OFFICIAL ANNOUNCEMENT

Examination Regulations for the Master's study program "Applied IT Security" at Ruhr-Universität Bochum

dated June 18, 2013, and
statutes for changing the Examinations Regulations dated
September 23, 2015 and September 4, 2020

Examination Regulations for the Master's study program
"Applied IT Security"
at Ruhr-Universität Bochum
dated June 18, 2013

Based on Sec. 2 (4), 64 (1) of the Higher Education Act of the State of North Rhine-Westphalia *(Hochschulgesetz; HG)* dated October 31, 2006 (Law and Official Gazette of the State of North Rhine-Westphalia p. 474), most recently amended by Art. 1 of the amending law dated December 18, 2012 (Law and Official Gazette of the State of North Rhine-Westphalia p. 672), Ruhr-Universität Bochum has issued the following regulations:

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I. General

Sec. 1 Aim of the study program

(1) The postgraduate program "Applied IT Security" (AITS) is a scientifically based, application-oriented degree that provides a wide, and in selected areas, in-depth basis for specialist knowledge as well as comprehensive methodical skills. It follows on from a successfully completed university degree in electrical engineering or one of the fields of study relating to electrical engineering, informatics, mathematics, physics, business information technology or business engineering (disciplines of "electrical engineering" or "informatics") at a university.

(2) The aim of the Master's study program is to provide knowledge in the field of IT security in order to enable students to independently and responsibly perform complex engineering operations. The Master's study program therefore gives students the qualifications necessary to collaborate in research and development with management responsibility. It also provides the necessary knowledge for scientific work at a PhD level.

(3) The Master's examination completes the study program and qualifies the students in the scientific profession. The Master's examination intends to determine whether the candidate has acquired sound knowledge and the skills to independently apply complex scientific methods. Students should be able to critically assess scientific findings and think and act responsibly and on an interdisciplinary basis as well as be able to analyze complex IT security problems and develop solutions. Further language skills and study visits abroad are desired; coursework completed and examinations taken there shall be recognized according to Sec. 10.

(4) The study program is conducted by an external provider by distance learning on behalf of the Faculty of Electrical Engineering and Information Technology. The Faculty of Electrical Engineering and Information Technology is responsible for organizing the examinations and quality assurance.

(5) The courses are offered in German and/or English. Therefore, the examinations can also be taken in the respective language.

Sec. 2 Admission to the study program

(1) Students may be admitted to the Master's study program "Applied IT Security" if they have at least a Bachelor's degree lasting six semesters in one of the fields of study: electrical engineering, informatics, mathematics, physics, business information, business engineering (field of study in "electrical engineering" or "informatics ") totaling 180 credits or a comparable study program with an overall grade of "satisfactory" (3.0) or better.

(2)   A further entry requirement is providing evidence of:

    a)   at least one year of relevant professional experience, providing written confirmation from the employer.

    b)   relevant knowledge of discrete mathematics, informatics or information technology, proven by relevant university certificates.

(3)   Applicants who have not obtained their qualification at a German-language institution must demonstrate the required skills of the German language according to the registration regulations (Einschreibeordnung). This may be demonstrated as follows: Successfully completed DSH language proficiency test (min. level 2). As an alternative to the DSH, the following examinations are recognized: TestDaF test (4 x TDN 4 in the four subtests), Goethe Certificate C2, ZOP (Zentrale Oberstufenprüfung), KDS (Kleines Deutsches Sprachdiplom) and GDS (Großes Deutsches Sprachdiplom) or the Deutsche Sprachdiplom/ level 2 of the Conference of Education Ministers.

As an alternative to German language skills, applicants may demonstrate English language skills at level B2 of the Common European Framework of Reference. The following evidence shall be recognized: UNIcert® II certificate, TOEFL test (IBT 85 and more), CPE (grades A-C), CAE (grades A-C) or IELTS (bands 9-6) or comparable evidence.

(4)   Admission to the Master's study program may be issued with conditions if they do not amount to more than 30 credits. The conditions and the time to provide evidence shall be determined by the examination board. Temporary admission shall be issued for this period of time. The examination board shall decide on any exceptions based on a justified application.

