

**English translation of the examination regulations
for the Master's Programme**

Media Informatics

of the

Rheinisch-Westfälische Technische Hochschule Aachen

and the

Rheinische Friedrich-Wilhelms-Universität Bonn

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**Please be aware that this translation is for informational purpose only and that solely the
German version is legally binding.**

On the basis of § 2 Para. 4 and § 94 Para. 1 of the law concerning university-level institutions of North Rhine-Westphalia (university law) from the 14th of March 2000 (GV, NRW. p. 190), finally modified by law from the 30th of November 2004 (GV, NRW. p. 752), the Rheinisch-Westfälische Technische Hochschule Aachen (RWTH) and the Rheinische Friedrich-Wilhelms-Universität Bonn (Bonn University) issue the following regulation:

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I General

§ 1

Aim of the Master's Programme and purpose of the master's assessment process

- (1) Giving due regard to changes and requirements in the working world, the aim of the Master's Programme in Media Informatics is to impart to students holding a relevant bachelor's degree the particular knowledge, skills and methods required in the Media Informatics field in a way that enables them to conduct scientific work, to critically assess and integrate scientific findings and knowledge, and to act responsibly. In order to achieve these objectives, the Master's Programme in Media Informatics strives to link research and instruction very closely with one another, inter alia through intensive lab courses conducted in collaboration with the Fraunhofer-Institut für Angewandte Informationstechnik FIT (Fraunhofer Institute for Applied Information Technology), the Fraunhofer-Institut für Medienkommunikation IMK (Fraunhofer Institute for Media Communication).
- (2) The master's assessment process shall lead to conferral of a master's degree in Media Informatics which qualifies the holder to practise a profession. The purpose of the master's assessment process is to determine whether the candidate has acquired the specialised knowledge necessary for practising a particular profession, has a fundamental grasp of his field of study and has the ability to apply scientific methods and findings.
- (3) The programme is conducted in English.

§ 2

Master's degree

Candidates who successfully complete the master's assessment process shall be awarded a Master of Science (abbreviated as M.Sc.) degree by the Faculty of Mathematics, Computer Science and Natural Sciences of the RWTH Aachen.

§ 3

Admission requirements

- (1) The requirements for admission to the Master's Programme are:
 1. A recognised relevant first academic degree (e.g. Bachelor of Science in Computer Science) which establishes the candidate's academic qualification for the Master's Programme. Academic qualification shall be deemed to exist when the degree evidences a subject spectrum and knowledge as specified by Para. 2. Academic degrees which have been approved by the appropriate government agency of the country in which the university is located or have been accredited in a state-approved process shall be recognised. The decision whether such an approval exists is made by the Ministerium für Wissenschaft und Forschung des Landes Nordrhein-Westfalen MWF (Ministry for Science and Research of the Federal State of North Rhine-Westphalia) and the Ständige Konferenz der Kultusminister KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the states in the Federal Republic of Germany) respectively.
 2. Sufficient English-language proficiency is a prerequisite for admission to the programme. The TOEFL 550, Computer TOEFL 213 (Test of English as a Foreign Language), IELTS 6.0 (International English Language Testing System) or equivalent tests shall be used to determine the applicant's level of proficiency.
 3. Since labs in one of the participating Fraunhofer institutes FIT or IMK in St. Augustin are mandatory only as many students can be admitted as lab places are available there. Placement in these lab courses shall be decided in combination with the admission to the programme by a committee that is to be set up by the Master's Programme Committee and comprised of instructors from the University of Bonn, RWTH Aachen University and the aforementioned Fraunhofer institutes.

- (2) For the purposes of Para. 1, candidates should have, as a special educational background, knowledge in the following fields: Linear Algebra, Calculus, Differential Equations and Numerics, Discrete Structures, Stochastics, Mathematical Logic, Programming, Data Structures and Algorithms, System Programming, Computer Architecture, Computability and Complexity, Formal Languages and Automata Theory, as well as further knowledge from the area of computer science totalling at least eight Semesterwochenstunden (credit hours). In absence of certain knowledge the Master's Programme Committee can make successful participation in suitable bridging courses a mandatory prerequisite for the admission to the programme.
- (3) The question of whether the individual candidate fulfils the admission requirements set forth in Para. 1 and has the required academic qualifications shall be decided by the Master's Programme Committee for Media Informatics prior to his or her matriculation.

