the first unsuccessful attempt. After expiry of this deadline it shall be deemed a fail. If a module examination comprises several examinations, an examination that has been marked at least with “ausreichend” (Note 4), (“sufficient” (4)), shall be credited as such and be excluded from the resit examination of the failed module exam. A resit of a passed module examination is not permitted except for the case regulated in Section 15(2). Failed attempts at other German universities shall be recognized against resit examinations.

(2) If a module examination has not been passed, the student shall, upon notice of their fail, be automatically registered for resit. Sentence 1 shall also apply to examinations which have not yet been completed but are part of a commenced module examination for which no module grade according to Section 5(2) could hitherto be calculated. Students are entitled to de-register in writing from examinations at the Examinations Office. The faculty responsible shall facilitate the taking of resit examinations usually within the period for retake examinations (Section 17(5)).

(3) A second resit examination of a module examination or an individual examination within a module examination is permissible upon application. The application for taking a second resit examination must be submitted in writing to the Examinations Office within a month after the student had been informed on the result of their first resit examination. Late applications or non-submitted applications, which are critical for the passing or definite failing of a module examination shall result in disenrolment (exmatriculation) from University. The second resit examination applied for in due time shall be carried out at the next possible examination date according to Section 17(5).

(4) If a second resit examination is marked by the examiner with “nicht bestanden” (Note 5), ie (“not sufficient / failed” (5)), a second evaluation by another examiner must be carried out. The exam grade shall be calculated by the arithmetic mean of all individual examinations. Another resit examination is not permitted.

Section 17 Types of examinations, compulsory coursework and organization of examinations

(1) The following are types of examinations:

1) Oral examinations (Section 18).

2) Written examinations (Sections 19-21); and

3) Alternative types of assessment (Section 22).

(2) Requirements for examinations (‘compulsory coursework’) are pieces of work which were completed in the form of the individual piece of assessment according to Sections 18 et seq and in the form of a confirmation of attendance (Testat, VT). Within the scope of compulsory coursework as a confirmation of attendance (Testat, VT), students must provide proof according to the conditions and guidelines of the subject that they have at least a sufficient level of knowledge and skills in a particular field or subject area. Compulsory coursework does not require a differentiated assessment

and does not count towards the overall grade. All types of compulsory coursework are listed in Annex 1) and are not subject to constraints with regard to their possibility to retake. Compulsory coursework is deemed completed if, according to subject guidelines, it has been evaluated “successful”, or when marked, if it has been marked with at least “ausreichend” (Note 4), (“sufficient” (4)).

(3) If a student furnishes prima facie (ie credible) evidence that due to a lengthy or continuous physical impairment, chronic illness, pregnancy, or maternal leave or parental leave, they are not able to complete compulsory coursework or examinations as a whole or in part, the affected student shall be permitted to complete these within a deferred deadline, within an extended examination time or in a different form. For this, a doctor’s note may be required.

(4) Between individual examinations there should generally be an interim day.

(5) Periods for examinations and resit examinations shall be published on the Zittau/Görlitz University of Applied Sciences’ website.

Section 18 Oral examinations

(1) The oral form of assessment is an oral examination (PM). By the oral examination the student should prove that they are capable of recognizing the contexts in the examined field and understand particular questions in this context. Furthermore, it should be ascertained whether the student has a broad knowledge of the fundamentals.

(2) The oral examination is generally held before at least one examiners and one co-examiner, or one examiner and one observer, who is an expert in the subject matter at hand, as a group or individual examination.

(3) The duration of the oral examination is between 20 and 50 minutes per student. Shorter or longer examination times may be arranged within the scope of foreign language modules. The duration of group examinations is either a multiple of the duration per student, or it is designated as the total duration of the group examination.

(4) As part of the oral examination, written questions may be set to a reasonable extent, provided this does not override the oral character of the examination.

(5) The essential topics and results of the oral examination shall be recorded in the minutes by the observer or co-examiner. The student shall be immediately informed about the result of each examination. The examination minutes shall be included in the student’s examination file.

(6) Students who are registered for the same examination at a later date shall be admitted as audience if the room allows for it, provided none of the examined students object. For oral examinations in the form of a thesis defence, the public may be admitted if the candidate agrees. The admittance of the public does not apply to the deliberations on and the disclosure of the examination result. If members of the audience try to influence or interfere with the examination, the public or the person interfering shall be excluded.

Section 19 Written examinations

(1) Written examinations are:

1) The invigilated written examination (Klausur, Section 20); and

2) The Bachelor thesis (Section 21).

(2) The result of a written examination shall be published no later than four weeks after grading in the way that is common practice at the University. The anonymity of the examined students must be preserved.

Section 20 Invigilated written examination

(1) Invigilated written examinations (Klausur, PK) are intended to prove that the student is capable of solving problems and/or working on a topic within a given time and with limited resources using the common methods of the respective examination area. Furthermore, it should be ascertained whether the student has a broad knowledge of the fundamentals. Students may be given a choice of topics.

(2) Invigilated written examinations have a duration of 90 to 180 minutes, are to be proctored and minuted, and are non-public. In foreign language modules and modules concluded with more than one type of examination, the duration of an invigilated written examination may fall below 90 minutes.

