

Pursuant to Section 50 (1) of the *Hessische Hochschulgesetz* (Hesse Higher Education Act - HHG), as amended on 5 November 2007 (Official Gazette I pp. 710, 891), the Faculty Councils of the Departments of Psychology (04), Mathematics and Informatics (12), Physics (13), Chemistry (15), Pharmacy (16), Biology (17), Geography (19) and Medicine (20) of Philipps-Universität Marburg adopt the following joint doctoral regulations, most recently by resolution of 15 July 2009:

Only the German version of this text is legally binding!

Philipps-Universität Marburg
Doctoral Regulations
of the Departments of Mathematics and Natural Sciences
and the Department of Medicine
for Its Mathematics and Natural Sciences Disciplines
Dated 15 July 2009

Adopted by

Department of Pharmacy	on 22 April 2009
Department of Biology	on 29 April 2009
Department of Mathematics / Informatics	on 13 May 2009
Department of Physics	on 13 May 2009
Department of Psychology	on 13 May 2009
Department of Geography	on 20 May 2009
Department of Chemistry	on 17 June 2009
Department of Medicine	on 15 July 2009

Table of Contents

Article 1	Scope and Objectives
Article 2	Doctorate and Doctoral Degrees
Article 3	Doctoral Committee
Article 4	Board of Examiners and Referees
Article 5	Acceptance as Doctoral Candidate
Article 6	Doctoral File
Article 7	Supervision of the Dissertation
Article 8	Dissertation
Article 9	Dissertation by Publication
Article 10	Submission of the Dissertation and Admission to the Doctorate Procedure
Article 11	Referees' Review
Article 12	Dissertation Display
Article 13	Decision with Respect to the Acceptance and Assessment of the Dissertation
Article 14	Dissertation Defense
Article 15	Overall Assessment
Article 16	Publication of the Dissertation
Article 17	Mandatory Copies
Article 18	Award of the Doctorate
Article 19	Repetition of the Doctoral Attempt
Article 20	Doctoral Performance in the Event of Illness and Incapacity and Family Burdens
Article 21	Doctoral Certificate, Certificate of the Doctoral Examination
Article 22	Denial and Withdrawal of the Doctoral Degree
Article 23	Honorary Doctorate
Article 24	Effective Date
Annex 1a:	Doctoral Certificate in German (Specimen)
Annex 1b:	Doctoral Certificate in English (Specimen)
Annex 2a:	Certificate of the Doctoral Examination in German (Specimen)
Annex 2b:	Certificate of the Doctoral Examination in English (Specimen)

Article 1

Scope and Objectives Article 2

- (1) The objectives and procedures for an individualized doctorate shall be governed by the joint doctoral regulations created by the faculty in the Department of Mathematics, the Departments of Natural Sciences, and Department of Medicine for its mathematics and natural sciences disciplines, in compliance with the General Regulations for Doctoral Regulations of the Philipps-Universität Marburg as amended on November 27, 2006 (StAnz, vom 29.01.2007 (Nr. 5/2007), S. 230).
- (2) A full-time doctorate shall normally require three years to complete. An extension of up to three years is possible for a part-time doctorate.
- (3) The doctorate's objective is to further develop the candidate's ability to carry out independent scholarly activity, as well as to develop and promote junior researchers.

Article 2

Doctorate and Doctoral Degrees

- (1) The doctorate shall demonstrate the doctoral candidate's ability to carry out independent scholarly activity. The doctoral work shall include both a scientific treatise (dissertation) and an oral examination (dissertation defense) on a subject of the doctoral candidate's choosing from the discipline of mathematics and/or the discipline of natural sciences. The subject chosen by the doctoral candidate shall be within the area of expertise of the faculty administering the doctorate.
- (2) The Doctor of Natural Sciences (Dr. rer. Nat) shall be conferred by the relevant department in accordance with the General Regulations for Doctoral Regulations of the Philipps-Universität Marburg.
- (3) A joint doctorate at a German and a foreign university (binational doctorate) shall be possible.

Article 3

Doctoral Committee

- (1) The decision of whether to accept an applicant as a doctoral candidate shall be made by the Doctoral Committee. This Committee shall also do the following: determine a supervisor in agreement with the doctoral candidate, open the doctorate procedure, appoint the referees for the dissertation, establish the Board of Examiners and arbitrate in the event of conflict.
The Doctoral Committee shall be comprised of at least the following members:
 - a) the Dean or his or her deputy, a professor appointed by the respective Faculty Council, ,
 - b) three professors,
 - c) a member of the department's group of fellows holding a doctoral degree, and
 - d) a doctoral candidate in an advisory capacity.
- (2) The Doctoral Committee members shall be appointed by the Faculty Council on the recommendation of the group representatives in the Faculty Council. Each member's term of office shall be two years. The group of students shall have the right to nominate the representative of the doctoral candidates pursuant to Article 1 (1 d). To ensure continuity, appointments should be made such that terms of office overlap. Terms of office may therefore be extended by one year if necessary.

