

Examination Regulations Master of Science in Manufacturing Technology (MMT)

Examination Regulations for the Master's Program in Manufacturing Technology (MMT)

Effective from June 2011

Based on articles 2 paragraph 4 and 64 paragraph 1_Hochschulgesetz Nordrhein-Westfalen (Higher Education Act for the Land North Rhine-Westphalia) of October 31, 2006 (GV.NRW page 474), last amended by law of October 8, 2009 (GV. NRW page 516), Technische Universität Dortmund has issued the following regulations:

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I. General provisions

§ 1

Scope of the master's examination regulations

- (1) These master's examination regulations apply to the master's program in Manufacturing Technology of the Faculty of Engineering at Technische Universität Dortmund. According to article 64, paragraph 1 Hochschulgesetz Nordrhein-Westfalen (Higher Education Act for the Land North Rhine-Westphalia) they define the structures of the master's program.
- (2) The module descriptions include information on the individual elements of study, contents, and competences to be acquired. They are no inherent part of the examination regulations. They are determined by the faculty boards in charge and need to be communicated to the rector's board.

§ 2

Purpose of the program

- (1) The aim of this master program is the gaining of advanced knowledge, skills, and competences in the field of manufacturing technologies. The connection of scientific, theoretical coursework and practical study elements turns the graduates into demanded specialists for projects in the production technology sector.
- (2) The consecutive master's program is based on a bachelor's degree. By taking the master's degree in Manufacturing Technology a further academic degree is obtained which implicates the competence for scientific work and generally entitles the graduate to do his/her Ph.D.. By successfully completing the program the candidates demonstrate their profound knowledge of production engineering.

§ 3

Preconditions for admission

- (1) As precondition for admission to the master's program the candidate needs to provide
 - an appropriate Bachelor of Science degree in the field of engineering or a comparable degree with a total of 180 credit points (ECTS). The average and final grade respectively must correspond at least to grade "good" (1.9)
 - a certificate attesting a sufficient command of English according to TOEFL (paper-based, computer-based, or internet-based) with the following minimum scores: paper-based: 550; computer-based: 213; internet-based: 80. The admission committee decides on the approval of other internationally accepted English language certificates (e.g. IELTS, Cambridge First Certificate). Knowledge of the German language is no precondition.
- (2) A bachelor degree course is considered appropriate to meet the preconditions for admission when it includes modules of the following subjects:
 - Mathematics (covering at least 18 credit points (ECTS))
 - Mechanics (covering at least 12 credit points (ECTS))
 - Materials engineering, production engineering, theory of design and/or metrology and feedback control (totalling at least 20 credit points (ECTS) to be divided individually)
- (3) Candidates not having German citizenship or the citizenship of a member state of the European Union additionally need to prove their aptitude for the master's program in a written aptitude test (GRE, Graduate Records Examination). This does not apply to candidates having obtained their degree within the scope of the German Basic Law.
- (4) An admission committee decides on exceptions, requirements, and the admission of candidates with comparable degrees to the master's program. The admission committee is appointed by the faculty board for a period of two years. The committee consists of at least two professors and one scientific member of the Faculty of Engineering. The sessions of the admission committee are non-public. The committee can confer the execution of its tasks to the chairman. The committee shall have a quorum when at least two members are present.

§ 4 Master's degree

On the basis of having successfully completed the master's examination Technische Universität Dortmund – through the Faculty of Engineering - will award the degree "Master of Science" (M. Sc.).

§ 5 Credit point system

- (1) The program is based on a credit point system which is compatible with the European Credit Transfer System (ECTS). A total of 120 credit points needs to be acquired by participating in the modules, by taking the corresponding exams, and by submitting the master's thesis.
- (2) Accordingly, 30 credit points need to be acquired per semester.
- (3) Credit points are being awarded after having successfully completed the respective modules.

