Technische Universität Dortmund
Fakultät Bio- und Chemieingenieurwesen

Examination Regulations

Master's Degree Course Chemical Engineering and Biochemical Engineering

dated of December, 21, 2007

Table of Contents

I. General Information

§ 1

Validity of the Master's Degree Examination Regulations

The Master's degree examination regulations shall apply to the Master's degree programme in chemical or biochemical engineering at the Faculty of Biochemical and Chemical Engineering of the Technische Universität Dortmund. They will follow the structures of the Master's degree studies according to § 64 paragraph 1 of the law of institutions of higher education in the federal state of North Rhine-Westphalia [HG - Hochschulgesetz NRW - Higher Education Act].

§ 2

Purpose of Study

The Master's degree programme is research orientated and prepares students for scientific work. When the student successfully completes the Master's degree programme a professional qualifying degree will be awarded. The Master's degree programme is successfully completed once the required modules and Master's thesis are passed with a grade of at least "sufficient" [4.0]. By successfully completing their Master's degree the candidates give proof of their professional competence and have access to the following professional branches:

- Scientific professions in industry, administration and research institutes
- Research work with a view to taking a doctoral degree
- Change to another university in Germany or abroad for further scientific research

§ 3

Entry Requirements

Above average completion of bachelor's studies with an ECTS grade of A or B or indication of a special potential for a successful completion of the Master's degree programme which must be evaluated by the examination board. See the admission regulations for further particulars.

§ 4

Master's Degree

After the successful completion of the Master's examination the faculty shall confer the academic degree Master of Science [M.Sc.) for Chemical Engineering or Biochemical Engineering

§ 5

Credit System

(1) The programme is based on a credit point system which is compatible with the European Credit Transfer System (ECTS). During the Master's degree programme students must obtain a total of 90 credits through participation in the required modules, the completion of the required examinations and the Master's thesis.

(2) This means that as a rule students must obtain 30 credits per semester.

(3) Credits are normally awarded on the basis of successfully completed modules.

§ 6

Standard Period of Studies and Range of Studies

(1) The standard period of Master's degree studies is three semesters and includes the completion of the Master's thesis.

(2) The Master's degree programme includes a total of 90 credits or 2700 working hours, which are divided among compulsory subjects, compulsory electives and free electives.

(3) The programme is divided into modules that have to be completed within two semesters. These modules consist of related courses which normally take 4 to 10 semester periods per week [SWS - Seminarwochestunden]. The recommended scheduling of the different subjects of the Master's programme can be found in the appendix.

(4) The compulsory modules of the Master's programme are listed in the appendix. The compulsory electives shall be posted through announcements displayed on a board.

(5) The courses can be offered either in German or English.

(6) The Master's programme starts in the summer semester but the individual modules are largely independent of each other so that the studies can also start in the winter semester.

(7) For students who have completed a six-month bachelor's programme at another university, the Master's programme will cover four semesters. It shall consist of the three-semester Master's programme at the Faculty of Biochemical and Chemical Engineering as well as additional requirements amounting to 30 credits. Further particulars will be regulated by the admission regulations.

§ 7

Examinations and the Master's Thesis

(1) As a rule the examinations shall be taken after the student has completed all the courses in a module (module examination). Individual requirements can also be fulfilled in a cumulative way to complete a module. The individual requirements can be fulfilled in the framework of individual courses.

(2) The module examinations and individual requirements shall be integrated into the course and consist of written examinations, papers or seminar arrangements, term assignments, oral examinations or presentations with or without discussion and specific practical examinations. The responsible tutors, with the consent of the examination board, can chose to determine other appropriate forms of examinations.

(3) The form and extent of the module examinations and individual requirements are shown in the following tables.