§ 4

Standard period of study, scope of studies and credit points

- (1) The standard period of study including the master's assessment process is four semesters.
- (2) A total of 60 Semesterwochenstunden (credit hours) shall be required to complete study. Lecture courses, tutorials and lab courses with related subject matter shall be grouped together in modules. A module is completed by a Leistungsnachweis (certificate of achievement) and/or by an examination and a predefined number of credits is granted for the successful completion of a module. The grade of each examination is weighted according to its number of credits (see also §10). A total of at least 120 credit points (based on the European Credit Transfer System □□ECTS), with the master's thesis accounting for 30 of these credit points, are required to complete this Master's Programme. One or several exemplary study plans are made available to the students. Individual study plans can be granted by the Master's Programme Committee.

§ 5

Examinations and examination deadlines

- (1) The master's assessment process encompasses grade-based examinations and the master's thesis. Examinations are conducted in English.
- (2) Course-specific examinations and the master's thesis shall flank the course of study and should be completed within the standard period of study set forth in § 4 Para. 1. Examinations shall take place within 3 weeks after end of the lecture period at the latest. For every examination a repetition shall be offered before start of the next lecture period.
- (3) Candidates shall apply for admission to the master's assessment process at the same time that they register for the first examination in the process (see § 11). Application and registration shall be made in writing to the Master's Programme Committee. The Master's Programme Committee shall announce the registration deadline; this deadline should precede the examination date by at least six weeks.
- (4) Should a candidate prove on the basis of a medical certificate that he or she is unable to complete the assessment process in part or in its entirety in the designated form due to prolonged or chronic physical illness or impairment, the chairman of the Master's Programme Committee shall allow the candidate to undergo a different but equivalent form of assessment. The same shall apply to Leistungsnachweisen (certificates of achievement).
- (5) Mutterschutzfristen (Maternity protection leave time frames), periods of parental leave, and time off due to care of people according to § 65 Para. 5 Sentence 2 No. 5 HG shall be considered as regulated by law.

- (6) Students on granted leave are not allowed to achieve any certificates of achievement or to take any exams at RWTH Aachen or University of Bonn. This does not affect the repetition of failed exams or certificates of achievement for the semester abroad itself.

§ 6

Joint Master's Programme Committee

- (1) A joint Master's Programme Committee shall be set up for this degree programme.
- (2) The joint Master's Programme Committee shall coordinate organisational collaboration between the contracting parties (i.e., the University of Bonn and RWTH Aachen University) in the implementation and conduct of the joint Master's Programme. This Committee shall also act as the Examination Committee. In this capacity, it shall report to the rectors of the University of Bonn and RWTH Aachen University on a regular, at least annual, basis on the development of the master's assessment process and periods of study.
- The Committee's tasks shall include in particular:
- Developing and refining the degree programme, including the Study Regulations and Examination Regulations
 - Organising the courses on offer
 - Discharging responsibilities in its capacity as the body in charge of examinations under § 94 of the Act on the Universities of the State of North Rhine-Westphalia.
- (3) The Master's Programme Committee shall be comprised of:
1. Three professors each from RWTH Aachen University and the University of Bonn (a total of six, one of whom must be a member of the Fraunhofer Gesellschaft),
 2. One member from each university's group of wissenschaftliche Mitarbeiter (scientific staff excluding professors and lecturers (Hochschuldozenten and Privatdozenten)) working within the B-IT,
 3. One member taken from the group of students enrolled in the Master's Programme.
- (4) Members of the Master's Programme Committee who are eligible to vote and to stand for election are those professors from the respective university who have a regular teaching load in Media Informatics and those professors from the respective university who offer at least two credit hours of instruction in the course of an academic year. In the group of wissenschaftliche Mitarbeiter, those individuals who work within the B-IT shall be entitled to vote and eligible to stand for election on behalf of the respective university. Among the students in the respective student body, those students who are enrolled in the respective B-IT Master's Programme shall be entitled to vote and eligible to stand for election. The Senate of the University of Bonn and the Rectorate of RWTH Aachen University shall confirm the composition of the Master's Programme Committee.
- (5) The chairman must be a member of RWTH Aachen University, the deputy chairman must be a member of the University of Bonn. The chairmen and the deputies must belong to the professors who have a regular teaching load within the B-IT. Entitled to vote are the professors as stated in Para. 4 sentence 1. A deputy shall be elected for each of the members of the Master's Programme Committee except for the deputies stated in sentence 2. The term of office for student members shall be one year, the term of office for all other members shall be three years. Members may be re-elected.
- (6) The Master's Programme Committee is an administrative body as defined by Germany's administrative procedure law and law governing procedure in contentious administrative matters.
- (7) The Master's Programme Committee shall ensure compliance with the provisions of the Examination Regulations and make certain that the assessment process is conducted in