§ 6 Standard period of study and scope of the master's program

- (1) Starting in the winter semester, the standard period of study is four semesters, including time for working on the master's thesis.
- (2) In total, the master's program covers 120 credit points and 3600 working hours respectively, which are divided into compulsory and elective subject areas. This specification already includes time for independent preparation and review of the courses.
- (3) The program is organised into modules which need to be completed in no more than two semesters. Modules are contentwise and temporally related, self-contained subject fields totalling 5 to 30 credit points. Apart from lecture-based modules, the scope of studies also includes compulsory laboratory work, interdisciplinary qualification, project work as well as the final master's thesis. The program schedule can be found in the appendix. All modules are listed in paragraph 5.
- (4) Courses are held in English. The non-technical elective subject and the module for interdisciplinary qualification respectively is offered in English and, if available, in other languages.
- (5) Modules are organised as follows:
 - a) Modules based on lectures are scheduled for the first and second semester. There are three detached compulsory modules (C) as well as several elective modules (E) from which modules covering a total of 30 credit points must be chosen.
 - b) Modules with practical character comprise laboratory work, project work, and interdisciplinary qualification, each to be completed in the third semester.
 - c) The final master's thesis is scheduled for the fourth semester.

The competences to be acquired, contents as well as examinations and examination requirements are described in detail in the module's manual. The following table shows the modules in a scheme.

Table 1: Module overview

Name	Compulsory/ Elective	Number of semesters	To be completed in semester:	Credit points	Module examination / Partial performances
Module 1: Machining technology	C	2	1st + 2nd	10	2 Partial performances
Module 2: Materials technology	C	2	1st + 2nd	10	2 Partial performances
Module 3: Forming technology	C	2	1st + 2nd	10	2 Partial performances
Module 4: Automation and Robotics	E*	2	1st + 2nd	10	1 Module examination
Module 5: Simulation methods in solid mechanics	E*	2	1st + 2nd	10	2 Partial performances
Module 6: Work system and process design	E*	2	1st + 2nd	10	2 Partial performances
Module 7: Modern Machine Tool Design	E*	1	1st	5	1 Module examination
Module 8: Advanced Simulation Techniques in Metal Forming	E*	1	2nd	5	1 Module examination
Module 9: Measurement Engineering	E*	1	1st	5	1 Module examination
Module 10: Fatigue Behavior	E*	1	2nd	5	1 Module examination
Module 11: Laboratory work	C	1	3rd	10	1 Module examination
Module 12: Scientific Project Work	C	1	3rd	10	1 Module examination / partial performances
Module 13: Interdisciplinary Qualification	C	1	3rd	10	1 Module examination/ partial performances
Module 14: Master's Thesis	C	1	4th	30	1 Module examination

*,Modules covering a total of 30 credit points need to be chosen from the electives offered.

§ 7 Examinations

- (1) Each module is normally completed by a module examination or, in exceptional cases, by several partial performances.
- (2) Students shall take the module examinations partial performances primarily in the form of written tests, giving presentations and co-organising seminars respectively, semester papers, oral examinations, poster and project presentations with or without disputation, and specific practical examinations. The responsible lecturers may define other suitable forms of examinations upon approval by the board of examiners. Form and scope of the examinations and partial performances are fixed in the module descriptions.
- (3) Examination performances are normally assessed by two examiners. In case the examination is the ultimate permissible repeat examination or in case the program is completed by the examination the assessment of the examination performance by two examiners is mandatory (article 65, paragraph 2 Hochschulgesetz Nordrhein-Westfalen). Furthermore, oral examinations

are always conducted as individual examination or group examination by several examiners or by one examiner and in the presence of an expert assessor.

- (4) The responsible lecturers/examiners will give due notice of the examination dates at the beginning of each course. Students need to register for the examinations at the relevant examination office no later than two weeks before the examination date. Students will receive more detailed information regarding their registration for the examination(s) at the beginning of the course by the lecturer responsible for the given course.
- (5) At least one hour to four hours at most shall be provided for written tests; 15 to 45 minutes shall be provided for oral examinations. Regarding partial performances, at least one hour to three hours maximum shall be provided for written tests and 15 to 30 minutes for oral examinations.
- (6) Written tests shall be invigilated and are non-public. Potentially authorised aids will be disclosed by the responsible lecturer before the examination. The results of written examination performances need to be announced to the students after two months at the latest, but at least four weeks before students retake the corresponding examination.
- (7) In oral examinations the essential subjects and results of the examination in each discipline shall be recorded in the minutes of the examination. Before finally grading the performance the examiner needs to consult the assessor. The result shall be announced to the students subsequent to the examination. Students intending to take the same examination at a later date are, in accordance with the premises, permitted as auditors unless the student being examined disagrees. The admission of auditors does not refer to the consultation and announcement of the result.
- (8) In modules which are completed by a module examination specific performances may be requested in the individual courses constituting the precondition for the completion of the module. Regarding form and scope, the requirements of these specific performances are distinctly below those of an examination. Provided that the type of performance is not explicitly defined in the module descriptions, the lecturer shall announce the requirements at the beginning of the course. The performance may either be graded or rated as "pass" or "fail". In order to participate in the module examination the candidate needs to provide evidence of having successfully completed all performances requested in this module.
- (9) In case students substantiate by medical certificate that they cannot take an examination (entirely or partially) in the scheduled form or within the period fixed due to prolonged or permanent physical handicap or chronic disease the chairman of the board of examiners shall set an alternative form or period for the examination to be taken. In case of doubt the relevant person or office in charge of handicapped students' issues must be consulted. Examination procedures consider the legal maternity periods and the periods of parental leave as well as times absent due to the necessity to tend a marital partner, a registered partner, or a first-degree relative or a person related by marriage of the first degree.