Compulsory Modules of the Master's Degree Programme in Biochemical Engineering					
Module	**Credits**	**Examination**			**Biochemical Engineering**
			Module Examination	**Individual Require-ments**	
Analytics	7	written examination	**x**		**x**
Biochemical process technology	7	oral examination or written examination	**x**		**x**
Bio reaction technology 2	6	written examination	**x**		**x**
Industrial biochemical technology	9	written examination, tests		**3**	**x**
Molecular biotechnology	8	written examination	**x**		**x**

Compulsory Modules of the Master's Programme in Chemical Engineering									
Module	**Credits**	**Examination**			**PAT**	**UET**	**CVT**	**PD**	**PSE**
			Module exami-nation	Indivi-dual require-ments					
Waste water treatment technology	6	oral examination or written examination	**x**			**x**			
Chemical Technology 2	4	written examination	**x**				**x**	**x**	
Chemical Processes	6	oral examination or written examination	**x**				**x**		
Conceptual Design	4	written examination	**x**						**x**
CVT Laboratory Course	4	Tests		**x**			**x**		
Fluid Separations	4	written examination	**x**						**x**
Gas cleaning technology	6	oral examination or written examination	**x**			**x**			
Principles of process design	7	written examination		**2**	**x**				
Mechanical engineering II	4	written examination	**x**					**x**	
Particle Processes	7	oral examination	**X**					**x**	

Compulsory Modules of the Master's Programme in Chemical Engineering									
Module	**Credits**	**Examination**			**PAT**	**UET**	**CVT**	**PD**	**PSE**
			Module Examination	**Individual Requirements**					
Particle Technology	4	written examination	**x**						**x**
PAT Laboratory Course	4	Tests		**x**	**x**				
PD Laboratory Course	4	Tests		**x**				**x**	
Process Control I	5	oral examination / written examination		**2**					**x**
Process Modelling and Optimization	4	written examination /term assignment	**x**		**x**				**x**
Product cleaning	5	oral examination	**x**					**x**	
PSE Lab	4	Tests		**x**					**x**
Reaction Engineering	4	written examination	**x**						**x**
Reaction Engineering 2	4	written examination	**x**		**x**		**x**	**x**	
Simulation Technology	7	written examination	**x**						**x**
Technical Catalysis	6	oral examination or written examination	**x**				**x**		
Transportation Processes II	4	written examination	**x**			**x**			
Environment and Energy Supply Technology	4	oral examination or written examination	**x**			**x**			
UT Laboratory Course	4	tests		**x**		**x**			
Conceptual Process Design	4	written examination	**x**		**x**	**x**	**x**		
Material Selection	5	oral examination or written examination	**x**		**x**				

(4) The responsible tutors / examiners shall announce the examination dates promptly at the beginning of the courses. Registration for the examinations must be made at least two weeks prior to the examination date via the competent examination board. Further details concerning registration for the examinations shall be announced by the responsible tutors at the beginning of the courses.

(5) The written examinations of the module examinations shall last a minimum of two and a maximum of four hours, and the oral examinations' time from 15 to a maximum of 45 minutes. For individual requirements the written examinations shall cover a minimum time of

one and a maximum of three hours, the oral examinations a minimum of 15 and a maximum of 30 minutes.

(6) The written examinations shall be written under ward and are not public. Tools that may be allowed shall be announced by the respective tutors prior to the examination.

(7) Written examinations shall normally be evaluated by two examiners. The results of the written examinations shall be announced at the latest 6 weeks after the test.

(8) Oral examinations will be held in front of several examiners or one examiner and one assessor as individual or group examinations. The essential points and results of the examinations in the respective subjects shall be recorded in a protocol. Before the examiner determines the grade he or she shall hear the assessor's opinion. The result of the examination shall be announced to the students right after the oral examination. Students who want to pass the same examination at a later date shall be admitted as auditors provided there is enough room and the examined student does not object. The admission does not include the discussion and announcement of the examination grade.

(9) In modules that are completed with a module examination, students may be asked to perform additional work during the different courses. This may consist of written examinations, papers, term assignments, practical work, practical exercises, oral tests, lectures and protocols or portfolios. If this additional work is not defined in the module descriptions, the tutors shall announce it at the beginning of the course. Assignments can be marked by a grade or evaluated as pass/fail. To be admitted to the module examinations, the student must have completed all the assignments required for the module, which means that the assignments must have received a grade of at least "sufficient" (4.0) or be evaluated as "passed".