accordance with regulations. The Master's Programme Committee shall be responsible in particular for deciding appeals lodged in connection with decisions taken in the course of the assessment process. In addition, the Master's Programme Committee shall report to the respective faculties regularly, at least once a year, on the development of the assessment process and periods of study. The Master's Programme Committee shall make suggestions for changes to the Examination Regulations, the Study Regulations and curricula and shall disclose the distribution of grades for individual courses and overall performance. The Master's Programme Committee may delegate routine tasks to the chairman or deputy chairman; this does not apply to decisions on appeals or to its report to the faculties.

- (8) The Master's Programme Committee shall have a quorum when, in addition to the chairman or his deputy and two further professors, at least two more members who are entitled to vote are present. Resolutions shall be passed by simple majority. In the event of a tie vote, the chairman's vote shall be the deciding vote. Those members of the Master's Programme Committee who are students shall not be involved in the assignment of grades for course work or examinations or in the recognition of course work or examinations.
- (9) Members of the Master's Programme Committee shall have the right to be present during examinations.
- (10) Meetings of the Master's Programme Committee shall be closed to the public. Members of the joint Master's Programme Committee, their deputies, the examiners and assistant examiners shall observe confidentiality. Those members who are not civil servants shall be bound to confidentiality by the chairman of the Master's Programme Committee.
- (11) The Master's Programme Committee shall, in conjunction with the Faculty of Mathematics and Natural Sciences of the University of Bonn and the Faculty for Mathematics, Computer Science and Natural Sciences of RWTH Aachen University, designate a wissenschaftlichen Mitarbeiter to be study advisor (Programme Coordinator).
- (12) The Master's Programme Committee utilizes the *Zentrales Prüfungsamt* (central examination office) of the RWTH in order to fulfil its respective tasks.

§ 7

Examiners and assistant examiners

- (1) The Examination Committee shall appoint the examiners and assistant examiners for the individual examinations. The committee may delegate this task to the chairman. As a rule, only professors or lecturers (Hochschuldozenten and Privatdozenten) shall be appointed as examiners who give lectures in the respective course. Providing there are compelling reasons for a departure from this requirement, only those persons can be appointed as examiners who have taught classes on their own authority in the examination subject in the segment of the Master's Programme that precedes the examination. Only those persons who hold a corresponding master's degree or a comparable degree may be appointed as an assistant examiner.
- (2) Examiners shall be independent in their conduct of examinations.
- (3) The candidate may propose examiners for the master's thesis and oral examinations. These suggestions shall be taken into account; however they do not constitute any claim.
- (4) The chairman of the Master's Programme Committee shall ensure that the students are notified of the names of the examiners at least two weeks prior to the date of the particular examination.
- (5) For the examiners and assistant examiners § 6 Para. 10 sentences 2 and 3 applies accordingly.

§ 8

Recognition of study times, grades and credits for course work, assignment to a more senior specialised-study semester

- (1) Credit shall be granted, without a determination of equivalency, for grades that a student has earned in the same course of study at another university in Germany.
- (2) Credit shall be granted for grades earned in other courses of study or at a non-university educational institution in Germany provided that equivalency has been determined. Credit for grades earned at universities outside of Germany shall be granted on application, when equivalency has been established. The equivalency of grades shall be deemed to exist when the content, scope and requirements of the particular examination substantially correspond to the content, scope and requirements set forth in this Master's Programme. Moreover, equivalency shall not be established on the basis of a skeletal comparison but rather on the basis of an overall review and evaluation. Equivalency agreements approved by the Standing Conference of the Ministers of Education and Cultural Affairs of the states in the Federal Republic of Germany and agreements under university partnerships shall be observed when determining the equivalency of periods of study, course work and grades which were completed or earned outside the ambit of the Hochschulrahmengesetz (Framework Act for Higher Education). Otherwise, the Central Office for Foreign Education may be consulted when doubts regarding equivalency exist.
- (3) Equivalent study periods and grades earned from national or state approved universities of cooperative education can be granted on application. The same applies for study periods and grades earned in continuing studies. On request equivalent study achievements or examinations resulting from "Fern- und Verbundstudien" (distance learning and combined studies) which are endorsed by the federal states of Germany or the Federation can be recognised.
- (4) The Examination Committee shall be responsible for granting credit pursuant to Paras. 1 to 3. Appropriate representatives of the respective subjects shall be consulted before a decision on equivalency is taken.
- (5) Should credit be granted for examinations, the grades earned in so far as the grading systems are comparable shall be recognised and used to calculate the final grade. Should the grading systems not be comparable, the entry "angerechnet" (recognised) shall be made in the student's transcript. Such credits shall be identified accordingly in the student's Zeugnis (official certificate documenting academic performance).
- (6) When the requirements set forth in Paras. 1 to 3 have been satisfied, examinations which were taken within the ambit of Germany's Framework Act for Higher Education shall be recognised ex officio. The student shall submit the documentation necessary for granting credit.