(5)   Applicants cannot be admitted to the study program if they have not passed the final attempt of the Bachelor's, Master's, intermediate diploma or diploma examination in one of the fields of study of "IT security" or a related field of study at universities under the jurisdiction of the German Basic Law.

(6)   The study program can be started in the winter or summer semester.

(7)   Before being accepted to the Master's study program, the applicant shall attend a consultation about the choice of courses and the structure of the Master's study program.

(8)   The examination board shall decide whether the entry requirements according to paragraph 1 through 3 have been met.

Sec. 3 Standard period of study and required coursework

The coursework amounts to a total of 120 credits that are distributed over 3 years or 6 semesters. One credit corresponds to an average workload of 30 hours. If the student studies part time, all times in these Examination Regulations shall be extended accordingly.

Sec. 4 University degree and professional designation

If the student passes the Master's examination, the Faculty of Electrical Engineering and Information Technology at Ruhr-Universität Bochum shall award the degree "Master of Science", abbreviated to "M.Sc.". According to applicable German engineering laws, the graduate is entitled to use the protected professional title of engineer. The degree is equivalent to the former university degree "Diplom Ingenieur".

Sec. 5 Modules

(1)   The study program is structured in modules.

(2)   A module can be comprised of several teaching units.

(3)   Each module is completed with a module examination. The module examination can be made up of several examinations.

Sec. 6 Examinations

(1)   An examination or an examination prerequisite may be taken in the form of a written examination, an oral examination, completing tasks during the study program, a term paper, a project, a seminar presentation, an internship or a colloquium presentation. The examinations can be distributed over several dates throughout the semester and each may depend on additional coursework and examinations during the module. Examination prerequisites are indicated in the valid version of the module handbook.

(2)   During a written examination, candidates must demonstrate that they can correctly work through tasks from the course that is being examined and can find suitable solutions within a limited amount of time and with limited resources. The test shall last between one and four hours; this shall be determined by the examination board. Tests may be taken electronically at work stations.

(3)   During an oral examination, the candidate must demonstrate that he or she has adequate knowledge in the examined field, can identify correlations and can assess specific questions within these correlations. Oral examinations are to last between 15 and max. 45 minutes per candidate. They are to be taken as an individual examination or a group examination with up to four students in front of two examiners or one examiner in the presence of a competent assessor. Before deciding on an assessment for the examination,

the examiner shall consult the assessor. The main topics and results of the oral examination are to be documented in a record. The transcripts and sketches made during the oral examination are part of the record.

(4) Tasks during the study program (e.g. semester papers, homework, weekly tasks) are performed during the same semester as the courses. The tasks can be distributed over several dates throughout the semester and either be provided orally, electronically or in writing. The lecturer is responsible for assessing the student's performance. The lecturer may also permit group tasks if each group member's performance can be individually assessed.

(5) A project is the independent work on a given topic. The lecturer may also permit group tasks if each group member's performance can be assessed individually. The work to be performed shall be defined by the lecturer at the beginning of the course and is to be assessed individually at the end of the course.

(6) Seminar contributions are given on a specific topic by a participant in the form of a presentation and, where necessary, an explanatory visual presentation in front of the seminar attendees and are assessed by the lecturer. Students have completed the examination for a seminar if they have held their own presentation and have taken part in the specified number of meetings to discuss the seminar presentations. The seminar is not passed if students have not taken part in the specified number of meetings and have not (successfully) taken the opportunity to make up for missed meetings. Further information on compulsory attendance can be found in the valid version of the module handbook.

(7) Internships are coursework during which a participant performs several experiments on specific topics, which are then assessed by the internship director. The experiments may be performed in groups. Students have completed the examination for an internship if they have successfully taken part in the specified number of meetings for the course. This is the case when experiments have been performed, recorded and assessed during an internship. The internship is not passed if students have not successfully taken part in the specified number of meetings and have not (successfully) taken the opportunity to make up for missed meetings.