(10) If a student credibly proves by means of a medical certificate that he/she is not able to write an examination completely or partly as provided for because of a long and permanent or constant handicap, the chairman of the examination board may allow the student to take an equivalent examination in another form or length of time. If there are doubts, the competent person or office for questions concerning handicapped students of the Technische Universität Dortmund shall be involved. The examination procedure shall consider legal maternity periods and the parental leave.

(11) The Master's thesis can be started after the acquisition of 53 credits. The time allotted for the writing of the Master's thesis is 26 weeks. By writing the Master's thesis students acquire 30 credits.

(12) According to a mutual agreement between the examiner and the student, the Master's thesis can be written either in German or in English.

§ 8

Repetition of Examinations, Passing the Master's Examination, Definitive Failure of the Examination

(1) The examinations can be repeated, if they are not passed or are not considered as passed, twice. If an individual requirement is not passed only this has to be repeated. The Master's thesis can be repeated once. Passed examinations cannot be repeated. If compulsory electives and free electives are not passed they can be replaced by successfully completing other compulsory electives and free electives.

(2) The Master's examination shall be passed when all 90 credits for the required examinations, the laboratory courses and the Master's thesis were acquired.

(3) The Master's examination shall be regarded as definitely failed if

1. the Master's thesis after repetition is again not passed or is not considered as passed
2. the candidate cannot acquire the necessary minimum number of credits in one or several of the modules.
3. a compulsory module was definitely failed.

(4) If the Master's examination or an examination is regarded as definitely failed the chairman of the examination board will give the candidate a written notification. The notification shall be provided with a plea instruction. On request the candidate shall be issued a certificate concerning the successfully passed examinations; a supplement is added that this certificate does not apply for a presentation at another university.

§ 9

Examination Board

(1) An examination board shall be established and be in charge of the organization of the examinations and the tasks assigned by these examination regulations.

(2) An examination board in accordance with paragraph 1 sentence 1 consists of seven members: four members of the group of professors, one member of the group of the scientific assistants, and two members of the group of students. The members are separately elected by the Faculty Council according to the groups for two years, the members of the students' group for one year. The examination board elects the chairman and the vice chairman from its members of the group of professors. The Faculty Council elects the members of the examination board with exception of the chairman and his/her vice chairman. Re-election is admissible.

(3) The examination board shall make sure that the provisions of the examination regulations are maintained and shall provide for the proper administration of the examinations. It is especially responsible for the arbitration of objections made against decisions that were taken during the examination procedure and for the resolution of questions and problems that concern all the faculties. In addition, the examination board has to report regularly to the faculty, at least once a year, on the development of the examinations and study periods. It submits suggestions for the reform of the examination regulations, study regulations and study plans. The examination board can assign the completion of its current business to the chairman; this does not apply, however, to decisions regarding objections and to the report to the faculty.

(4) The examination board shall have a quorum if - besides the chairman or his/her representative and one additional professor - at least two additional members entitled to vote are present. It shall decide with a simple majority. In case of a tie, the vote of the chairman shall decide. The student members of the examination board shall not participate in educational-scientific decisions, especially in the judgement, acknowledgement or apportionment of study and examination requirements, in the specification of the examination tasks and in the appointment of the examiners and assessors.

(5) The members of the examination board shall have the right to attend the examinations.

(6) The meetings of the examination board are not public. The members of the examination board, the examiners and the assessors shall be subject to confidentiality. Unless they are employed in the civil service, they must swear an oath of confidentiality to the chairman of the examination board.

(7) The current transactions of the examination board shall be carried out by the centre for study information and counselling.

§ 10

Examiners and Assessors

(1) The examination board shall appoint the examiners according to the legal provisions. The examination board can confer the appointment upon the chairman. All professors as well as additional persons entitled to give examinations within the provisions of § 65 paragraph 1 HG [Hochschulgesetz: Higher Education Act] can be appointed as examiners. A person is allowed to be appointed an assessor if he/she has passed the appropriate Diplom or Master's examination in the respective area of studies or if he/she can bring proof of a relevant qualification.

(2) The examiners shall work independently.

(3) The candidates may nominate an examiner for the Master's thesis. If possible, the nominations of the students shall be taken into consideration. However, the nominations of the students do not substantiate a claim.