§ 9

Cancellation, failure to appear, withdrawal, cheating, disruption of examinations

- (1) Candidates may cancel their registration for a course-based examination without indicating the reason for the cancellation up to one week before the examination date at the latest.
- (2) Candidates who fail to appear on the day of an examination without good cause or who withdraw from an examination without good cause once it has begun shall receive the grade "nicht ausreichend" (Insufficient, 5.0); this shall not affect Para. 1. The same shall apply when a candidate does not complete a written test within the allotted time.
- (3) Candidates shall immediately notify the Master's Programme Committee in writing of the reasons for the cancellation or their failure to appear and credibly substantiate them. In the event of illness, the candidate may be required to submit a medical certificate. The chairman of

the Master's Programme Committee may, in individual cases, require the submission of a certificate from a medical examiner designated by the Committee. The Master's Programme Committee shall notify the candidate in writing when it refuses to recognise the reasons submitted. Any grades that have already been earned shall be recognised.

- (4) Candidates who try to influence the outcome of an assessment (examination or thesis) through deception or the use of inadmissible materials or aids shall receive the grade "nicht ausreichend" (Insufficient, 5.0). The respective examiner or proctor may bar any candidate from continuing an examination who, despite a warning, disrupts the orderly conduct of the examination; in such cases, the candidate shall receive the grade "nicht ausreichend" (Insufficient, 5.0). A record shall be made of the reasons for barring the candidate from the examination. In serious cases, the Master's Programme Committee may bar the candidate from taking further examinations.
- (5) Candidates may, within a period of 14 days, request that decisions taken pursuant to Para. 4, sentences 1 and 2 be reviewed by the Master's Programme Committee. The Committee shall inform the respective candidate of any negative decisions, substantiate its decision, and advise him of the legal remedies available to him, immediately and in writing.

II Master's assessment process

§ 10

Scope and type of the master's assessment process

- (1) The master's assessment process consists of examinations in the subjects:
 1. Computer and Communication Technology in accordance with Para. 2,
 2. Multimedia Technology in accordance with Para. 3,
 3. Multimedia Use and Impact in accordance with Para. 4,
 4. Media Informatics Lab Courses according to Para. 5,
 5. Communication Skills according to Para. 7, as well as
 6. the master thesis according to § 15. The topic of the master thesis can only be handed out if
 1. one of the two lab courses (according to Para. 6) has been successfully completed,
 2. the examinations in the subject Communication Skills (according to Para. 7) are successfully completed and
 3. examinations of at least 54 credits (60 percent of 90 credits) have been successfully completed.
- (2) In the subject of Computer- and Communication Technology, at least 20 credits have to be earned in examinations about selected topics. At least 6 credits have to be earned in the module „Object-Oriented Software Construction“ and at least 6 credits have to be earned in the module „Data Communication and Internet Technology“.
- (3) In the subject of Multimedia Technology, at least 20 credits have to be earned in examinations about selected topics. At least 6 credits have to be earned in the module “Computer Graphics”.
- (4) In the subject of Multimedia Use and Impact, at least 10 credits have to be earned in examinations about selected topics. At least 6 credits have to be earned in the module “Designing Interactive Systems”.
- (5) In addition, eight credits from examinations in the subjects stated under Para. 2 to 4 have to be earned.
- (6) In the subject “Media Informatics lab courses”, two lab courses (10 credits each) have to be completed. At least one lab course shall be completed at one of the participating Fraunhofer institutes.