- (3) Members of the Doctoral Committee shall elect a committee chairperson, who shall be a professor. The Committee may assign individual tasks to the chairperson. The chairperson shall report on the number of doctorate procedures and the outcomes of said procedures to the Faculty Council at least on an annual basis.
- (4) The faculty in the Department of Medicine shall appoint a Doctoral Committee specifically for doctoral programs in human biology and for graduates from other degree programs in mathematics and natural sciences. Members of this Committee should be active in one of the natural sciences disciplines.

Article 4

Board of Examiners and Referees

- (1) In order to open a doctorate procedure, the Doctoral Committee shall appoint a Board of Examiners. Ordinarily, a member of the board of professors, who is not active as a referee, shall chair the Board of Examiners.
- (2) The Board of Examiners shall consist of 3 to 5 persons, at least two of which shall be full professors. In addition, at least one of the two full professors must be either the doctoral candidate's supervisor, or a second referee. The members of the Board of Examiners must represent three different areas of specialization. At least two members must be from the doctoral candidate's department.
- (3) The Board of Examiners shall do the following: decide whether to accept, modify, or reject a dissertation, conduct the dissertation defense, decide whether the dissertation defense must be repeated, assess the doctoral candidate's achievements and define the conditions for publication of the dissertation.
- (4) Deliberations and voting in the Board of Examiners shall generally be carried out *in camera*. Voting with respect to examination decisions, however, shall be carried out openly. There shall be no abstentions.
- (5) The supervisor shall prepare the first referee's report.
- (6) Persons in related disciplines shall be appointed by the Doctoral Committee as second referees and can normally be approved from the following group:
 - professors from the same or another department,
 - emeritus and retired professors,
 - honorary professors,
 - adjunct professors,
 - visiting professors
 - *Privatdozenten*, (unpaid lecturer paid only by students' fees),
 - professors from another university,
 - scientists from a recognized non-university research establishment holding doctorates, and
 - research associates holding doctorates, with corresponding scientific competence.
- (7) Second referees may be nominated by the candidates. Nomination, however, shall not entitle that person to appointment as second referee. In the case of a binational doctorate, at least one referee shall be specified by each university.

Article 5

Acceptance as a Doctoral Candidate

- (1) The Doctoral Committee's decision on whether to accept the applicant as a doctoral candidate shall be based upon that candidate's written application. The written application shall be addressed to the chairperson, and shall include the required documentary evidence. Such evidence shall normally be:
 - a. diplomas or degrees from the applicant's prior course of study,
 - b. a working title and a project outline of the planned dissertation,
 - c. the letter(s) of acceptance from the supervisor(s) for the planned dissertation.
- (2) The prerequisite for acceptance as a doctoral candidate shall normally be:
 - a. successful completion of a course of study at an academic university involving a standard study period of at least eight semesters (*Diplom, Magister, Staatsexamen*, eight-semester Bachelor's degree) in a subject area required for the dissertation, or,
 - b. a Master's degree (120 credits) in a subject area required for the dissertation, or
 - c. completed university studies in conjunction with an aptitude assessment for applicants that:
 - i. have completed a course of study at an academic university in a subject area other than that of the department administering the doctorate,
 - ii. have graduated with a *Diplom* from a university of applied sciences, or
 - iii. have completed a Bachelor's degree involving a standard study period of at least six semesters (fast-track).
- (3) The prerequisite for fast-track entry in accordance with Article 5 (2)(c)(iii) shall be a two-semester Master's study. Applicants that have completed two semesters (60 ECTS credits) of a Master's program in the mathematics or natural sciences or two semesters advanced study of a pharmaceutical or medical program may be admitted, providing they have achieved an average grade of 1.5 or above, weighted according to ECTS, in the modules of the preceding Bachelor's and Master's program or the pharmaceutical and medical courses of study. This shall normally be equivalent to ECTS Grade A. In other respects, the aptitude assessment procedure in accordance with Article 5 (2)(c) shall be determined by the relevant faculties in implementing regulations for the subject areas in which this possibility exists.
- (4) Acceptance as a doctoral candidate in accordance with Article 5 (2) a) and b) may be subject to conditions. The conditions will need to be fulfilled within three semesters. An applicant may be refused admission as a doctoral candidate only if reasons are adduced in writing.
- (5) The doctoral phase shall commence upon the applicant's acceptance as a doctoral candidate. Doctoral candidates may be enrolled at the Philipps-Universität Marburg for the duration of their doctorate.