§ 11

Accreditation of Previous Periods of Studies, Study- and Examination Requirements, Advancement into Higher Semesters

(1) Periods of study, studies and passed examinations in the same field and programme at other universities within the scope of the Grundgesetz [Basic Law for the Federal Republic of Germany] shall be accepted without any equivalence test.

(2) Periods of study, studies and passed examinations in another field and programme at other universities within the scope of the Grundgesetz [Basic Law for the Federal Republic of Germany] shall be accredited if equivalence is asserted. Periods of study, studies and passed examinations completed outside the scope of the Grundgesetz [Basic Law] shall be accredited upon request if equivalence is asserted. Equivalence shall be asserted if periods of study, studies and passed examinations correspond essentially to those of the appropriate programme at the Technische Universität Dortmund in content, scope and requirements. There is no schematic comparison, but an overall view and overall assessment shall be made. The equivalence agreement approved by the Kultusministerkonferenz [Standing Conference of the Ministers of Education and Cultural Affaires of the Länder] and the Hochschulrektorenkonferenz [German College Rectors' Conference] as well as agreements in the framework of universities' partnerships shall be considered for the equivalence of the periods of study, studies and passed examinations at foreign universities. In addition, the central office for foreign education can be consulted if equivalence is doubted. Credits which had been granted within the scope of the 'European Credit Transfer System' (ECTS) shall be accredited if the following necessary qualifications are fulfilled: Prior to studying abroad the student shall make a written agreement with an authorised representative of the examination board and a representative of the teaching staff at the host university arranging the extent and manner for granting the provided credits unless the exchange takes place within the framework of a cooperation agreement .

(3) Paragraphs 1 and 2 apply for accrediting periods of study, studies and passed examinations in state-approved distance learning or in distance learning units developed by the state of North Rhine-Westphalia in co-operation with the other federal states and the Federal Government.

(4) The examination board can accept a corresponding job activity as an internship.

(5) Applicants who are entitled to enter the programme in a higher semester due to an assessment examination in accordance with § 49 paragraph 11 HG [Hochschulgesetz – Higher Education Act] will be placed according to the knowledge and abilities proven in the assessment examination for their studies and passed examinations in the Master's examination. The certificate's statements concerning the results of the assessment examination shall be binding for the examination board.

(6) The examination board shall be responsible for accreditation according to paragraphs 1 to 5. The responsible specialised representatives shall be consulted prior to assessment of equivalence.

(7) If studies and passed examinations are accredited, the grades – as far as the grade systems are comparable – shall be adopted and incorporated in the calculation of the final grade. In case of incomparable grade systems, the remark "passed" shall be recorded. Accreditation shall be indicated in the diploma.

(8) If the qualifications of paragraphs 1 to 5 are fulfilled, there is a legal right to accreditation. Accreditation of periods of study, studies and passed examinations which were made in the scope of the Grundgesetz [Basic Law] shall be effected officially. The students must submit the required documents for accreditation. Based on the studies and passed examinations according to paragraphs 1 to 5, a maximum of 30 credits may be granted.

§ 12

Absence, Withdrawal, Fraud, and Violation of the Rules

An examination result shall be deemed "not sufficient" (5.0) if the student does not appear for the examination without good reason or if he/she withdraws from the examination after it has started without good reason. This shall also apply if the written examination has not been completed within the allotted time.

(1) The reasons for the withdrawal or the absence must be presented and substantiated to the examination board in writing without any delay. If the student is ill, he/she must submit a medical certificate indicating the diagnostic findings in a readily comprehensible way and attests to the inability to take the examination. If the examination board is not prepared to accept the reasons, the student shall be informed in writing.

(2) If the student tries to affect the result of an examination by cheating (ex. using impermissible aids, adopting text passages without rendering them as quotations, cribbing etc.) the respective examination shall be deemed "not sufficient" (5.0). The decision of whether it is an act of cheating shall be made by the examiner. If an attempted cheating in the sense of sentence 1 is detected by the supervisor during an examination, he/she can exclude the candidate from the respective examination. In this case the examination result shall be marked as "not sufficient" (5.0). If a candidate disturbs the proper administration of the examination, he/she can be kept from completing the examination after dissuasion by the examiner or supervisor in charge; in this case, the appropriate examination result shall be deemed "not sufficient" (5.0). The reasons for the decision shall be recorded in the student's file. In serious cases, the examination board can exclude the student from subsequent examinations.