Section 21 Bachelor thesis

(1) Bachelor theses (PA) are intended to prove that the candidate is capable of working on a topic on their own within the scope of the final module, within a given time and applying academic methods.

(2) The writing-up of the Bachelor thesis shall be supervised by an examiner according to Section 11(1) and (2). This thesis adviser is usually an academic staff member of the Zittau/Görlitz University of Applied Sciences. If the thesis adviser is not a member of the Zittau/Görlitz University of Applied Sciences, then at least the second reader evaluation must be carried out by a member of the Zittau/Görlitz University of Applied Sciences. The candidate may propose topics for the Bachelor thesis. This does not justify a claim to a particular topic. If the candidate has not proposed a topic within three months after admission to the final module, they shall be assigned a topic by motion of the Examinations Office.

(3) The Bachelor thesis may be written-up in cooperation with a company, a professional organization or an academic institution.

(4) The Dean of the Faculty of Electrical Engineering and Computer Science shall set the task of the Bachelor thesis. The following is required:

1) Application for assigning a topic for the Bachelor thesis; and

2) Submission of the proof of admission to the final module according to Section 24(1).

Topic, assignment date, submission deadline and examiners shall be recorded on the proof of admission at the point of issuing. The topic may be returned for exchange only once and within the period of one month after its assignment.

(5) The permitted writing-up period for the Bachelor thesis is three months. In the event of an experimental or empirical topic, this deadline can be set from three up to four months after assignment. The deadline begins with the date of issue. The Bachelor thesis shall be submitted to the faculty within the deadline in hardback duplicate and on a CD or DVD. The date of the postmark is decisive for adherence to the deadline. If the deadline cannot be met for unforeseeable reasons for which the candidate is not responsible, the deadline may be extended by up to two months upon written application in due time. When submitting the Bachelor thesis, the candidate must confirm in writing that they have written their thesis on their own and did not use any other sources and aids than those listed. When the Bachelor thesis is submitted the date of receipt shall be recorded. If the candidate does not adhere to the deadline according to sentence 1, 2 and 6 respectively, the Bachelor thesis shall be marked with “nicht ausreichend” (Note 5), (“not sufficient, failed” (5)).

(6) The Bachelor thesis shall generally be written-up in German. Upon explicit and written permission of the thesis adviser, the Bachelor thesis may be written in English. In this case, an extensive summary of the main points shall be appended in German.

(7) The Bachelor thesis may also be admitted in the form of a collaborative thesis. A maximum of three candidates are permitted in this group. Within the collaborative thesis, the contribution of every single candidate must be evaluable. This is the case if the contributions of all individual candidates can be clearly distinguished from one another according to objective criteria. Subsection (5) sentence 7 applies to the collaborative thesis, providing that the written confirmation of each candidate does not refer to the entire thesis but to their contribution, which must be indicated accordingly.

(8) In general, the Bachelor thesis must be evaluated by the thesis adviser (first marker) and a second marker. The evaluation should be made within four weeks after submission of the Bachelor thesis. The exam grade shall be aggregated through the arithmetic mean of all individual marks. Section 5(1) applies for the calculation of individual marks.

(9) In the event of a mark that is lower than “ausreichend” (Note 4), (“sufficient” (4)), the graduate thesis can be repeated pursuant to the provisions of Section 16 hereof. A return of the topic according to subsection 4 sentence 4 is only permissible once and, when the graduate thesis is being repeated, if the candidate did not exercise their return option during their previous attempt.

(10) Students must submit a poster in A1 size for visual presentation before the day of their Bachelor thesis defence. This poster shall then remain the property of the University.

Section 22 Alternative types of assessment

(1) The following alternative types of assessment (examinations) are permissible:

1) Short academic paper (Belegarbeit) (subsection (2)).

2) Seminar paper (Referat) (subsection (3)).

3) Laboratory work (Laborleistung) (subsection (4)).

4) Placement report (Praxisbeleg) (subsection (5)).

(2) A short academic paper (Belegarbeit, PB) is an examination in which the student systematically deals with a given topic during the course of the semester, and which is accompanied by topic-related and methodical consultations. It shall be submitted to the examiner no later than on the first day of the examination period in the given semester.

(3) A seminar paper (Referat, PR) is an examination in the form of an independently written work on a topic and its subsequent presentation. The paper can also be submitted promptly during the semester’s teaching weeks.

(4) Laboratory work (Laborleistung, PL) is an examination in the form of active and independent work in the laboratory combined with a subsequently written report on the topic. It is generally carried out during the semester’ teaching weeks.

(5) The placement report (Praxisbeleg, PP) is an examination in the form of an independently written work on paramount findings during the practical semester.

(6) The alternative types of assessment may also be admitted as group projects. A maximum of three candidates are permitted in this group. Within the collaborative thesis, the contribution of every single candidate must be evaluable. This is the case if the contributions of all individual candidates can be clearly distinguished from one another according to objective criteria.

Section 23 Compulsory modules (core modules and elective core modules)

(1) The compulsory modules of the degree course inAutomation and Mechatronics are listed in Annex no 1 of the Examination Regulations.