Article 6

Doctoral File

- (1) The Doctoral Committee shall be responsible for creating a doctoral file, which shall document (1) the beginning and the conclusion of the doctoral candidate relationship, (2) the project outline of the planned dissertation in accordance with Article 5 (1b), (3) the referees' reviews, and (4) the minutes taken during the dissertation defense pursuant to Article 14 (6), and (5) any other decisions made over the course of the doctorate program.

- (2) The doctoral file shall be handled and archived confidentially. During the doctorate program, members of the Board of Examiners and members of the Doctoral Committee shall be entitled to view the file. Upon request, the doctoral candidate shall be granted access to the doctoral file after the conclusion of the doctorate program, but in any case within one year of the award of the doctorate or otherwise given justified interest.

Article 7

Supervision of the Dissertation

- (1) Supervisors shall normally come from the group of professors active in the department in question or from the group of academics who hold a *Habilitation* (post-doctoral university teaching qualification). Academics holding doctoral degrees, but have not gained a *Habilitation*, may be accepted as supervisors with the Doctoral Committee's consent.
- (2) In the Department of Medicine, supervisors must come from the group of teaching staff in the human biology programs.
- (3) The supervision relationship shall commence upon the applicant's acceptance as a doctoral candidate pursuant to Article 5 and shall be contingent upon said acceptance.
- (4) In the event that the supervisor is not a member of the department in question and the doctorate is conducted and supervised at an external academic institution, a *Habilitation* holder from the relevant department or a member of the group of professors within the relevant department must also be named as a referee. The supervisor from the faculty in question shall receive regular updates concerning the progress of the study from both the external supervisor and the doctoral candidate.
- (5) The doctoral candidate shall, on a regular basis and at least once per year, give his or her supervisor academic presentations so that the supervisor may evaluate the candidate's progress.
- (6) The Doctoral Committee shall, at the justified request of one of the persons involved, decide via majority vote on a change in supervision, or an interruption or termination of the doctoral candidate relationship. In cases of conflict, both sides shall be heard.
- (7) In the case of full-time doctorates, no more than three years should pass between acceptance as a doctoral candidate and opening of the doctorate program. The Doctoral Committee shall decide on any extension.
- (8) If, for personal or academic reasons, the doctoral candidate decides to discontinue the doctoral study that he or she has commenced and to embark upon a new topic, he or she must inform the Doctoral Committee thereof. Upon application to the Doctoral Committee, the doctoral candidate may embark upon a new doctoral topic, the progress of which will be monitored by the same or a new supervisor. There shall be no entitlement to work on a new topic.
- (9) In the event that a change of topic is accepted by the Doctoral Committee, the Doctoral Committee shall, upon commencement of the new topic, determine a supervisor in agreement with the doctoral candidate. Six months and two years after commencement of the new topic, the doctoral candidate shall submit a written report on the progress of the dissertation to the Doctoral Committee. The Doctoral Committee shall, based upon this written report, decide whether the dissertation has been concluded or whether it is to be continued or abandoned. If the Doctoral Committee decides against a continuation of the dissertation a second time, the candidate shall have definitively failed the doctorate.

Article 8 Dissertation

- (1) The dissertation shall, in terms of content, be assigned to the faculty in question's area(s) of specialization and, as an independent piece of work satisfying scientific standards, must provide a contribution to the further development of scientific knowledge.
- (2) The dissertation must be written in either German or English. A summary in the respective other language must be enclosed with it.
- (3) Work which has already been submitted for other examinations shall not be approved as a dissertation. The outcomes of such examination work may, however, be used for the dissertation, with the relevant studies being indicated in the list of sources and the text passages used identified.

Article 9 Dissertation by Publication

- (1) Publications that have emerged from the doctoral study and have been published in, or submitted to, highly regarded journals that can be identified by the relevant faculties may be accepted as dissertation work (dissertation by publication). In such cases, the collected publications must be prefaced by a summary of the studies in German and English, and a separate declaration must provide a statement on the contribution that the doctoral candidate has made to the publications. This declaration shall be signed by both the supervisor and the doctoral candidate, and shall be enclosed with the doctoral application. The faculties in question may, in implementing regulations, more closely define the requirements of the dissertation work.
- (2) Requirements for dissertations by publication are:
 - the topic of the publications/manuscripts should be consistent with the specified doctoral topic or have developed from it,
 - the doctoral candidate should have made a significant contribution to these publications/manuscripts, and
 - the doctoral candidate should have prepared an introduction, summary, and discussion of the publications/manuscripts in which he or she specifies his or her own contribution to the publications/manuscripts submitted.
- (3) The written review of a dissertation by publication shall address the doctoral candidate's contribution to the publications/manuscripts submitted. The referees must express an opinion on whether, taking into account the contribution of the co-authors, the submitted publications/manuscripts are equivalent in type and extent to a dissertation and recommend a grade accordingly.