(3) The examination board can ask that the candidates – or in a group project the candidate's share of the work - make a written declaration, that the work was done independently and that no sources or aids were used other than those indicated and that quotations and paraphrases were properly accredited.

(4) Within a period of 14 days the candidate can appeal the examination board's decision according to paragraph 3.The student shall be informed of incriminating decisions immediately and in writing. Such decisions shall be justified and provided with instructions on right to appeal. Prior to the decision the candidate shall be given the possibility of a fair hearing.

II. The Master's examination

§ 13

Admission to the Master's Examination

(1) Only students enrolled at the Technische Universität Dortmund in the corresponding Master's degree programme or admitted according to § 52 paragraph 2 HG (Hochschulgesetz - Higher Education Act] as second priority student may be admitted to the Master's examination.

(2) Application for admission to the Master's examination shall be made via the examination board and accompanies the registration for the first required examination. The application shall be accompanied by a declaration indicating whether or not the student failed or definitely failed a Master's examination in the same programme or a related programme or is taking part in another examination procedure.

(3) The decision on admission shall be made by the examination board or its chairman. In the event of a refusal, the candidate shall be informed in writing.

(4) Admission shall be refused if:

1. the requirement stipulated in paragraph 1 is not fulfilled or
2. the candidate definitely failed the Master's examination in a programme according to paragraph 2 or an examination in the courses or modules mentioned in the study regulations or in a related degree programme
3. an examination has been taken in one of the aforementioned degree programmes but due to a contestation of the examination result an enforceable and legally binding decision concerning the definitive failure is not yet available.

§ 14

Master's Examination

(1) The Master's examination consists of required examinations in which a total of 60 credits must be acquired. The distribution is shown in the appendix. Another 30 credits must be acquired through the Master's thesis.

(2) The Master's degree programme "Chemical engineering" is divided into the following areas of study:

Process and plant design (German, some courses in English)

Chemical engineering (German)

Environmental and energy supply technology (German)

Product design (German)

Process systems engineering (English)

(3) The compulsory modules and the corresponding credits are shown in the appendix.

(4) The examinations can be taken either in German or in English.

§ 15

Evaluation of Required Examinations, Acquisition of Credits, Calculation of Grades

(1) The grades on the examinations and individual requirements shall be determined by the respective examiner. For the evaluation the following grades shall be used:

1 =	very good	=	excellent
2 =	good	=	an achievement that is considerably above the average requirements
3 =	satisfactory	=	an achievement that meets the average requirements
4 =	sufficient	=	an achievement that satisfies the requirements in spite of its defects
5 =	not sufficient	=	an achievement that does not satisfy the requirements because of significant defects

Interim grades can be calculated for the required examinations by decreasing or increasing the grades by 0.3; however, the grades 0.7, 4.3, 4.7 and 5.3 are excluded.

(2) The number of credits assigned to each module shall be acquired if the module was completed with a grade of at least “sufficient” [4.0], or “passed”.

(3) In addition to the grade given according to paragraph 1, the examiners or the respective examination board, for reasons of transparency, will assign a grade corresponding to the grading system of the European Credit Transfer System (ECTS).

A =	usually 10% of all successful candidates in an academic year (in comparison an excellent)
B =	usually 25% of all successful candidates in an academic year (in comparison a result of above average)
C =	usually 30% of all successful candidates in an academic year (in comparison a result corresponding to average)
D =	usually 25% of all successful candidates in an academic year (in comparison a result of below average)
E =	usually 10% of all successful candidates in an academic year (in comparison a result of far below average, but still sufficient)

F= falling below the minimum criteria.

The ECTS grade is calculated by comparing the results of all the successful candidates over the last three years.

(4) If the module is completed with a module examination the grade on the examination is the grade for the module. For individual requirements the module grade can be calculated from the arithmetic average of the non-rounded grades of the individual requirements in the various modules.