(8) Colloquium presentations are examinations during which students present the contents and the most important results of a scientific paper (e.g. their dissertation) to an audience of experts. To hold a colloquium presentation, students are required to demonstrate that they have attended at least five colloquium presentations of other students. Colloquia are open to the faculty. Further information on compulsory attendance can be found in the valid version of the module handbook.

(9) The type and scope of the examinations and the examination prerequisites are part of the module handbook. The module handbook is available on the internet.

(10) The use of multiple-choice questions in examinations is permitted in coordination with the examination

board. Multiple choice offers answers with one or several correct solutions. The overall answer shall be considered incorrect if any incorrect answers are marked.

(11)   The form of the module examination as well as the registration requirements and the relevant deadlines for tasks during the study program shall be announced at the start of the first course of the module by the lecturer. It shall also be made known how the individual assessments of the examination components are added to the overall grade.

(12)   In each study year, the module examinations (particularly written tests and oral examinations) shall be offered on two regular dates. The examination board may establish separate regulations for examinations taken during the study program (e.g. internships, seminars). The examination board may also determine that additional examination dates can be offered.

(13)   The examination dates of a semester shall be determined no later than at the beginning of the semester by the external provider according to Sec. 1 (4).

Sec. 7 Registration and de-registration of examinations and compensation for disadvantages

(1)   Students are responsible for registering for all examinations and the Master's thesis. The deadlines for registration are determined and announced at the beginning of the semester by the external provider according to Sec. 1 (4).

(2)   Students may only register for a module examination with examination prerequisites if the examination prerequisites have been met.

(3)   Students may de-register for every module examination. The de-registration term shall end fourteen days before the date of the examination. The external provider according to Sec. 1 (4) shall be informed of the de-registration in writing and within the deadline.

(4)   If a candidate does not take part in a registered examination without a valid reason, this examination shall be assessed with 0% unless the student has de-registered from the examination within the deadline.

(5)   If the student states sickness as the reason for not attending the examination, a doctor's note is to be provided that confirms that the student was unable to attend the exam at the time of the exam. Doctor's notes are to be submitted to the Examination Office without being requested to do so directly after the examination, however no later than a week after the examination date. Furthermore, the examination board may also determine in individual justified cases that it is necessary to present a certificate from a medical officer of Ruhr-Universität. If the examination board acknowledges the reasons for not attending, the examination shall not be counted towards the maximum number of module examinations.

(6)   If a candidate credibly demonstrates by presenting a medical certificate that he or she is not able to take the examinations in the intended format, either in whole or in part, due to a prolonged or permanent physical or mental disability, the chairman or chairwoman of the examination board shall permit the candidate to provide equivalent work in another format. The application for the compensation for disadvantages must be submitted no later than upon registration for the examination.

(7)   The statutory maternity protection regulations and periods, the periods for parental leave and the periods of absence due to caring for and raising children within the meaning of Sec. 25 (5) of the Federal Training Assistance Act as well as due to caring for the spouse, registered partner or an immediate relative or an immediate relative by marriage are to be taken into account. Supporting documents are to be provided.

(8)   All deadlines for registering for examinations or registering the Master's thesis or repeats shall be suspended on request

   1.   by three semesters per child to care for and raise minor children within the meaning of Sec. 25 (5) of the Federal Training Assistance Act,

   2.   by up to a total of max. four semesters to participate as an elected representative in executive bodies of the university, the student body, the departmental student organizations or the student associations,

   3.   by up to max. four semesters to take up the position of equality officer,

   4.   for the time of effects of a disability or a severe illness that prolong the period of study and

   5.   by up to three semesters for the time in which students are responsible for caring and supporting close relatives.

Sec. 8 Assessment of examinations and announcement of results

(1)   Graded examinations shall be assessed according to the percentage point system according to Sec. 9.

(2)   Examinations that are not graded shall be given a "pass" or a "fail".

(3)   The result of the written test is generally to be announced to the candidate no later than six weeks after the test date, taking data protection regulations into account. The candidate shall be permitted to view his or her examination documents on request up to one year after taking the examination. The time, place and deadlines to view the written test are to be announced by the examination board or the study program director.