§ 8

Repeating examinations, passing or failing the master's examination

- (1) Examinations can be repeated twice in case they have been rated or are considered as failed. The second re-examination must be performed as an oral examination. When failing a partial written or oral examination students must only repeat the relevant partial examination. The master's thesis can be repeated once. Once passed, examinations cannot be repeated. Failing an elective module can be compensated by successfully completing another elective module.
- (2) The opportunity of repeating a failed examination must be provided within eight weeks after announcing the results of the examination. Participation in the repeat examination after having failed is obligatory. Students failing to register for the repeat examination within two weeks after the date of the examination has been announced lose the right to take the examination unless they can prove that they are not at fault for having failed to meet the deadline for registration. The board of examiners decides on exceptions from this regulation.
- (3) The master's examination is passed when all 120 credit points earned through written and oral examinations, project and laboratory work as well as by the master's thesis have been acquired.
- (4) The master's examination as a whole is finally rated as failed when
 1. the master's thesis has again been rated or is considered as failed after repeating it or

2. the candidate missed to acquire the required minimum number of credit points or
 3. one compulsory module has finally been rated as failed.
- (5) When the master's examination is finally rated as failed or when one examination performance is finally considered as failed the chairman of the board of examiners forwards a written notification to the candidate. The notification shall include information on legal remedies. On request, the candidate may be issued a certificate on the examinations which have been successfully taken; it includes the information that this certificate is not intended for submission at other universities.

§ 9

Board of examiners

- (1) The existing board of examiners of the Faculty of Engineering shall be entrusted with corresponding tasks for the organisation of examinations and for the tasks resulting from these examination regulations shall be.
- (2) A board of examiners according to paragraph 1, sentence 1 consists of seven members, namely four members from the group of professors, one member from the group of academic staff, and two members from the group of students. The members of each group are being elected separately by the faculty board for a period of two years, members of the group of students for a period of one year. The board of examiners elects the chairman as well as the deputy chairman from the members of the group of professors. The faculty board elects representatives for the members of the board of examiners except for the chairman and her/his deputy. Re-election is permissible.
- (3) The board of examiners shall ensure that the provisions of the examination regulations are complied with and that examinations proceed as scheduled. It shall in particular be responsible for resolutions regarding objections to decisions made in the course of the examination procedure and for decisions on cross-faculty questions and problems. Moreover, the board of examiners shall report regularly, at least once a year, on the development of examinations and the periods of study. It shall make suggestions regarding the reform of examination regulations and the curriculum. The board of examiners may transfer current tasks (e.g. issues of validation, decisions to be made at short notice, special missions etc.) to the chairman; this does not apply to decisions on objections and to the report to the faculty.
- (4) The board of examiners shall have a quorum when, apart from the chairman or his deputy and a further member from the group of professors, at least two more members entitled to vote are present. The board of examiners decides by simple majority. In the event of a tie the vote of the chairman decides. Student members do not participate in educational-academic decisions. These are in particular the assessment, approval, or accrediting of performances, the definition of examination questions, and the nomination of examiners and assessors.
- (5) Members of the board of examiners may be present at examinations.
- (6) Meetings of the board of examiners are non-public. Members of the board of examiners, examiners, and assessors are subject to official secrecy. In the event that they are not in state employment, the chairman shall oblige them to secrecy.
- (7) Current business of the board of examiners is accomplished by the Central Examination Administration (Zentrale Prüfungsverwaltung)..