The module grades are as follows in words:

an average of up to 1.5	= very good
an average of over 1.5 up to 2.5	= good
an average of over 2.5 up to 3.5	= satisfactory
an average of over 3.5 up to 4.0	= sufficient
an average of over 4.0	= not sufficient

Only the first decimal place after the comma shall be taken into consideration when calculating the module grade. All subsequent decimal places will be cancelled without rounding.

(5) The grade for the Master's examination shall be calculated from the arithmetic average of the non-rounded module grades of the respective subjects so that the individual module grades shall be weighted according to the number of credits. Paragraph 4 applies accordingly.

(6) The final grade for the Master's examination shall be calculated from the arithmetic average of the non-rounded module grades and the grade on the Master's thesis so that the individual module grades shall be weighted according to the number of credits. Paragraph 4 applies accordingly.

(7) The final grade, if necessary, the subject grades and the module grades shall also be reported on the basis of the conversion key according to paragraph 3 in form of the ECTS grades.

§ 16

Master's Thesis

(1) The Master's thesis should show that within a stipulated time the candidate is able to address a problem of a subject relating to his or her field of study independently and according to scientific methods. The candidate can submit suggestions for the subject of the thesis. The subject of the thesis shall be assigned by the examination board. The date of this assignment shall be recorded.

(2) The Master's thesis can be assigned and supervised by any professor, any junior professor or any specialized senior scholar working in research and teaching. Other scientists meeting

the requirements according to § 65 paragraph 1 HG [Hochschulgesetz – Higher Education Act] can be appointed as supervisors upon approval of the examination board.

(3) If a candidate cannot appoint a supervisor, the chairman of the examination board shall ensure that the candidate receives a subject and supervisor for the Master's thesis.

(4) The Master's thesis can also be written by two candidates together if the contribution being evaluated as an examination requirement by the single candidate is clearly distinguishable and appraisable and indicates a clear restriction based on specification of chapters, number of pages, or other objective criteria and if it fulfils the requirements according to paragraph 1.

(5) Preparation time for the Master's thesis is 26 weeks. The subject and tasks of the Master's thesis shall be limited by the supervisor in order to make sure that the deadline for preparing the Master's thesis can be adhered to. In individual cases upon request if justified by the candidate, the chairman of the examination board in accordance with the supervisor can lengthen the preparation time up to four weeks. The application for an extension must be made to the examination board at least 14 days prior to the expiration of the preparation time.

(6) The subject of the Master's thesis can be rejected only once and only within the first month of the preparation; at that point the Master's thesis shall be considered as not started.

(7) The length of the Master's thesis shall not exceed ca. 80 pages.

(8) When submitting the Master's thesis, the candidate must swear on oath that she/he did her/his work independently and that she/he used no other sources and aids than those indicated and that she/he properly indicated all quotations and paraphrases. In the case of collaborative work among several students his/her part of the work must have been performed independently as just indicated above. Upon submission of the Master's thesis the declaration shall be signed and delivered according to the appendix …

§ 17

Acceptance and Evaluation of the Master's Thesis

(1) The Master's thesis shall be submitted in duplicate to the examination board within the time limit; the date of submission shall be recorded. In case of delivery by mail, the date of postmark is decisive. If the Master's thesis is not submitted within the time limit, it shall be deemed as "not sufficient" (5.0).

(2) The Master's thesis shall be examined and evaluated by two examiners. One of the examiners shall be the person who supervises the thesis. The second examiner shall be appointed by the chairman of the examination board. Each evaluation shall be effected according to § 16 and must be justified in writing.

(3) The grade of the Master's thesis according to § 16 shall be composed of the arithmetic average of the single evaluations unless the difference is more than 1.0. If the difference is more than 1.0, the examination board shall appoint a third examiner for the evaluation of the Master's thesis. In this case, the grade of the Master's thesis shall be composed of the arithmetic average of the two better grades. However, the Master's thesis can only be evaluated as "sufficient" or better if at least two of the grades are "sufficient" or better.

(4) The office of examination affairs must receive the evaluation of the Master's thesis not later than 2 months after the date of submission.

§18

Additional Qualification

(1) Prior to the completion of the last examination, the students can take additional examinations in other modules than the compulsory ones.