(2) The following modules include the completion of the PL type of assessment as a requirement for PK or PM examinations:

1) Physics

2) Metrology

3) Microcomputer Engineering

4) Electrical Machines

5) Automatic Control I (Basic Course)

6) Power Electronics/Electric Drives

7) Foundations of Process Automation / Process Analysis

8) Automatic Control I (Advanced Course)

(3) Students in the degree programme “Chinesisch-Deutsche Hochschule für Angewandte Wissenschaften (CDHAW)” shall complete the modules according to Annex 8.

(4) There are modules in English according to Annex no 9 to the Examination Regulations available in particular for foreign students in other international study programmes. The faculty shall select the modules to be completed by students at the beginning of the first semester.

Section 24 Special admission requirement, subject, nature and scope of the final module

(1) Students are admitted to the final module if they have completed all compulsory modules according to § 23 – with the exception of the modules of the last semester. If these requirements are met, the Examinations Office issues a proof of admission to the student.

(2) The module examination of the final module includes the following two examinations:

1) Bachelor thesis (PA) (Section 21); and

2) Defence of the Bachelor thesis (PM) (subsection (3)).

(3) The defence of the Bachelor thesis is an oral assessment according to Sections 17(1) sentence 1 no. 1, 18 during the course of an oral examination (PM). The oral examination in the form of defending the Bachelor thesis is usually held in the language of the Bachelor thesis. The oral examination begins with an introductory presentation by the candidate. Candidates are admitted if their Bachelor thesis has been marked with at least “ausreichend” (Note 4), (“sufficient” (4)), and when they have completed all compulsory modules. In addition to Section 18(1), the defence of Bachelor thesis serves in particular to ascertain whether the candidate is able to (i) present, (ii) explain orally, (iii) substantiate individually, and (iv) assess the practical significance of the results of the Bachelor thesis, its academic basis, its interdisciplinary connections and its practical relevance. As a rule, the thesis adviser and a second marker shall evaluate the defence. The exam grade shall be aggregated through the arithmetic mean of all individual marks. Section 5(1) applies for the calculation of individual marks.

(4) The presentation materials of the introductory presentation of the defence must also be submitted digitally on a CD or DVD according to subsection (3).

By derogation from subsection (1), different admission requirements to the final module (graduation module) shall apply to inter-university partnerships and study programmes. The total scope of work to be completed shall be governed by the respective agreement and will be set forth in the annex to the corresponding study programme or partnership.

Division 3: Bachelor’s degree certificate, transcript, diploma supplement, supplemental modules

Section 25 Bachelor’s degree certificate, transcript and diploma supplement

After the candidate has successfully completed the Bachelor examination, a transcript, a certificate confirming the award of the degree “Bachelor of Engineering” and a diploma supplement in English and German will be issued in accordance with annexes 3) to 7).

Section 26 Supplemental modules (optional modules)

Subject to the relevant module admissions criteria, students may sit examinations in modules additional to those stipulated in Section 23. The result of these modules shall be included in the transcript upon request, but shall not be taken into account when aggregating the overall grade.

Division 4: Final provisions

Section 27 Invalidity of examinations

(1) If a student has cheated during an examination, and if this fact only becomes known after the transcript referred to in Section 25 has been issued, or after the certificate referred to Section 7(8) has been issued, the examination committee can mark the examination according to Section 6(3) sentence 1 again with “nicht ausreichend” (Note 5) (“not sufficient” (5)). If appropriate the module examination can be declared “nicht ausreichend” (Note 5), (“not sufficient” (5)) or the Bachelor examination can be declared “failed”. The same applies to the Bachelor thesis.

(2) If the prerequisites for conducting the module examination were not fulfilled without the student intending to hide this fact, and if this fact becomes known only after the transcript has been issued in accordance with Section 25, or after the certificate has been issued in accordance with Section 7(8), this defect shall be remedied by passing the corresponding exam. If the student has willingly unjustly obtained the admission to an examination, the examination may be declared “nicht ausreichend” (Note 5), (“not sufficient” (5)), and the Bachelor examination may be declared “failed”. The same applies to the Bachelor thesis.

(3) The student shall be given the opportunity to make a statement before a decision is taken.

(4) The incorrect transcript or the incorrect certificate shall be recovered and, if applicable, reissued. Together with the incorrect transcript, the Bachelor’s degree certificate and the diploma supplement according to Section 25 shall be recovered if the Bachelor’s examination was declared “failed” due to cheating.

(5) The decision referred to in subsections (1) or (2) shall be excluded after a period of five years. The date of the transcript marks the beginning of this period.

Section 28 Storage and access to examination documents

(1) The examination documents shall be kept at the University of Applied Sciences according to subsections (2) and (3).

(2) The faculty conducting the examination shall store the following:

1) The documents concerning written forms of examinations and of alternative types of assessment for two years from the date of disclosure of the assessment.
2) The minutes of all oral and written forms of assessment and all documents relating to examinations and compulsory coursework for two years from the date of disclosure of the assessment; and
3) Graduate theses, evaluation reports referring to them as well as the minutes of the defence for five years from the end of the semester in which the examination was conducted.

(3) At the Examinations Office or in the University archives the following shall be stored, subject to the legal provisions:

1) Records of the examination results from the faculties.
2) Decisions and notifications from the examination committees of the faculties and the Central Examination Committee.
3) Evidence of examinations of the students and the minutes of the final examination.
4) Duplicates of the transcripts, certificates, transcripts of records and the diploma supplements.