§ 10

Examiners and assessors

- (1) The board of examiners appoints examiners and assessors according to the statutory provisions. It may transfer the appointment to the chairman of the board of examiners. Professors and other authorised persons according to article 65, paragraph 1 Hochschulgesetz Nordrhein-Westfalen may be appointed as examiner. A person having completed a diploma or master's examination in the corresponding subject or being able to prove relevant qualifications may be appointed as assessor.
- (2) Examiners shall carry out their activities as examiners independently.

Candidates may propose examiners for the master's thesis. Where possible, these proposals shall be taken into account; however, no claims may be based on a proposal made by a candidate.

§ 11

Accrediting performances, placement in higher semesters

- (1) Performances completed in the same course of studies at other universities within the scope of the German Basic Law are accredited without verification of equivalency.
- (2) Performances completed in other courses of studies or at institutions other than universities within the scope of the German Basic Law are accredited provided that the equivalency is verified and approved. Performances completed at universities beyond the scope of the German Basic Law are accredited on request provided that the equivalency is verified and approved. Equivalency is verified and approved when performances substantially comply with those of the corresponding course of studies at Technische Universität Dortmund in terms of content, scope, and requirements. Here, an overall consideration and evaluation shall be carried out rather than a schematic comparison. Regarding the equivalency of performances obtained at foreign universities, the equivalence agreements approved by the Kultusministerkonferenz (Conference of Ministers of Cultural Affairs) and the Hochschulrektorenkonferenz (German Rectors' Conference) as well as agreements made within the scope of university partnerships shall be considered. Moreover, in case of doubt as to the equivalency the Central Office for Foreign Education (ZAB) may be consulted. Credit points earned within the scope of ECTS are accredited when the necessary requirements are complied with. Before the student goes abroad a written agreement shall be made between the student, a representative of the board of examiners, and an academic staff representative of the host university setting type and scope of the credit points to be accredited, unless the exchange takes place within a cooperation agreement.
- (3) For performances completed in state-approved distance learning programs or in distance learning units developed by the Land North Rhine-Westphalia in cooperation with other Länder and the State paragraph 1 and 2 apply accordingly.
- (4) Applicants who are qualified to enrol in a higher semester due to a placement test according to article 49, paragraph 11 Hochschulgesetz Nordrhein-Westfalen shall be accredited the knowledge and skills demonstrated in the placement test for the benefit of performances of their master's examination. Statements made by the board of examiners in the diploma regarding the placement test are binding.
- (5) The board of examiners is responsible for accrediting performances according to § 1 to 4. Before making statements on the equivalency a competent subject representative shall be consulted.
- (6) If performances are accredited grades shall be transferred one-to-one and included in the final grade provided that the grading systems are comparable. In case of non-comparable grading systems the performances shall be commented as "pass". Accredited performances shall be indicated in the diploma.
- (7) In case the requirements of § 1 to 4 apply students have the legal right to their performances being accredited. Accrediting of performances which have been completed within the scope of the German Basic Law are carried out ex officio. Students need to present the documents necessary for accrediting. Based on study and examination performances accredited according to the provisions in § 1 to 4 a maximum number of 30 ECTS credit points may be acquired.

§ 12

Non-attendance, withdrawal, deception, and infringement

- (1) An examination performance shall be deemed to be graded "insufficient" (5.0) when the candidate does not appear on the date of the examination without good reason or when he or she withdraws from the examination without good reason after the examination has begun. The same applies to written examinations which are not completed within the time permitted.
- (2) The reasons put forward for withdrawal or unexcused absence shall be given and substantiated to the board of examiners without delay by written notice. In case of illness of the candidate or of a child which is mainly being taken care of by the candidate a medical certificate is demanded. In

case of illness of the candidate the medical certificate must comprise the medical findings and attest in a generally intelligible way the inability to take an exam. Should the board of examiners not accept the reasons put forward the candidate will be given written notice.