(2) The determination of the final grade shall, as far as possible, take into account the examination with the best grade unless the student applies for another form of evaluation. Apart from that, upon request, the results of the examinations in these additional subjects shall be recorded in the transcript. However, they shall not be included in the calculation of the final grade.

§ 19

Transcript, Attestations for a Change of Universities

(1) The candidate shall receive a transcript of the successful Master's examination according to the appendix without any delay, at the latest four weeks after the evaluation of the last examination. The transcript shall include the date on which the last examination was passed. The transcript shall show the final grade of the Master's examination, the subject and the grade of the Master's thesis, the modules and module grades as well as the number of credits acquired in the individual modules. According to § 16 paragraph 1 the grades shall be accompanied by the grades according to the European Credit Transfer System (ECTS).

(2) Upon request from the candidate the transcript can show additional studies and passed examinations, which have not been calculated into the module and final grade because they exceeded the maximum limit of credits within one module.

(3) The transcript shall include a supplementary diploma. It shall specify the character, content and qualification level of the programme as well as the various courses and examination requirements. It shall contain information about the university and the university system. The supplementary diploma shall be issued in German and English.

(4) Upon request from the candidate, prior to the completion of the Master's examination, a certificate shall be issued attesting to the passed examinations including a list of the successfully passed modules with the acquired credits and passed examinations and the grades according to § 16 paragraph 1 as well as the corresponding grades according to the ECTS. The candidates can apply for such a certificate only once in a semester (Datenabschrift /Transcript of Records).

(5) The transcript shall be signed by the chairman of the examination board.

(6) Upon request from the candidate in consultation with the examination board, the transcript and the attestations can also be issued in English.

§ 20

Master's Diploma

(1) The candidate shall receive a Master's diploma effective from the date on the transcript. The Master's diploma shall certify to the conferring of the Master's degree according to § 4. § 20 paragraph 6 applies accordingly.

(2) The Master's diploma shall be signed by the dean of the faculty and the chairman of the examination board and shall be affixed with the seal of the faculty.

III. Final Provisions

§ 21

Invalidity of a Master's Examination, Withdrawal of a Master's Degree

(1) If the candidate cheated on an examination and this fact is revealed only after the conferral of the transcript, the examination board shall have the right to rectify ex post the grades of those examination requirements on which the candidate cheated and declare the examination to be completely or partly failed.

(2) If the qualifications for admission to an examination were not fulfilled but the candidate was not guilty of deception and if this fact is revealed only after the conferral of the transcript, this fault can be corrected by passing the examination. If the candidate wrongly and deliberately effected admission, the examination board shall decide on the legal consequences taking into account the Administrative Procedure Act for the Federal State of North Rhine-Westphalia.

(3) Before a decision is reached, however, the candidate concerned shall be given the chance to make a statement.

(4) The invalid transcript shall be confiscated and, if necessary, a new transcript shall be issued. According to paragraph 1 and paragraph 2 sentence 2, reaching a decision is impossible after a period of 5 years from the date of issue of the transcript.

(5) The Master's degree can be withdrawn and the document confiscated if it later turns out that it was acquired by fraud or if substantial conditions for its awarding were erroneously regarded as fulfilled. On the withdrawal, however, the corresponding Faculty Council shall decide.

§ 22

Viewing of Examination Records

(1) After the announcement of the results of the written examination of one examination section, the candidate shall be allowed to view the written examinations. The date and place of the viewing shall be fixed by the examiners and announced by posting on a board at the latest on the day of the examination.

(2) Viewing of further written examinations, the corresponding comments of the examiners and the examination protocol shall be allowed upon request.

(3) The application must be made within three months of announcement of the examination results to the chairman of the examination board. The date and place of the viewing shall be fixed by the chairman of the examination board.

§ 23

Starting Date and Publication of the New Regulations

These examination regulations shall be published in 'Amtliche Mitteilungen' of the Technische Universität Dortmund and go into effect on October 1st, 2007.