- (7) In the subject Communication Skills German language skills of approx. 300 hours have to be demonstrated by non native German speaking students. For the successful certified examination of the above mentioned German language skills 4 credits are granted. Native German speaking students have to earn these credits by other examinations from the subject Communication Skills. Further, examinations in "Technical Writing" (4 credits) and in a selected seminar (4 credits) have to be successfully completed.
- (8) Lectures do amount to at least two SWS (credit hours). Two credits per SWS lecture are granted if the lecture is accompanied by an exercise of at least one SWS. Otherwise, 1,5 credits per SWS lecture are granted. Credits can only be granted if the requirements of the respective lecture are met.
- (9) The lectures chosen by the candidates in the different subjects have to be approved by the chairman of the Master's Programme Committee resp. his representative. On request and by submission of proof that sufficient knowledge does exist the mandatory modules stated under (2)-(4) can be replaced by other courses from the same subject.
- (10) Examinations for the lectures take place as written or oral exams. The type of examination is announced by the examiner at least four weeks before the examination date. Examination procedures regarding Technical Writing, the seminar and the lab courses are lay down by the Master's Programme Committee on request of the respective lecturer and are announced together with the corresponding course. The study regulations can specify further details.

§ 11 Admission

- (1) Only those persons may be admitted to the master's assessment process who
 1. Fulfil the admission requirements specified in § 3 Para 1;
 2. Are enrolled in the Master's Programme Media Informatics at RWTH Aachen;
- (2) Candidates shall submit their application for admission to the master's assessment process to the Master's Programme Committee in writing together with their application for the first examination in the process. The following shall be included with the application, unless already submitted:
 1. Documents proving that the candidate satisfies the admission requirements specified in Para. 1
 2. A statement from the candidate on whether he has already failed a master's assessment process once in this or a related course of study or has definitively failed the process in this or a related course of study after having exhausted all options for repeating it or has already failed a Diplom assessment process in Computer Science once or has definitively failed the Diplom assessment process in Computer Science after having exhausted all options for repeating it, and whether he is presently undergoing an assessment process elsewhere.
- (3) All further applications shall also be submitted to the Master's Programme Committee. When applying, the candidate shall specify which courses are to be covered by examinations.
- (4) Should the candidate not be able to include the documents stipulated in Paras. 1 and 2 in the required form, the Master's Programme Committee may allow him to provide the requisite proof in another form.

§ 12
Admission Procedure

- (1) The Master's Programme Committee or, in accordance with § 6 Para. 7 sentence 5, the chairman of the Master's Programme Committee shall decide on applications for admission to the master's assessment process.
- (2) An application shall be rejected when
 - a) The requirements specified in § 11, Para. 1 have not been satisfied, or
 - b) The candidate's documentation is incomplete, or
 - c) The candidate has definitively failed the master's assessment process in the same Master's Programme after having exhausted all options for repeating it or has definitively failed the Diplom assessment process in Computer Science after having exhausted all options for repeating it, or
 - d) The candidate is already enrolled in the same master's programme at another university, or the candidate is currently undergoing a master's assessment process in a computer science degree programme.

§ 13
Written examinations

- (1) In the course of a written examination, candidates are supposed to prove that they are capable of understanding a problem and finding ways to solve it using methods commonly used in their discipline, within a specific period of time and with the help of limited aids.
- (2) The examiners shall announce on a timely basis which aids may be used during a written examination. Written examinations shall last:
 - 60 minutes for courses with up to two SWS,
 - 90 minutes for courses with more than two but no more than four SWS,
 - 120 minutes for courses with more than four but no more than six SWS and
 - 150 minutes for courses with more than six SWS.

Taken into account are SWS for both lectures and exercises.

- (3) Each written examination shall be graded by an examiner in accordance with §18. Should the candidate be repeating the written test for the second time pursuant to § 19, Para. 3, it shall be graded by two examiners. Preliminary correction by wissenschaftliche Mitarbeiter shall be permissible.
- (4) On application, candidates shall be allowed to examine their graded examinations.

§ 14
Oral examinations

- (1) In oral examinations, candidates are supposed to prove that they understand the relationships and correlations in the field they are being tested on and are able to analyse and process specific questions or tasks within this overall context. Oral examinations should also determine whether the individual candidate has a broad basic knowledge of his field.
- (2) Oral examinations shall be conducted by either a panel of several examiners (Kollegialprüfung) or by a single examiner in the presence of a competent assistant examiner (§ 7, Para. 1, sentence 5), with the candidate being examined either individually or in a group. Before assignment of the grade in accordance with § 18 Para. 1, the examiner shall consult with the other examiners or the assistant examiner.