(4)   The assessment result of an oral examination is to be announced to the candidate on the day of the oral examination.

(5) The assessment results of examinations provided in another format are to be announced by the lecturer in a suitable format no later than three weeks after taking the last part of the examination.

Sec. 9 Assessment of modules

(1) A module examination is completed if all assessments of the examinations according to Sec. 8 are available.

(2) The module examination shall be graded as soon as the module examination is completed. A weighted average assessment (weighted average with credit points) of the module examinations according to percentage points shall be calculated. Decimal points shall be rounded up to the next whole number.

(3) The different assessments and their names can be found in the following table:

Percentage points	Grades in words	
95 - 100	ausgezeichnet	(excellent)
84 - 94	sehr gut	(very good)
73 - 83	gut	(good)
62 - 72	befriedigend	(satisfactory)
50 - 61	ausreichend	(sufficient)
0 - 49	nicht ausreichend	(fail)

Table 1: Grading scheme

(4) For modules that only include ungraded examinations, the grade "pass" or "fail" shall be awarded.

(5) A module examination is passed if

a) an average assessment of at least 50% has been achieved in a module that only includes graded examinations;

b) all examinations have been passed in a module that only includes ungraded examinations;

c) an average assessment of at least 50% in the graded examinations has been achieved in a module that includes both graded and ungraded examinations and all ungraded examinations have been passed.

(6) Grading according to the ECTS scale shall be limited to the overall grade of the Master's examination.

(7) The module list (annex 1) states the type of module assessment (graded/ungraded) for each module.

(8) An examination that includes solely multiple choice exercises shall be considered passed if

a) at least 60 % of all questions asked are answered correctly or at least 60 % of the total number of points available has been achieved, or

b) the number of questions answered correctly or the number of points achieved is at least 50% and the average examination performance of the candidates who have taken the examination for the first time during the regular periods of study does not fall below 22 %.

It is not permitted to award minus points. If an examination is made up of at least half multiple choice exercises as well as other exercises, the multiple choice exercises shall be assessed according to this paragraph. The remaining exercises shall be assessed according to the usual procedure. The grade is calculated from the weighted results of both exercises. The weighting shall be performed according to the proportion of exercise types in the examination.

Sec. 10 Repeating examinations and failing the final examination attempt

(1)   Students who do not pass a module exam can repeat it. A maximum of five attempts at an exam is permitted. This does not apply to the Master's thesis (see paragraph 2). The failure of an examination is final if a module examination has not been passed after five examination attempts (repeated four times). If the final attempt of a module examination has not been passed, the Master's examination has not been passed.

(2)   If the Master's thesis has been graded as "fail", it can be repeated once. If the repeat examination is also assessed with less than 50%, this module examination has not been passed. It cannot be repeated a second time.

(3)   The candidate shall be notified in writing that the Master's examination has been failed. Information on legal remedies shall also be provided.

(4)   Passed module examinations of the mandatory study program can be repeated once in order to improve the grade. The best result shall count.

Sec. 11 Examination board

(1)   The Faculty of Electrical Engineering and Information Technology shall form an examination board for the organization of examinations and to perform the tasks assigned to it under these Examination Regulations. The examination board shall comprise the chair, his or her deputy and five other voting members. The chair, his or her deputy as well as two other members are elected from the group of professors from the faculty, one member is elected from the group of scientific employees and two members are elected from the group of students. A deputy shall be elected for each member of the examination board with the exception of the chair. The head of the Examination Office is an advisory member of the examination board with no

right to vote. The term of office for the members of the group of professors from the faculty and from the group of scientific employees shall be three years. The term of office for student members shall be one year. Members may be reelected.

(2)   The examination board is a public authority under administrative procedure laws.

(3)   The examination board ensures that the Examination Regulations are observed and sees to the orderly procedure of examinations. It is particularly responsible for deciding on objections to decisions taken in the examination procedure. The examination board regularly reports to the faculty council of the Faculty of Electrical Engineering and Information Technology. It makes suggestions concerning the reform of the Examination Regulations. The examination board can transfer the performance of its tasks for all regular cases to the chairman or chairwoman. This does not apply to decisions on objections.