(4) Within one year after completing the examination procedure of the relevant module examination, the student shall be permitted to inspect their written examinations, the evaluation reports referring to these and the examination minutes.

Section 29 Appeal proceedings

(1) If an appeal is permitted against an examination decision, the conditions according to Sections 68 et seq VwGO apply.

(2) If the student appeals, the examination committee of the faculty solely verifies whether

1) The examination procedure was conducted in a proper manner.
2) False assumptions were made.
3) Generally valid policies of assessment were not adhered to; and/or
4) The examiner has been misled by considerations irrelevant to the case.

The same applies if the appeal is directed against decisions of several examiners.

(3) If the examination committee of the faculty does not resolve the appeal, the Central Examination Committee takes the decision.

Section 30 Responsibilities

(1) The examination committee of the faculty is responsible for checking compliance with the examination regulations.

(2) It decides on:

1) Fundamental questions with regard to examinations.
2) The consequences of violations of examination regulations (Section 6).
3) The non-recognition of reasons for withdrawing from or absence in an examination (Section 6(2)).
4) Passing and failing an examination (Section 7).
5) The recognition of periods of study, compulsory coursework, examinations, modules and transfer of ECTS credits in individual cases (Section 8).
6) The appointment of examiners, observers and co-examiners (Section 11).
7) Taking exams within a deferred deadline, within an extended examination time or in a different form (Section 17(3)).
8) The extension of the deadline for the Bachelor thesis (Section 21(5)).
9) The invalidity of examinations (Section 27).
10) The resolution of appeals (Section 29).

(3) The Examinations Office is responsible for the administrative tasks necessary within the scope of these Regulations and for supporting the examination committees. In particular, this involves:

1) Implementing and executing the decisions of the individual examination committees.
2) Ascertaining the admission for module examinations (Sections 13, 24(1) and (3).
3) De-registration from a module examination (Section 14(2)).
4) Registration for a free attempt (Section 14(1)).
5) Keeping the examination file.
6) The chronological and spatial organization and the coordination of the examinations in conjunction with the faculties.

7) Informing about events relevant to examinations.

8) Issuing certificates.

9) Issuing transcripts, certificates and diploma supplements (Section 25).

10) Issuing academic transcripts (Section 7(8)).

11) Receipt of applications for a final resit examination (Section 16(3)).

12) Receipt of notifications of withdrawal and the absence (Section 6 (2)).

(4) The Central Examination Committee is responsible for examination matters which concern several faculties and for decisions on appeals, insofar as the faculty's examination committee does not resolve them.

Section 31 Entry into force

These examination regulations shall enter into force on the day following the day of publication at the University and apply for all students enrolled in 2018.

Issued based on the decision of the Faculty Council Electrical Engineering and Computer Science of 26/04/2017 and the approval by the Rector's Office of the Zittau/Görlitz University of Applied Sciences of 05/09/2018.

Zittau/Görlitz, 05 September 2018

The Rector

Prof. Dr. phil. Friedrich Albrecht

Annex no. 1 (to Sections 12; 13): **Examination schedule**

Stg.s-internal code	Modules	Semester							ECTS credits*
		1	2	3	4	5	6	7	
	101720 Foundations of Computer Science	VT,VB VT PK120							5
	195800 Basics of Electrical Engineering - Stationary Processes	VT,VL PK150							5
	100640 Mathematics I	PK150							5
	101700 Physics I	PK120							5
	100900 Engineering Mechanics	PK180							5
	195650 Materials Technology	PK120							5
	100950 Business Studies		PK120						5
	239900 Digital Technology			PK120					5
	232400 Electronics			VT PK150					4
	191850 Foreign Languages I (receptive skills)			PK30, PK90					3
	195850 Foundations of Electrical Engineering - Processes based on time		VL PK150						5
	195100 Mathematics II		PK120						4
	196850 Metrology			PL, PK90					5
	100180 Microcomputer Engineering		PK90, PL						5
	101010 Object-Oriented Programming		VT PK120						5
	195900 Physics II			PL, PM30					5
	232300 Introduction to Science and Humanities (Duo)				PK90				5
	195150 Mathematics II			PK120					4
	236450 Signals and Systems			PK150					5
	208000 Introduction to Thermodynamics				PK120				5
	231050 Electrical Machines				PL, PK120				5
	195550 Communication Networks				PK120				5
	231100 Automatic Control I				PK180, PL				5
	194700 Logic Control Theory I/Programmable Logic Control				PK120, PB				5
	208200 Soft Computing I (Foundations)					PB			5
	193900 Power Electronics/Electric Drives					PK120, PL			5