- (3) Oral examinations should last 20 to 30 minutes per candidate undergoing a regular assessment in the course of the semester. An oral examination with several participants with a maximum of up to four participants shall last one hour at the most.
- (4) A record shall be kept of the essential topics and results of the examination in the individual courses. Candidates shall be informed of their grade immediately following the oral examination.
- (5) Students that want to undergo the same examination at a later date shall be admitted as listener provided that enough room is available and unless the candidate explicitly denies participation. However, such an admission as listener does not include the consultation of the examiners and the announcement of the examination result.

§ 15 Master's thesis

- (1) The master's thesis is a written dissertation and concludes the candidate's academic training. A master's thesis should demonstrate that the candidate is capable of conducting independent work on a problem taken from the Media Informatics field and of producing findings within a specified period of time under application of scientific methods.
- (2) Any professor or person with qualification to lecture (Habilitation) being active in Computer Science within the faculty for Mathematics, Computer Science and and Natural Sciences at the RWTH Aachen or being active in Computer Science within the faculty for Mathematics and Natural Sciences at University Bonn or being head of one of the participating Fraunhofer institutes FIT or IMK may assign the subject for a master's thesis and supervise the master's thesis. Permission from the chairman of the Master's Programme Committee is required when a professor who conducts research and teaches at an educational institution or facility outside the participating faculties provides the topic for the master's thesis and subsequently serves as the candidate's supervisor or when the candidate is to do his thesis at a facility outside the university.
- (3) Candidates may apply to the chairman of the Master's Programme Committee to have a topic assigned to them. In such cases, the chairman shall ensure that the candidate receives a topic for his master's thesis on a timely basis. The candidate shall be given an opportunity to submit proposals for the topic of his master's thesis.
- (4) The chairman of the Master's Programme Committee shall notify candidates of the topic of their master's thesis. A record shall be kept of the date of notification.
- (5) Candidates shall have six months from the date on which they were notified of the topic of their thesis to the date on which they have to submit their thesis. The topic and the nature of the assigned task must be such that the master's thesis can be completed within the specified period. Candidates may decline a topic only once and only within the first month of notification. As an exception, the Master's Programme Committee may extend the submission deadline by up to six weeks upon receipt of an application in which the candidate cites reasons that would justify an extension.
- (6) Candidates shall declare in writing when they submit their thesis that the particular thesis is their own work, that they used only those sources and resources cited in the thesis and that they have identified citations as such.
- (7) The master's thesis should comprise 50 to 100 DIN A4-size pages. It should be written in English.

§ 16

Submission and evaluation of the master's thesis

- (1) Candidates shall submit their master's thesis in quadruplicate to the Examination Committee by the specified deadline. A record shall be made of the time and date on which the particular master's thesis was submitted. Should a master's thesis not be handed in on time, it shall be deemed to have received the grade "nicht ausreichend" (Insufficient, 5.0).
- (2) Master's theses shall be evaluated and graded by two examiners. One of the examiners shall be the person who assigned the subject for the particular master's thesis, the other shall be designated by the chairman of the Master's Programme Committee from the group of persons specified in § 15, Para. 2, sentence 1. The candidate shall be entitled to propose the second examiner.
- (3) The examiners shall each grade the master's thesis separately and provide the reasons for the grade they assigned in writing in accordance with § 18, Para. 1. When the difference between the two grades is less than 2.0, they shall be averaged together for the final grade for the particular master's thesis. Should the difference be 2.0 or greater, the Master's Programme Committee shall appoint a third examiner to evaluate the thesis. In such cases, all three grades will be averaged together for the final grade. A master's thesis may however be awarded the grade "ausreichend" (Sufficient) or higher only when at least two of the individual grades were "ausreichend" (Sufficient) or higher. Grades shall be averaged in accordance with § 18, Para. 6.
- (4) Thirty credit points are awarded for the successfully completed master's thesis.

§ 17

Supplementary modules

- (1) In addition to their examinations in compulsory modules, candidates may opt to be examined in up to 5 more modules.
- (2) On application by the candidate, the results of any examination in these modules shall be included in his Zeugnis (official certificate documenting academic performance); these grades however shall not be used when calculating his overall grade.