(4)   The examination board has a quorum when the chairman or chairwoman or his or her deputy in addition to two other lecturers and at least one other member with voting rights are present. It passes resolutions with a simple majority. In the event of a tie, the chairman or chairwoman's vote shall decide the matter. The student members of the examination board shall not be involved in the assessment and recognition of coursework and examinations.

(5)   The members of the examination board have the right in justified cases to attend examinations.

(6)   The examination board can maintain an electronic database to organize examination matters within the scope of legal security provisions.

(7)   The meetings of the examination board are not public. They are generally held once a semester. The members of the examination board and their deputies are obliged to maintain secrecy. Unless they are in the public sector, they shall be obliged by the chairman or chairwoman of the examination board to maintain confidentiality. The minutes on the deliberations of the examination board shall be prepared.

(8)   The examination board may use the administrative assistance of the Examination Office during performance of its duties.

Sec. 12 Examiners and observers

(1)   The examination board appoints the examiners and observers. It can transfer the appointment to the chairman or chairwoman. Examiners may only be appointed as such if they have a minimum of a Master's degree or a comparable degree in the subject and, unless compelling reasons require a deviation, independently teaches or has taught in the subject of the examination. Generally, the examiners are the head lecturers of the course. Observers may only be appointed as such if they have the Master's degree or a comparable degree in the subject.

(2) The examiners are independent when examining students.

(3) Unless the examiners, the observers and those involved in examinations are in the public sector, they shall be obliged by the chairman or chairwoman of the examination board to maintain confidentiality.

Sec. 13 Recognition of periods of study, coursework and examinations, admission to a higher semester

(1) Examinations that are taken in the same study program or comparable Master's study programs at other state or state-approved universities, at state or state-approved co-operative education universities, in study programs at foreign state or state-approved universities or in another study program at the same university shall be recognized on request provided there is no significant difference in the examinations and coursework that are replaced with regard to the skills acquired; equivalence shall not be reviewed. Recognition within the meaning of sentence 1 shall serve for the student to continue to study program and take examinations. After recognition, they are assigned to the modules of the Master's degree.

(2) Differences shall be considered significant if the acquired skills do not meet the requirements of the Master's study program Applied IT Security. These are to be considered and assessed as a whole, a systematic analysis is not necessary. For the recognition or transfer of periods of study, coursework and examinations outside the jurisdiction of the German Basic Law, the equivalency agreements approved by the Conference of Education Ministers *(Kultusministerkonferenz)* as well as the agreements under university partnerships are to be observed. If agreements or conventions of the Federal Republic of Germany with other states about the equivalence for universities (equivalency agreements) benefit students from abroad in deviation from paragraph 1, the regulations in the equivalence agreements shall have priority. If there is any doubt, the International Office and the Central Office for Foreign Education Systems may be consulted.

(3) On request, other knowledge and qualifications acquired outside of university can be recognized if the knowledge and qualifications are equal to the examinations they are to replace in terms of content and level.

(4) The examination board of the Faculty of Electrical Engineering and Information Technology is responsible for the transfer or recognition according to sections 1 to 3. A specialist representative is generally to be consulted before making a decision on whether significant differences exist. The student shall present the documents necessary for the recognition. After presenting the complete documentation, a notice that includes information on legal remedies shall be issued within around 6 weeks. If the recognition requested based on an application within the meaning of sentence 1 is unsuccessful, the applicant may request the decision to be reviewed by the president regardless of the process and procedure deadlines.

(5) If coursework and examinations are recognized, the assessments and grades - where the assessment and

grading systems are comparable - shall be accepted and included in the calculation of the overall grade. If assessment and grading systems are not comparable - subject to special agreements between faculties or their specialist representatives - the requirements of the ECTS (European Course Credit Transfer System) of the European Union shall apply. The recognition is stated on the certificate. If an examination is recognized as equivalent but does not have a convertible assessment, the note "recognized" shall be included on the certificate. In these cases, the overall grade is calculated only from the assessed coursework and examinations.