	206750 Project Engineering					VL PB, PK90			5
	142000 Work Placement						PP		30
	234650 Final Module							PA, PM60	12
	230650 Pattern Recognition and Machine Learning							PB	5
	202150 Project Management for Engineers							PK90	5
	234300 Scientific Work Skills							VT	8
Total ECTS credits		30	24	31	30	15	30	30	190
Specialization programme in Mechatronics									
	194150 Sensors and Actuators				PK120				5
	101940 Construction Theory					PB			5
	206800 Modelling and Simulation					PK120			5
	101140 Software Technology					PB			5
Total ECTS credits					5	15			20
Specialization programme in Energy and Automation									
	205850 Safe and Fault-Tolerant Systems				PK90, PB				5
	194050 Electromagnetic Compatibility					PK120			5
	208250 Foundations of Process Automation / Process Analysis					PB, PL, PK90			5
	204150 Automatic Control Systems/Industrial Data Communication					PB, PM30			5
Total ECTS credits					5	15			20
Specialization programme in Railway Signalling and Safety Systems									
BAHN	230850 Railway Safety Technologies (foundation module)***				PK90				3
BAHN	230800 Rail-Fixed Guideway Elements ***					PK90			3
BAHN	230900 Railway Safety Technologies (advanced module) ***					PK90			4
BAHN	230950 Railway Signalling and Safety Systems ***						PK90		4
Total ECTS credits									0

CDHAW Specialization programme									
5th Semester 30 ECTS credits									
CDHAW	*193900* *Power Electronics/Electric Drives*					*PK120, PL*			5
CDHAW	*206850* *Magnetic Bearing Technology*					*PB*			5
CDHAW	*103240* *Mechanism Engineering*					*PK90*			5
CDHAW	*206050* *Model-Based Measuring and Control Methods*					*PB*			5
CDHAW	*206800* *Modelling and Simulation*					*PK120*			5
CDHAW	*230650* *Pattern Recognition and Machine Learning*					*PB*			5
CDHAW	*206750* *Project Engineering*					*VL* *PB, PK90*			5
6th Semester 30 ECTS credits									
CDHAW	*234650* *Final Module*						*PA, PM60*		12
CDHAW	*242700* *CDHAW Work placement*						*PP*		10
CDHAW	*234300* *Scientific Work Skills*						*VT*		8
Total ECTS credits						30	30		60
Specialization programme in International Projects (Mexico-Tec)									
5th Semester 30 ECTS credits									
	213450 *Advanced Communications*					*PK120*			5
	214200 *Advanced Control Theory*					*PK180, PL*			5
	214350 *Artificial Neural Networks*					*PB*			5
	214950 *Image Processing Bachelor*					*PB*			5
	214900 *Mechatronics Project Work*					*PB*			10
	216500 *Microcontrollers*					*PK120*			5
	217100 *Signal Theory*					*PK120*			5
	214250 *State Estimation*					*PB*			5
6th Semester 30 ECTS credits									
	234650 *Final Module*						*PA, PM60*		12
	242750 *International Work placement*						*PP*		10
	234300 *Scientific Work Skills*						*VT*		8
Total ECTS credits						30	30		60

Legend:
PM = Oral examination according to Section 18
PK = Written form of examination as an invigilated written examination according to Sections 19(1) no. 1; 20
PB = Alternative type of assessment as a short academic paper (Belegarbeit) according to Section 22(1) no. 1, (2)
PR = Alternative type of assessment as a seminar paper (Referat) according to Section 22(1) no. 2, (3)
PL = Alternative type of assessment as laboratory work according to Section 22(1) no. 3, (4)
PP = Alternative type of assessment as a placement report (Praxisbeleg) according to Section 22(1) no. 4, (5)
PA = Examination as a Bachelor thesis according to Section 21
VM = Compulsory coursework as an oral examination according to Section 17(2) in conjunction with Section 18
VK = Compulsory coursework as an invigilated written examination according to Section 17(2) in conjunction with Sections 19(1) no 1; 20
VB = Compulsory coursework as a short academic paper (Belegarbeit) according to Section 17(2) in conjunction with Section 22(1) no 1, (2)
VR = Compulsory coursework as a seminar paper (Referat) according to Section 17(2) in conjunction with Section 22(1) no 2, (3)
VL = Compulsory coursework as laboratory work according to Section 17(2) in conjunction with Section 22(1) no 3, (4)
VT = Compulsory coursework as a confirmation of attendance (Testat) according to Section 17(2)

(Numerical data after the type of examination states the duration of the type of examination in minutes.)

Annex no. 2): Components and rules for composing the overall grade (weighing)

The Bachelor examination is an interdisciplinary examination. The grades for the individual modules will contribute towards the overall grade with the following weighting factors:

Stg.s-internal code	Module	Type of assessment	Weighing of exam achievements	Weighing Factor
	101720 Foundations of Computer Science	PK 120	100.0	1.00
	195800 Basics of Electrical Engineering - Stationary Processes	PK 150	100.0	1.00
	100640 Mathematics I	PK 150	100.0	1.00
	101700 Physics I	PK 120	100.0	1.00
	100900 Engineering Mechanics	PK 180	100.0	1.00
	195650 Materials Technology	PK 120	100.0	1.00
	100950 Business Studies	PK 120	100.0	1.00
	239900 Digital Technology	PK 120	100.0	1.00
	232400 Electronics	PK 150	100.0	2.00
	191850 Foreign Languages I (receptive skills)	PK 30 PK 90	50.0 50.0	0.00
	195850 Foundations of Electrical Engineering - Processes based on time	PK 150	100.0	1.00
	195100 Mathematics II	PK 120	100.0	1.00
	196850 Metrology	PL PK 90	50.0 50.0	2.00
	100180 Microcomputer Engineering	PK 90 PL	80.0 20.0	1.00
	101010 Object-Oriented Programming	PK 120	100.0	1.00
	195900 Physics II	PL PM 30	30.0 70.0	1.00
	232300 Introduction to Science and Humanities (Duo)	PK 90	100.0	0.00
	195150 Mathematics II	PK 120	100.0	1.00
	236450 Signals and Systems	PK 150	100.0	1.00
	208000 Introduction to Thermodynamics	PK 120	100.0	1.00
	231050 Electrical Machines	PL PK 120	20.0 80.0	1.00
	195550 Communication Networks	PK 120	100.0	1.00
	231100 Automatic Control I	PK 180 PL	80.0 20.0	2.00
	194700 Logic Control Theory I/Programmable Logic Control	PK 120 PL	67.0 33.0	1.00
	208200 Soft Computing I (Foundations)	PB	100.0	2.00
	193900 Power Electronics/Electric Drives	PK 120 PL	80.0 20.0	2.00
	206750 Project Engineering	PB PK 90	40.0 60.0	2.00

	142000 Work Placement	PP	100.0	8.00
	234650 Final Module	PA PM 60	60.0 40.0	20.00
	230650 Pattern Recognition and Machine Learning	PB	100.0	1.00
	202150 Project Management for Engineers	PK 90	100.0	1.00
	234300 Scientific Work Skills	-	0.0	0.00
Specialization programme in Mechatronics				
	194150 Sensors and Actuators	PK 120	100.0	1.00
	101940 Construction Theory	PB	100.0	1.00
	206800 Modelling and Simulation	PK 120	100.0	1.00
	101140 Software Technology	PB	100.0	1.00
Specialization programme in Energy and Automation				
	205850 Safe and Fault-Tolerant Systems	PK 90 PL	50.0 50.0	1.00
	194050 Electromagnetic Compatibility	PK 120	100.0	1.00
	208250 Foundations of Process Automation / Process Analysis	PB PL PK 90	25.0 25.0 50.0	1.50
	204150 Automatic Control Systems/Industrial Data Communication	PB PM 30	30.0 70.0	1.50
Specialization programme in Railway Signalling and Safety Systems				
BAHN	230850 Railway Safety Technologies (foundation module)***	PK 90	100.0	0.00
BAHN	230800 Rail-Fixed Guideway Elements ***	PK 90	100.0	0.00
BAHN	230900 Railway Safety Technologies (advanced module) ***	PK 90	100.0	0.00
BAHN	230950 Railway Signalling and Safety Systems ***	PK 90	100.0	0.00
CDHAW Specialization programme				
5th Semester 30 ECTS credits				
CDHAW	193900 Power Electronics/Electric Drives	PK 120 PL	80.0 20.0	0.00
CDHAW	206850 Magnetic Bearing Technology	PB	100.0	0.00
CDHAW	103240 Mechanism Engineering	PK 90	100.0	0.00
CDHAW	206050 Model-Based Measuring and Control Methods	PB	100.0	0.00
CDHAW	206800 Modelling and Simulation	PK 120	100.0	0.00
CDHAW	230650 Pattern Recognition and Machine Learning	PB	100.0	0.00
CDHAW	206750 Project Engineering	PB PK 90	40.0 60.0	0.00
6th Semester 30 ECTS credits				
CDHAW	234650 Final Module	PA PM 60	60.0 40.0	0.00
CDHAW	242700 CDHAW Work placement	PP	100.0	0.00

CDHAW	234300 Scientific Work Skills	-	0.0	0.00
Specialization programme in International Projects (Mexico-Tec)				
5th Semester 30 ECTS credits				
	213450 Advanced Communications	PK 120	100.0	0.00
	214200 Advanced Control Theory	PK 180 PL	80.0 20.0	0.00
	214350 Artificial Neural Networks	PB	100.0	0.00
	214950 Image Processing Bachelor	PB	100.0	0.00
	214900 Mechatronics Project Work	PB	100.0	0.00
	216500 Microcontrollers	PK 120	100.0	0.00
	217100 Signal Theory	PK 120	100.0	0.00
	214250 State Estimation	PB	100.0	0.00
6th Semester 30 ECTS credits				
	234650 Final Module	PA PM 60	60.0 40.0	0.00
	242750 International Work placement	PP	100.0	0.00
	234300 Scientific Work Skills	-	0.0	0.00

*** Optional module

Composition of the overall assessment N_P of the Bachelor examination:

$$N_P = \frac{\sum_{j=1}^{xx} (w_j * N_j)}{\sum_{j=1}^{xx} w_j}$$

N_j: grade of the module examination in module j

w_j: weighing factor for module j

xx : number of modules

j: Modules of the Bachelor examination according to

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

ZEUGNIS

ÜBER DIE BACHELORPRÜFUNG

Herr/Frau [Name]

geboren am […] in […]
hat im Studiengang

Automatisierung und Mechatronik

in der Studienrichtung

Mechatronik

an der Fakultät Elektrotechnik und Informatik
studiert und die Bachelorprüfung bestanden
und erhält die Gesamtnote:

[Prädikat]