Issued on the basis of the decisions of the Faculty Council of the Faculty of Biochemical and Chemical Engineering of the Technische Universität Dortmund from …

Dortmund dated …

Technische Universität Dortmund

The Rector

University professor

Dr. Eberhard Becker

Appendix:

Schedule of the Master's Degree Programme in Chemical Engineering							
Branch of study: Process and Plant Design (PAT) Responsible Professor: Prof. Dr.-Ing. G. Schembecker							**Credits**
1st sem	Reaction Engineering 2 (4 Credits)	Process Modelling and Optimization (4 Credits)	Concep-tual Process Design (4 Credits)	Material selection (2,5 Credits)	PAT Laboratory courses (2 Credits)	Compul-sory electives and free electives(13,5 Credits)	30
2nd sem	Principles of Process Design (7 Credits)			(2,5 Credits)	(2 Credits)	(18,5 Credits)	30
3rd sem	Master's thesis (30 Credits)						30

Schedule of the Master's Degree Programme in Chemical Engineering							
Branch of study: Environmental and Energy Supply Technology (UET) Responsible Professor: Prof. Dr.-Ing. H. Fahlenkamp							**Credits**
1st sem	Trans-portation Processes II (4 Credits)	Conceptual Process Design (4 Credits)	Gas cleaning tech-nology (6 Credits)	Waste water treatment technology (3,5Credits)	UT Laboratory courses (2 Credits)	Compul-sory electives and free electives (10,5 Credits)	30
2nd sem	Environ-mental and Energy Supply Technology (4 Credits)			(2,5Credits)	(2 Credits)	(21,5 Credits)	30
3rd sem	Master's thesis (30 Credits)						30

Schedule of the Master's Degree Programme in Chemical Engineering							
Branch of study: Chemical engineering (CVT) Responsible Professor: Prof. Dr. rer. nat. A. Behr							**Credits**
1st sem	Reaction Engineering 2 (4 Credits)	Conceptual Process Design (4 Credits)	Tech-nical Catalysis (4 Credits)	Chemical Processes (3 Credits)	CVT Laboratory courses (2 Credits) (2 Credits)	Compul-sory electives and free electives (13 Credits)	30
2nd sem	Chemical Technology 2 (4 Credits)		(2 Credits)	(3 Credits)		(19 Credits)	30
3rd sem	Master's thesis (30 Credits)						30

Schedule of the Master's Degree Programme in Chemical Engineering							
Branch of study: Product Design (PD) Responsible Professor: Prof. Dr. techn. P. Walzel							**Credits**
1st sem	Conceptual Process Design (4 Credits)	Product Cleaning (5 Credits)	Reaction Engin-eering 2 (4 Credits)	Particle Processes (4 Credits)	PD / Laboratory courses (2 Credits)	Compul-sory electives and free electives (11 Credits)	30
2nd sem	Chemical Technology 2 (4 Credits)			(3 Credits)	(2 Credits)	(21 Credits)	30
3rd sem	Master's thesis (30 Credits)						30

Schedule of the Master's Degree Programme in Chemical Engineering								
Branch of study: Process Systems Engineering (PSE) Responsible Professor: Prof. Dr.-Ing. S. Engell								**Credits**
1st sem	Fluid Separations (4 Credits)	Reaction Engineering (4 Credits)	Process Modelling and Optimization (4 Credits)	Simulation Technology (7 Credits)	Process Control I (5 Credits)	PSE Lab (2 Credits	Compulsory electives and free electives (4 Credits)	30
2nd sem	Particle Technology (4 Credits)	Conceptual Design (4 Credits)				(2 Credits)	(20 Credits)	30
3rd sem	Master's thesis (30 Credits)							30

Schedule of the Master's Degree Programme							
Biochemical Engineering (BIW) Responsible Professor: Prof. Dr.-Ing. R. Wichmann							**Credits**
1st sem	Analytics (7 Credits)	Biochemical Process Technology (4 Credits)	Industrial Biochemical Technology (3 Credits)	Bio reaction technology 2 (3 Credits)		Compulsory electives and free electives (13 Credits)	30
2nd sem	Molecular Biotechnology (8 Credits)	(3 Credits)	AB and FT Laboratory courses (6 Credits)	(3 Credits)	Term Assignment (3 Credits)	(7 Credits)	30
3rd sem	Master's thesis (30 Credits)						30