(6)   If the requirements of paragraphs 1 and 3 are met, students have a right to recognition.

(7)   If the student has changed university or study program, the Master's thesis shall not be recognized.

(8)   After recognition of coursework and examinations at another university, the student may be admitted to a higher semester depending on the scope of the recognized coursework and examinations. Admission to a higher semester does not in any way infer further recognition of coursework or examinations.

Sec. 14 Unexcused absence, cheating and violation of these Regulations

(1)   If the candidate attempts to manipulate the result of coursework or an examination by cheating, the coursework or examination shall be assessed with 0 % or "fail". Cheating shall be determined during oral examinations by the examiners, during written tests by the supervisors or the lecturer and for coursework or examinations taken any other format by the lecturer and shall be recorded on file. A fine of up to EUR 50,000 may be imposed. In case of several or other severe attempts to cheat, the candidate may also be excluded from the study program.

(2)   Candidates who disturb the proper procedure during examinations can be excluded from continuing the examination by the examiners and the supervisors after receiving a warning. In this case, the examination is assessed with 0%. The reasons for exclusion shall be recorded on file. In severe cases, the examination board may exclude the candidate from taking other examinations.

(3)   If students cannot comply with these Examination Regulations for valid reasons, the asserted reasons are to be submitted to the Examination Office immediately in writing and established as credible. If the student is sick, a doctor's note will be required.

(4)   The submission of plagiarized project work, tasks during the study program or a plagiarized Master's thesis shall be considered cheating according to Sec. 1.

(5)   Incriminating decisions according to paragraph 1 to 4 and the reasons therefor shall be disclosed to the candidate immediately in writing and include information on legal remedies.

II. Master's examination

Sec. 15 Admission

(1) Students can be admitted to a module examination of the Master's study program if they have entered into a corresponding contract with the external provider according to Sec. 1 (4) and have paid the fees due for participation.

(2) Registration for an examination is only valid if the Bachelor's certificate as well as a written declaration according to Sec. 2 (5) is submitted to the Examination Office.

(3) Students can only be permitted to submit a Master's thesis if they have completed modules totaling at least 80 credits.

Sec. 16 Type and scope of the Master's examination

(1) The Master's examination is comprised of the module examinations according to annex 1 totaling 120 credits. The Master's examination is comprised of the compulsory modules (70 credits), the elective modules (25 credits) and the Master's thesis (25 credits). There is no separate final examination.

(2) The module handbook states the courses assigned to each module and is available on the internet.

(3) The student may take an examination in other subjects in addition to the mandatory examinations before passing the Master's examination. Results from these additional subjects shall not be taken into account when calculating the final grade.

Sec. 17 Master's thesis

(1) The Master's thesis is a written examination paper. It should demonstrate that the candidate is able to independently work through a challenging problem in electrical engineering and information technology using scientific methods within a specified period of time.

(2) The Master's thesis can be issued and supervised by any lecturer with a PhD or qualified or appointed lecturer from the Faculty of Electrical Engineering and Information Technology. It can also be supervised by members of staff without a PhD if they have been appointed as examiners. It may also be supervised by professors or lecturers that do not belong to the faculty; this requires the approval of the chairman or chairwoman of the examination board or his or her deputy.

(3) The student has the right to suggest the topic and supervision of the Master's thesis. The right to suggest a topic does not result in an entitlement to do so.

(4)   The task shall be issued by the chairman or chairwoman of the examination board in the Examination Office of the Faculty of Electrical Engineering and Information Technology. The time the task is issued shall be recorded on file.

(5)   On request, the chairman or chairwoman of the examination board shall ensure that the candidate is given a topic for the Master's thesis.

(6)   The time to work on the Master's thesis shall be no longer than six months. The task and scope of the Master's thesis are to be limited so that the Master's thesis can be written within the deadline (750 hours). If the Master's thesis is written on a part-time basis in addition to employment, the time given to work on the thesis shall be no more than twelve months. The task may only be returned once and only within the first month of working on the thesis. In individual cases, the examination board may extend the time to work on the thesis in exceptional cases by up to six weeks upon submission of a justified application by the candidate. The Master's thesis may be written in German or English. The topic shall be determined upon registration of the Master's thesis. After registration, the topic cannot be redefined. Any title changes require the written confirmation by the first examiner and the approval of the examination board.