§ 18

Assessment, grading system and pass requirements for the master's assessment process

- (1) The grade for each examination shall be determined by the respective examiner. The following grading system shall be used:

1	sehr gut (very good)	Excellent achievement
2	gut (good)	Achievement well above average requirements
3	befriedigend (satisfactory)	Achievement corresponding to average requirements
4	ausreichend (sufficient)	Achievement that still meets necessary requirements despite deficiencies
5	nicht ausreichend (insufficient)	Achievement that does not satisfy requirements due to substantial deficiencies

These grades may be raised or lowered by values of 0.3 to produce a graduated grading scale and provide a more distinguished assessment; grades of 0.7, 4.3, 4.7 and 5.3 are excluded.

- (2) Candidates shall be informed of the grades earned in individual examinations within six weeks of the particular examination, and the grade awarded for their master's thesis within eight weeks at the latest following the submission deadline. Notification by placard is sufficient, giving due consideration to data protection requirements.

- (3) The grade earned in a subject shall be calculated using the average grade from all examinations the candidate has passed which fall under that subject, with the individual grades being weighted on the basis of the corresponding credit points. The grading scale here is:

up to 1,5	sehr gut (very good),
from 1,6 to 2,5	gut (good),
from 2,6 to 3,5	befriedigend (satisfactory),
from 3,6 to 4,0	ausreichend (sufficient),
above 4,0	nicht ausreichend (insufficient).

- (4) Candidates shall have satisfied the requirements for the master's assessment process when they pass all examinations in the subjects and receive a passing grade on their master's thesis.
- (5) The final grade shall be calculated using the average of the grades earned in the five subjects, weighted on the basis of the corresponding credit points and the grade earned for the master's thesis (weighted with 30 credit points). The grading scale for the final grade for the master's assessment process is:

up to 1,5	sehr gut (very good),
from 1,6 to 2,5	gut (good),
from 2,6 to 3,5	befriedigend (satisfactory),
from 3,6 to 4,0	ausreichend (sufficient)

- (6) Only the first decimal place after the decimal shall be used when calculating the grades for individual subjects or for overall performance; all further decimal places shall be dropped without rounding off.
- (7) When a candidate receives a 1.0 for his master's thesis and the grade average for the five required subjects does not exceed 1.1, the candidate shall be awarded a master's degree "mit Auszeichnung bestanden" (with distinction) rather than the final grade of "Very good" as stated in Para. 5.

§ 19

Repeating the master's assessment process

- (1) Should a candidate's master's thesis be given the grade "nicht ausreichend" (Insufficient), the candidate may write another thesis. The candidate may decline the proposed topic for his master's thesis within the period specified in § 15, Para. 5, sentence 3 only when he did not make use of this option with his first thesis.
- (2) Should a candidate's master's thesis be given the grade "nicht ausreichend" (Insufficient) or should his thesis be deemed "Insufficient", the candidate shall, upon submitting an application for permission to write a second master's thesis, be assigned a new topic. §§ 15 and 16 shall apply accordingly. Should the second thesis also be assessed as "Insufficient", the candidate shall have definitively failed the master's assessment process and have no further opportunities to repeat it.
- (3) Students may repeat twice any course-specific examinations they have failed or can replace that examination by another examination of that subject. Students may not repeat any successful examinations.

§ 20

Final degree certificate

- (1) Upon completing the master's assessment process and satisfying the requirements for a master's degree, candidates shall receive a Zeugnis (official certificate documenting the

individual's academic performance) listing his grades within three months at the latest following the last assessment (i.e., examination or the master's thesis). The Zeugnis shall be issued by RWTH Aachen and shall list the grades and credit points earned in the individual examinations, the subject of the individual's master's thesis, the grade received for the thesis, and the overall grade. The overall grade shall be entered in words and as a number with one decimal place in accordance with § 18, Para. 5. Supplementary courses shall be listed in accordance with § 17, Para. 2. In the Zeugnis it is stated that Media Informatics is a joint Master's Programme with University Bonn. The Zeugnis shall be signed by the chairman of the Master's Programme Committee.

- (2) The Zeugnis shall show the date on which the individual completed his last assessment (i.e., examination or the master's thesis).
- (3) The Zeugnis shall be issued in English and German. It shall be augmented by a Diploma Supplement. Diploma Supplements are issued in a standardised format in English and German and contain supplementary information regarding subject matter, the course of the holder's studies, the academic or occupational qualification acquired with the degree, and the university awarding the degree.
- (4) In the event that a candidate definitively fails the master's assessment process after having exhausted all options available for repeating it, the chairman of the Master's Programme Committee shall issue the candidate a written notification thereof which shall include information regarding possible legal remedies.
- (5) Students who leave the University without completing their course of study shall be issued, upon request, a Zeugnis listing those parts of the student's course of study which he successfully completed.