- (3) If a candidate attempts to influence the examination performance by deception (e.g. by using non-authorized aids, by using text passages without marking them as a quotation, by copying from other examinees, etc.) the examination is graded "insufficient" (5.0). The respective examiner takes the decision whether an attempt of deception may be assumed. If an attempt of deception according to sentence 1 is discovered during an examination by the supervisory staff the candidate may be disqualified from taking the respective examination. In this case the examination shall be graded "insufficient" (5.0). A candidate trying to disturb the correct procedure of the examination may, after admonition, be disqualified from continuing the examination by the examiner or supervisory staff. In this case the examination performance concerned shall be graded "insufficient" (5.0). The respective reasons for the decision shall be put on record. In serious cases the board of examiners may disqualify the candidate from taking further examinations.
- (4) In examinations the board of examiners may demand a written statement from the candidate confirming that he or she has composed the document – in case of teamwork an accordingly marked part of the document – independently without having used any other sources and aids than those indicated in the text and that literal and analogous citations have been marked. Article 16, paragraph 7 remains unaffected.
- (5) The candidate may demand within a period of two weeks that decisions made according to paragraph 3 shall be reviewed by the board of examiners. Negative decisions shall be communicated to the candidate without delay; they shall be substantiated and must include information on legal remedies. The candidate shall be given the opportunity for a hearing before a decision is made.

II. Master's examination

§ 13

Master's examination

- (1) The master's examination consists of written and oral examinations; students must acquire 90 credit points within the scope of these examinations. A further 30 credit points shall be acquired by the master's thesis.
- (2) The modules to be studied as well as the corresponding courses and credit points are listed in article 6, paragraph 5. This listing also stipulates which courses are compulsory. For detailed information, see the module's manual.

§ 14

Admission to the master's examination

- (1) Students being enrolled in the master's program or as guest auditors according to article 52, paragraph 2 Hochschulgesetz Nordrhein-Westfalen are admitted to the examinations of the master's program in Manufacturing Technology unless admission is refused according to paragraph 2.
- (2) Admission shall be refused when
 1. the requirement stated in paragraph 1 is not complied with or
 2. the candidate's master's examination in a master's program in Manufacturing Technology has finally been rated as failed or a module examination referring to the modules listed in the appendix or an examination in a related course of studies has finally been rated as failed or
 3. after having taken an examination in one of the aforementioned courses of studies a definitive and legally binding judgement regarding the student's status of having finally failed has not yet been made due to a subsequent contestation of the board of examiners' decision.

§ 15

Evaluation of examination performances,

acquiring credit points, grading

- (1) Grades for examinations and partial performances are determined by the respective examiners. The following grading system shall be applied:

1 =	very good	=	excellent result
2 =	good	=	result that is considerably above average requirements
3 =	satisfactory	=	results corresponding to average requirements
4 =	sufficient	=	results that still meet the requirements despite their deficiencies
5 =	insufficient	=	results that do not meet the requirements due to considerable deficiencies

For a more differentiated assessment of examinations grades may be reduced or raised by 0.3; grades 0.7, 4.3, 4.7, and 5.3 are excluded, though.

- (2) The number of credit points assigned to each module can be acquired when the module has been graded at least "sufficient" (4.0) or rated as "pass". If a module is completed by a module examination this grade constitutes the module grade at the same time. In case of partial performances the module grade is generated by the arithmetic average of the non-rounded grades for partial performances completed in this module, with the individual grades of the partial performances being weighted with the respective number of credit points. In the case of module 13 "Interdisciplinary Qualification" the total number of credit points of the partial performances may be higher than the credit points of the module stated in paragraph 6. In this case, the module grade will be calculated as mentioned above by using the weighted arithmetic average of the partial performances. The module counts the number of credit points stated in article 6.

Module grades are as follows:

with an average up to 1.5	= very good
with an average above 1.5 up to 2.5	= good
with an average above 2.5 up to 3.5	= satisfactory
with an average above 3.5 up to 4.0	= sufficient
with an average above 4.0	= insufficient.

When forming module grades only the first decimal place behind the comma is considered; all other places are cancelled without rounding.