(7)   When submitting the Master's thesis, the candidate shall ensure in writing that he or she has written the work him or herself and did not use any sources or tools other than those stated and has identified quotes.

Sec. 18 Acceptance and assessment of the Master's thesis

(1)   The written documentation of the Master's thesis is to be submitted in good time to the external provider according to Sec. 1 (4) in three copies and in a verifiable electronic format. The time of submission shall be recorded on file. If the Master's thesis is sent by post, the date of the post stamp shall apply. If the Master's thesis is not submitted on time, it shall be assessed with 0 % ("fail").

(2)   The Master's thesis shall be assessed by two examiners. One of the examiners shall be the person responsible for giving the student the topic and supervising the Master's thesis. The second examiner must belong to the group specified in Sec. 17 (2) and is determined by the chairman or chairwoman of the examination board. The examiners shall assess the thesis according to the percentage point system. The overall assessment of the Master's thesis is formed from the average of the individual grades. If there are differences of more than 20% in the individual assessments, the examination board shall determine the overall assessment.

(3)   The process for assessing the Master's thesis including the reporting to the Examination Authority is usually to be completed within four weeks after submission of the Master's thesis.

(4)   If the Master's thesis has been graded as "fail" (less than 50%), it can be repeated once.

Sec. 19 Passing and grading the Master's examination

(1)   The Master's examination is passed if all modules (see list of modules in annex 1) have been successfully completed and 120 credits have been achieved.

(2)   Once the Master's examination is passed, the Master's study program is complete.

(3)   The total grade of the Master's examination is calculated from the weighted average (weighted with the credits) of all graded module examinations. Decimal points shall be rounded up to the next whole number. Table 1 from Sec. 9 (3) is used for the grades.

Sec. 20 Master's degree certificate

(1)   On request, a certificate for the passed Master's examination shall be issued, which bears the title "Master's Examination Certificate for the Continuing Education Program Applied IT Security" in the header. If the Master's examination has been passed, the certificate can be issued one semester later on request if the student repeats examinations for the purpose of improving his or her grades, taking Sec. 10 into account. This application is to be submitted to the Examination Office within four weeks after passing the Master's examination. The certificate includes:

a)   the overall grade of the Master's examination with the average assessment in percentage points as well as the name of the grade,

b)   the topic of the Master's thesis, its assessment in percentage points as well as the name of the grade,

c)   the names and scope (credits) of the individual modules, the courses for electives, the assessment of the modules in percentage points as well as the name of the grade,

d)   additional subjects and their results according to Sec. 16 (3).

(2)   The certificate shall be signed by the dean of the Faculty of Electrical Engineering and Information Technology and issued with the seal of the Faculty of Electrical Engineering and Information Technology.

(3)   The certificate shall bear the date of the last examination. If a Master's thesis is submitted, the certificate shall bear the date the thesis is submitted. The certificate shall also bear the date that it is issued.

(4)   If the candidate has not yet passed the Master's examination and he or she does not wish to continue the study program at Ruhr-Universität Bochum, he or she will be issued a written certificate on request and upon presentation of the relevant supporting documents. It shall include the passed examinations with their percentage points as well as the names of the passed modules, their assessments in percentage points and the name of the grade.

Sec. 21 Diploma Supplement

(1)   The graduate will receive the certificate together with the Diploma Supplement that bears the date of the certificate.

(2)   The Diploma Supplement provides information about the specialist profile of the completed study program.

(3)   The Diploma Supplement shall be signed by the dean of the Faculty of Electrical Engineering and Information Technology and issued with the seal of the Faculty of Electrical Engineering and Information Technology.

Sec. 22 Master's diploma

(1)   The Master's diploma is handed out to the graduate with the certificate. It certifies that the academic degree and the professional title according to Sec. 4 has been awarded. The diploma shall bear the date of the last examination and the date it is issued.