§ 21 Master certificate

- (1) At the same time that he receives the Zeugnis, the candidate shall be issued a diploma in English and German with the same date as the Zeugnis. This diploma shall document that the holder was awarded a master's degree in accordance with § 2.
- (2) Diplomas shall be signed by the dean of the Faculty of Mathematics, Computer Science and Natural Sciences of the RWTH Aachen and by the chairman of the Master's Programme Committee for Media Informatics and stamped with the seal of the Faculty of Mathematics, Computer Science and Natural Sciences of the RWTH Aachen.

III Final Provisions

§ 22 Invalidity of the master's assessment process and revocation of the master's degree

- (1) Should it become known after the Zeugnis has been issued that the candidate cheated on an examination or his master's thesis, the Master's Programme Committee may correspondingly correct the grades for those examinations or the thesis on which the candidate cheated and declare the entire master's assessment process or parts thereof as failed.
- (2) Should it become known after the Zeugnis has been issued that the particular candidate had not fulfilled the requirements for admission to the master's assessment process, and should this have happened without any fraudulent intent on the part of the candidate, this defect shall be remedied by the candidate's successful completion of the assessment process. Should the candidate have wrongfully secured admission with intent, the Master's Programme Committee

shall decide on the legal consequences in accordance with the administrative procedure law for the State of North Rhine-Westphalia.

- (3) Prior to taking a decision, the particular student shall be given an opportunity to state his case.
- (4) The incorrect Zeugnis shall be withdrawn and, where applicable, a new Zeugnis shall be issued. Decisions pursuant to Para. 1 and Para. 2, sentence 2, may be taken only for a period of five years after the issue of the Zeugnis.
- (5) Should the candidate's entire master's assessment process be declared a "Fail", the faculty shall revoke the master's degree and withdraw his diploma.

§ 23

Access to the master's assessment process records

- (1) Upon completion of the master's assessment process, candidates shall be granted access to their written examinations, their thesis, the examiners' written evaluations and the assessment process reports.
- (2) Candidates may apply to the chairman of the Master's Programme Committee within one month of issue of the Zeugnis for access to their files. The chairman of the Master's Programme Committee shall determine the place and time of such access.

§ 24

Coming into effect and publication

- (1) These Examination Regulations shall enter into force on the day after their publication.
- (2) These Examination Regulations are published in the Amtliche Bekanntmachungen (Official Announcements) of the RWTH and the University of Bonn.

Issued on basis of the decisions of the joint Master's Programme Committee of the RWTH Aachen and the University of Bonn from June 14th, 2005.

Appendix: Examples for modules of the Master's Programme Media Informatics

Subject "Computer and Communication Technology":

- Mobile Communications
- Distributed Systems
- Privacy Enhancing Techniques
- Cryptography
- Security in eBusiness
- Cryptanalytic Methods
- Data Communication and Internet Technology
- Capacity Planning and Performance Analysis
- Web Protocols and Practice
- Introduction to Databases
- Implementation of Databases
- Introduction to Software Engineering
- Object-Oriented Software Construction
- Introduction to Artificial Intelligence
- Introduction to Bio Informatics

or related courses/modules

Subject "Multimedia Technology":

- Computer Graphics
- Geometric Modelling
- Scientific Visualization
- Pattern Recognition and Neural Networks
- Introduction to Visual Processing and Computer Vision
- Virtual and augmented Reality
- Introduction to Media Analysis
- Statistical Methods in Natural Language Processing
- Digital Processing of Speech and Image Signals
- Automatic Speech Recognition
- Computer Vision and Image Based Rendering
- Introduction to Knowledge Representation
- Multimedia Retrieval

or related courses/modules

Subject “Multimedia Use and Impact“:

- Entrepreneurship and new Media
- eBusiness
- Computer-Supported Cooperative Work and Groupware
- Human-Computer Interaction and Requirements
- Designing Interactive Systems
- HCI Design Patterns
- Web Engineering

or related courses/modules

Communication Skills:

- German language course
- Technical Writing
- Seminar

or related courses/modules

Lab Work:

- Lab at one of the participating Fraunhofer institutes
- Lab

Master’s thesis