- (3) The grade for the master's examination is generated by the arithmetic average of the non-rounded module grades of each subject, with the individual module grades being weighted with the respective number of credit points. Paragraph 3 applies accordingly.
- (4) The overall grade of the master's examination is generated by the arithmetic average of the non-rounded module grades and the grade for the master's thesis, with the individual module grades and the grade of the master's thesis being weighted with the respective number of credit points. Paragraph 3 applies accordingly.
- (5) The overall grade shall also be indicated in the form of a grade corresponding to the European Credit Transfer System (ECTS). Moreover, ECTS grades may be issued for all graded examination performances. The board of examiners needs to decide on this matter.
- (6) The ECTS grades are stated as follows:
- A = usually approx. 10% of the best successful students;
 - B = usually approx. 25% of the next successful students;
 - C = usually approx. 30% of the next successful students;
 - D = usually approx. 25% of the next successful students;
 - E = usually approx. 10% of the next successful students.
- (7) ECTS grades are principally formed on the basis of a comparison of the cohorts of the last six semesters. Should this group be smaller than 50 persons the reference group shall be determined by including the last ten semesters. In principle, the current semester shall not be considered when forming the ECTS grades. As long as no statistical data for the calculation of a relative assessment is available no ECTS grades shall be issued. For legal reasons the board of examiners may decide to refrain from issuing ECTS grades. Corresponding information shall be published in the final document. When composing the reference group distinctions must be made

as to degree and degree course. Furthermore, the composition of the reference group may be altered in well-founded cases. The board of examiners needs to decide on this matter.

§ 16 Master's thesis

- (1) Students may start preparing their master's thesis after having acquired 80 credit points. The master's thesis scores 30 credit points.
- (2) The master's thesis shall demonstrate that the candidate is able to solve a problem independently according to scientific methods within a given period. The candidate can make proposals as to the topic of the thesis. The master's thesis should be prepared in cooperation with an industrial enterprise or should be industry-related. The topic is assigned by the chairman of the board of examiners; the exact date of assigning the topic shall be recorded.
- (3) The master's thesis can be assigned and supervised by any professor, any assistant professor, and any habilitated lecturer qualified to teach at professorial level who works in research and teaching of the corresponding subject. Other scientists complying with the requirements according to article 65, paragraph 1 Hochschulgesetz Nordrhein-Westfalen may be appointed as supervisor upon approval by the board of examiners.
- (4) In case a candidate cannot name a supervisor the chairman of the board of examiners provides for the candidate being assigned a topic for the master's thesis as well as a supervisor.
- (5) A completion period of six months is set for the master's thesis. Topic and scope must be so designed that the thesis can be completed within this period of time. Upon substantiated application of the candidate the chairman of the board of examiners may exceptionally grant an extension of up to four weeks in consultation with the supervisor. An application for extension must be filed two weeks before the completion period ends at the latest.
- (6) The topic of the master's thesis may only be returned once and within the first two weeks; the master's thesis is then considered as not commenced.
- (7) The master's thesis shall not exceed 120 pages. The master's thesis shall be issued in English language.
- (8) When submitting the master's thesis the candidate must affirm that he or she has written the thesis independently without having used any other sources and aids than those indicated in the text and that literal and analogous citations have been marked. A standard printed form issued by the Central Examination Office (Zentrales Prüfungsamt) needs to be used for the statutory declaration and attached duly signed. The master's thesis incorporates an oral examination, in which the performed work and the obtained results are presented. This oral examination finalizes the master's examination. Generally, 30 minutes are provided for the oral examination per candidate. The oral examination is evaluated by two examiners, who in general are identical to the examiners of the written master's thesis. The examiners conjointly determine the grade of the oral examination.

§ 17 Acceptance and evaluation of the master's thesis

- (1) The master's thesis shall be submitted in duplicate and, in addition, electronically within the time stipulated; the date of submission shall be recorded. When posting the documents the date of the postmark shall be valid. In case the master's thesis is not submitted at due date it shall be graded "insufficient" (5.0).
- (2) The master's thesis shall be reviewed and rated by two examiners. One examiner shall be the supervisor of the thesis. The second examiner shall be appointed by the chairman of the board of examiners. Individual assessment shall be made according to article 16 and must be substantiated in writing.
- (3) The grade of the master's thesis shall be generated according to article 16 by the arithmetic average of the individual grades provided that the difference does not exceed 2.0. In case the difference exceeds 2.0 the board of examiners shall appoint a third examiner to review and rate the thesis. In this case the grade shall be generated by the arithmetic average of the two best

grades. However, the thesis can only be graded "sufficient" (4.0) or better when at least two grades are "sufficient" or better.