(2)   The Master's diploma shall be signed by the dean of the Faculty of Electrical Engineering and Information Technology and issued with the seal of the Faculty of Electrical Engineering and Information Technology.

Sec. 23 Invalidity of the Master's examination, revocation of the degree

(1)   If the candidate cheated during an examination and this fact does not become known until after the certificate has been issued, the examination board shall subsequently correct the assessment and the grade for the respective examination and may declare the candidate has failed the examination.

(2)   If the requirements for admission to a module examination were not met without the candidate trying to conceal this, and if this fact does not become known until after the certificate has been handed out, this shortcoming shall be ignored if the candidate passes the examination. If the candidate wrongly obtained the admission with intent, the examination board shall decide on the legal consequences according to the administrative procedure laws of the state of North Rhine-Westphalia.

(3)   Before a decision is made, the student shall be given the opportunity to make a written statement.

(4)   The incorrect examination certificate shall be revoked by the chairman or chairwoman of the examination board and a new one shall be issued, where applicable. A decision according to paragraph 1 and paragraph 2 sentence 2 is only permitted within five years from the time the degree is awarded. The time between initiating and ending an administrative procedure to review the revocation of a degree shall not be included in the five-year deadline according to sentence 2.

(5)   If the examination is declared failed due to cheating, the M.Sc. degree shall be revoked; the examination board is responsible for revoking a degree. The decision shall be taken by the chairman or chairwoman of the examination board and the certificate in question shall be revoked.

Sec. 24 Viewing the examination records

(1)   After completing the study program, the candidate may submit a request to view his or her examination records within a suitable deadline.

(2)   The application shall be submitted to the external provider according to Sec. 1 (4) within one month after the examination certificate has been issued. The external provider shall determine the place and time of the inspection.

Sec. 25 Transitional provisions

At the end of the 2015/2016 winter semester, a Master's examination may be taken for the last time according to the Examination Regulations for the Master's degree Applied IT Security dated November 3, 2006, Official Notifications of the Ruhr-Universität Bochum No. 667. From the 2016 summer semester, examinations may only be taken according to these Examination Regulations.

Sec. 26 Entry into force and publication

(1)   These Examination Regulations shall enter into force on the day after publication and apply to all students who register for this study program from the winter semester 2013/2014.

(2)   These Examination Regulations shall be published in the Official Notifications of Ruhr-Universität Bochum.

Issued based on the resolutions of the faculty council of the Faculty of Electrical Engineering and Information Technology dated June 5, 2013.

Bochum, dated June 18, 2013

Statutes for changing the Examinations Regulations dated
September 23, 2015 and September 4, 2020

Presidents

of Ruhr-Universität Bochum

university professors Dr. E. Weiler and Dr. Axel Schölmerich

Annex 1
to the Examination Regulations for the Master's study program
"Applied IT Security"
at Ruhr-Universität Bochum

List of modules

	Module		Credit points	Module grade
1	Introduction to Cryptography and Data Security		10	graded
2	Discrete Mathematics for IT Security *		10	graded
3	Informatics for IT Security *		10	graded
4	Information Technology for IT Security *		10	graded
5	Network Security		10	graded
6	Security Systems and Protocols		10	graded
7	Cryptography		10	graded
8	Security Management		5	graded
9	Elective module **		25	graded
10	Legal Aspects of IT Security		5	graded
11	Master's thesis		25	graded
	Total:		120	

*   Students must demonstrate that they have 20 credits from the three modules "Discrete Mathematics for IT Security", "Informatics for IT Security" and "Information Technology for IT Security". The student will be assigned the modules that are not the focus of his or her Bachelor's degree upon admission to the study program.

Foreign students who are studying the study program in English shall provide evidence of the three modules "Discrete Mathematics for IT Security", "Informatics for IT Security" and "Information Technology for IT Security". The module "Legal Aspects of IT Security" as well as an elective shall be omitted. In total, students must complete 75 credits in the mandatory courses and 20 credits in their electives.

**   The module examinations that can be selected for the elective module are determined by the faculty council and published online.