(Durchschnittsnote: [Note])

Ergebnisse der Bachelorprüfung:

1. **Abschlussmodul**
   (Bachelorarbeit und Abschlusskolloquium)

   Thema der Bachelorarbeit:
   Gesamtnote der Bachelorarbeit:

Annex 3 a): Transcript of the Bachelor Examination (German Template, Mechatronics) - Page 2

2. Modulprüfungen

Grundlagen der Informatik
Grundlagen Elektrotechnik – stationäre Vorgänge
Mathematik I
Physik I
Technische Mechanik
Werkstofftechnik
Digitaltechnik
Elektronik
Messtechnik
Grundlagen Elektrotechnik – zeitabhängige Vorgänge
Mathematik II
Mikrorechentechnik
Objektorientierte Programmierung
Physik II
Betriebswirtschaftslehre
Mathematik III
Signale und Systeme
Elektrische Maschinen
Regelungstechnik I
Steuerungstechnik I / Speicherprogrammierbare Steuerungen
Elektromagnetische Verträglichkeit
Leistungselektronik / Elektrische Antriebe
Ingenieurpraktikum

Projektierung
Sensorik/Aktorik
Softwaretechnologie
Bildverarbeitung
Grundlagen Soft Computing
Kommunikationsnetze
Netzwerke, Web, Echtzeitbetriebssysteme
Regelungstechnik II
Steuerungstechnik II

3. Leistungen, deren Bewertung nicht in das Gesamturteil eingegangen ist

Fremdsprachen
Allgemeinwissenschaftliche Grundlagen (AWG) Duo
Wissenschaftliches Arbeiten

Zittau/Görlitz, [Datum]

Siegel

[Name]
Dekan der Fakultät
Elektrotechnik und Informatik

[Name]
Vorsitzender des Prüfungsausschusses
Elektrotechnik und Informatik

Annex no. 3 b): Transcript of the Bachelor Examination (German Template Energy and Automation) - Page 1

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

ZEUGNIS

ÜBER DIE BACHELORPRÜFUNG

Herr/Frau [Name]

geboren am […] in […]
hat im Studiengang

Automatisierung und Mechatronik

in der Studienrichtung

Energie und Automatisierung

an der Fakultät Elektrotechnik und Informatik
studiert und die Bachelorprüfung bestanden
und erhält die Gesamtnote:

[Prädikat]

(Durchschnittsnote: [Note])

Ergebnisse der Bachelorprüfung:

1. **Abschlussmodul**
   (Bachelorarbeit und Abschlusskolloquium)

   Thema der Bachelorarbeit:
   Gesamtnote der Bachelorarbeit:

<u>Annex no. 3 b):</u> Transcript of the Bachelor Examination (German Template Energy and Automation) - Page 2

2. Modulprüfungen

Grundlagen der Informatik
Grundlagen Elektrotechnik – stationäre Vorgänge
Mathematik I
Physik I
Technische Mechanik
Werkstofftechnik
Digitaltechnik
Elektronik
Messtechnik
Grundlagen Elektrotechnik – zeitabhängige Vorgänge
Mathematik II
Mikrorechentechnik
Objektorientierte Programmierung
Physik II
Betriebswirtschaftslehre
Mathematik III
Signale und Systeme
Elektrische Maschinen
Regelungstechnik I
Steuerungstechnik I / Speicherprogrammierbare Steuerungen
Elektromagnetische Verträglichkeit
Leistungselektronik / Elektrische Antriebe
Ingenieurpraktikum

Grundlagen der Prozessautomatisierung/Prozessanalyse
Leitsysteme/Industrielle Datenkommunikation/SIS
Projektierung
Bildverarbeitung
Gebäudeautomation/Energiemanagement
Grundlagen Soft Computing
Kommunikationsnetze
Regelungstechnik II
Steuerungstechnik II

3. Leistungen, deren Bewertung nicht in das Gesamturteil eingegangen ist

Fremdsprachen
Allgemeinwissenschaftliche Grundlagen (AWG) Duo
Wissenschaftliches Arbeiten

Zittau/Görlitz, [Datum]

Siegel

[Name]
Dekan der Fakultät
Elektrotechnik und Informatik

[Name]
Vorsitzender des Prüfungsausschusses
Elektrotechnik und Informatik

Annex 4a: Bachelor's degree certificate(German template Mechatronics)

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

BACHELOR

Frau «vorname» «name»

geboren am «gebdatum» in «gebort»
hat die Bachelorprüfung im Studiengang

Automatisierung und Mechatronik

in der Studienrichtung

Mechatronik

erfolgreich abgelegt**.**

Die Hochschule Zittau/Görlitz - University of Applied Sciences -
verleiht durch diese Urkunde den Hochschulgrad

Bachelor of Engineering – B.Eng.

Zittau/Görlitz, [Datum]

Siegel

[Name]
Rektor

[Name]
Dekan der Fakultät
Elektrotechnik und Informatik

Annex 5a: **Bachelor's degree certificate (**English template) Mechatronics

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

It is herewith certified that

Ms «vorname» «name»

born on «gebdatum» in «gebort»

having successfully completed the relevant Bachelor course
has been admitted to the degree of Bachelor
following a course of study in the field of

Automation and Mechatronics

specializing in

Mechatronics

and that the Zittau/Görlitz University of Applied Sciences
hereby awards the degree of
Bachelor of Engineering – B.Eng.