- (4) The candidate shall be informed about the evaluation of the master's thesis one month after submission at the latest.
- (5) The total grade of the master's thesis is established by adding the average grade of the written master's thesis, weighted with 0.8, and the grade of the oral examination, weighted with 0.2.

§18

Additional qualification

- (1) Before taking the final examination the candidate may take additional examinations in modules other than those required by the examination regulations.
- (2) When determining the overall grade the examination having scored the best grade is taken into account unless the candidate requests another proceeding. Upon application by the candidate the results of examinations completed in these additional subjects are indicated in the diploma; however, they are not included when determining the overall grade.

§ 19

Diploma and diploma supplement

- (1) Directly, but no later than four weeks after the last examination has been rated the candidate receives a diploma certifying that he or she has successfully completed the master's examination. The diploma dates from the day the last examination was taken. The diploma includes the overall grade of the master's examination as well as the ECTS grade according to article 15, paragraph 7, the topic and grade of the master's thesis, modules and module grades as well as the number of credit points earned in each module.
- (2) Upon request of the candidate the diploma may comprise additional study and examination performances which have not been included in the module and overall grade as the maximum limit of credits points within a module was exceeded.
- (3) A diploma supplement is added to the diploma. It describes type, content, and qualification level of the course of studies. Furthermore, the diploma supplement includes information on the university and the system of higher education respectively. The diploma supplement is issued in German and English language. An overview of the study and examination performances accomplished (Transcript of Records) is added to the diploma.
- (4) Upon request the candidate may be issued a certificate before the master's examination has been completed including examination performances accomplished so far (Notenbescheinigung); the certificate shall specify the successfully completed modules and credit points earned as well as examination performances and grades according to article 15, paragraph 1 and the corresponding grades according to ECTS. This certificate may only be issued once per semester.
- (5) The diploma is signed by the chairman of the board of examiners.
- (6) In consultation with the board of examiners the diploma and certificates may be issued in English language upon request of the candidate.

§ 20

Master's degree certificate

- (1) The candidate receives a master's degree certificate including the date of the diploma. It certifies the conferment of the master's degree according to article 5.
- (2) The master's degree certificate is signed by the dean of the faculty and the chairman of the board of examiners and provided with the faculty's seal.

III. Final provisions

§ 21

Invalidity of the examination and deprivation of the master's degree

- (1) If a candidate has cheated in an examination and if this fact does not become known until after the diploma has been delivered the board of examiners may subsequently amend the grades for those examinations the candidate cheated in and may declare the examination as entirely or partially failed.
- (2) If the conditions for admission to an examination were not fulfilled without the candidate intending to cheat in this matter and if this fact does not become known until after the diploma has been delivered this deficiency may be resolved by passing the examination. If a candidate has deliberately obtained admission to an examination by unjust means the board of examiners shall decide on the legal consequences with respect to *Verwaltungsverfahrensgesetz Nordrhein-Westfalen* (Administrative Procedures Act for the Land North Rhine-Westphalia).
- (3) Before a decision is taken the candidate concerned shall be given the opportunity to comment on the incident.
- (4) The incorrect diploma shall be revoked and, where appropriate, a new diploma shall be issued. A decision made according to paragraph 1 and paragraph 2 sentence 2 is excluded after a period of five years after having issued the diploma.
- (5) The master's degree is annulled and the master's degree certificate shall be revoked if it subsequently turns out that it has been obtained by deception or if basic requirements for its conferment have been assumed by mistake. The faculty board of the Faculty of Engineering decides on the deprivation.

§ 22

Access to examination documents

- (1) After the result of an examination has been announced students are allowed inspection of their written test(s). Time and place of the inspection are determined by the examiners and shall be announced by notice on the date of the examination at the latest.
- (2) Upon request students may also be allowed inspection of further written examination performances, related reports by the examiners, and the minutes of the examination.
- (3) Application needs to be filed and addressed to the chairman of the board of examiners within three months after the examination results have been announced. The chairman of the board of examiners determines time and place of the inspection.

§ 23

Effective date and publication of the examination regulations

These examination regulations are published in the official gazette of Technische Universität Dortmund and shall come into effect the day of the publication.
Issued on the basis of the resolution adopted by the faculty board on December 16, 2009 and by the rector's board of Technische Universität Dortmund on July 6, 2011.

Dortmund, July 11, 2011

The Rector
of TU Dortmund University

Professor
Dr. Ursula Gather