Zittau/Görlitz, [Datum]

Seal

[Name]
Rector

[Name]
Dean
Faculty of Electrical Engineering
and Computer Science

Annex 4b: Bachelor's degree certificate (German template Energy and Automation)

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

BACHELOR

Frau «vorname» «name»

geboren am «gebdatum» in «gebort»
hat die Bachelorprüfung im Studiengang

Automatisierung und Mechatronik

in der Studienrichtung

Energie und Automatisierung

erfolgreich abgelegt**.**

Die Hochschule Zittau/Görlitz - University of Applied Sciences -
verleiht durch diese Urkunde den Hochschulgrad

Bachelor of Engineering – B.Eng.

Zittau/Görlitz, [Datum]

Siegel

[Name]
Rektor

[Name]
Dekan der Fakultät
Elektrotechnik und Informatik

Annex 5b: Bachelor's degree certificate (English template Energy and Automation)

Hochschule Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Freistaat SACHSEN

It is herewith certified that

Ms «vorname» «name»

born on «gebdatum» in «gebort»

having successfully completed the relevant Bachelor course
has been admitted to the degree of Bachelor
following a course of study in the field of

Automation and Mechatronics

specializing in

Energy and Automation

and that the Zittau/Görlitz University of Applied Sciences
hereby awards the degree of
Bachelor of Engineering – B.Eng.

Zittau/Görlitz, [Datum]

Seal

[Name]
Rector

[Name]
Dean
Faculty of Electrical Engineering
and Computer Science

Annex no. 6): Diploma Supplement (German Template) Energy and Automation

Annex no. 6): Diploma Supplement (German template) Mechatronics

Annex no. 6): Diploma Supplement (German template) CDHAW

Annex no. 6): Diploma Supplement (German Template) “International“ (Mexico-Tec)

Annex no. 7): Diploma Supplement (English Template) Energy and Automation

Annex 7a: Diploma Supplement (English template) Mechatronics

Annex 7b: Diploma Supplement (English template) CDHAW

Annex 7c: Diploma Supplement (English Template) “International“ (Mexico-Tec)

<u>Annex no. 8):</u> Study programme Chinesisch-Deutsche Hochschule für Angewandte Wissenschaften (CDHAW)

Stg.s-internal code	Modules	ECTS credits
CDHAW	193900 Power Electronics/Electric Drives	5
CDHAW	206850 Magnetic Bearing Technology	5
CDHAW	103240 Mechanism Engineering	5
CDHAW	206050 Model-Based Measuring and Control Methods	5
CDHAW	206800 Modelling and Simulation	5
CDHAW	230650 Pattern Recognition and Machine Learning	5
CDHAW	206750 Project Engineering	5
CDHAW	234650 Final Module	12
CDHAW	242700 CDHAW Work placement	10
CDHAW	234300 Scientific Work Skills	8

1. The workload for CDHAW students has been agreed on 60 ECTS credits in accordance with Section 3 subsection 5.
2. Students must complete modules with a total workload of 30 ECTS credits as a requirement for admission to the final module according to Section 24 subsection 5. Students must complete modules with a total workload of 60 ECTS credits.
3. Pursuant to Section 25 subsection 2, students in international study programmes shall receive the following graduation documentation upon successful completion of all relevant modules:

    - Bachelor’s degree certificate (German)
    - Bachelor’s degree certificate (English)
    - Transcript of Records (German)
    - Transcript of Records (English)
    - Diploma Supplement (German)
    - Diploma Supplement (English)

The graduation documentation shall be issued by Zittau/Görlitz University of Applied Sciences but shall not be handed out to students. Instead, they shall be sent to the students’ sending institution, who shall hand them out subsequently.

Annex no. 9): International study programmes (here: Mexico-Tec)

Stg.s-internal code	Modules	ECTS credits
International	213450 Advanced Communications	5
International	214200 Advanced Control Theory	5
International	214350 Artificial Neural Networks	5
International	214950 Image Processing Bachelor	5
International	214900 Mechatronics Project Work	10
International	216500 Microcontrollers	5
International	217100 Signal Theory	5
International	214250 State Estimation	5
International	234650 Final Module	12
International	242750 International Work placement	10
International	234300 Scientific Work Skills	8

1. The workload for students in international study programmes has been agreed on 60 ECTS credits in accordance with Section 3 subsection 5.
2. Students must submit proof of completed modules with a total workload of 30 ECTS credits as a requirement for admission to the final module according to Section 24 subsection 5. Students must complete modules with a total workload of 60 ECTS credits.
3. Pursuant to Section 25 subsection 2, students in international study programmes shall receive the following graduation documentation upon successful completion of all relevant modules:

- Bachelor’s degree certificate (German)
- Bachelor’s degree certificate (English)
- Transcript of Records (German)
- Transcript of Records (English)
- Diploma Supplement (German)
- Diploma Supplement (English)

The graduation documentation shall be issued by Zittau/Görlitz University of Applied Sciences but shall not be handed out to students. Instead, they shall be sent to the students’ sending institution, who shall hand them out subsequently.