Article 10 Submission of the Dissertation and Admission to the Doctorate Procedure

- (1) An application for admission to the doctorate procedure must be addressed in writing to the chairperson of the Doctoral Committee. The following documents must be enclosed with the application:

- a) at least six copies of the dissertation or the dissertation work pursuant to Article 8, each bound and assigned a title page;
 - b) a declaration as to whether the candidate has already made a doctoral attempt, specifying, where applicable, time, university, dissertation topic and outcome of this attempt;
 - c) an assurance that the doctoral candidate has: written the submitted dissertation himself or herself and without external assistance, used no sources or aids other than those indicated, and appropriately identified all quotations as borrowed in full or in paraphrased form; an assurance that the doctoral candidate has not submitted the dissertation in its present or similar form to any other domestic or foreign university in connection with a doctoral application or for other examination purposes;
 - d) a curriculum vitae including important information about the candidate's academic education to date; and
 - e) proof of the aptitude assessment, where applicable, and proof of fulfillment of the conditions.
- (2) The applicant must adhere to the relevant Doctoral Committee's guidelines for submission of a dissertation. The enclosed documents must be either the original documents or officially certified copies. The chairperson of the Doctoral Committee may, in justified cases, permit proof to be furnished in another suitable manner.
- (3) Admission shall be refused if the required documents are incomplete, the specified admission requirements have not been fulfilled or if the topic researched by the applicant falls outside the faculty's areas of expertise.

Article 11 Referees' Review

- (1) Each referee shall prepare a written review of the dissertation, which will be forwarded to the Doctoral Committee chairperson. The review shall recommend either that the study be accepted, rejected or, in exceptional cases, be returned for amendments or additions. If a dissertation is recommended for acceptance, it shall be assessed using one of the following grades:
- Grade 1 for very good work
 - Grade 2 for good work
 - Grade 3 for satisfactory work
 - Grade 4 for adequate work.
- A rejected study shall be assigned Grade 5 (inadequate). To enable differentiated assessment of achievements, the grade digits may be lowered or increased by 0.3. Grades 0.7, 4.3, 4.7 and 5.3 shall be precluded. If the study receives Grade 1.0, the assessor may recommend an award of "excellent (*summa cum laude*)".
- (2) The reviews should normally be completed four weeks after submission of the dissertation. The chairperson of the Doctoral Committee must ensure that the deadline is adhered to.
- (3) The Doctoral Committee of the faculty in question may specify that, in order to award an overall grade of "excellent (*summa cum laude*)", an external review must be submitted (see Article 15 (3)).

- (4) The doctoral candidate shall be permitted to withdraw his or her doctoral application only if no review has been prepared and he or she provides special grounds that are accepted by the Doctoral Committee. In this case, a revised version of the dissertation may be resubmitted within six months and the doctorate procedure will be continued. The Doctoral Committee may, given appropriate grounds, grant an extension of this period. Otherwise, the procedure shall be deemed to have been completed. A copy of the submitted dissertation shall, in any case, remain lodged with the doctoral files. Any subsequent resubmission of the dissertation shall require a new procedure.

Article 12 Dissertation Display

- (1) Upon receipt of the written reviews, the chairperson of the Doctoral Committee shall inform all Doctoral Committee members, the members of the Board of Examiners, all professors, all *Habilitation*-holding members, and affiliated members of the faculty administering the doctorate about the status of the procedure. The dissertation, together with the reviews, shall be displayed for viewing. All faculty members administering the doctorate that are authorized examiners, all members of the Faculty Council, and, in justified cases, professors of other faculties, shall have a right of inspection. The display period shall be at least two and no more than four weeks. At the request of a Doctoral Committee member, the display period shall be extended by a total of no more than two weeks.
- (2) The professors, all *Habilitation*-holding members, and affiliated members of the faculty administering the doctorate shall have the right, within the display period, to give written notice of a special review. Said review must be submitted within two weeks of the display period's expiration.

Article 13 Decision with Respect to the Acceptance and Assessment of the Dissertation

- (1) Upon the display period's expiration, the Doctoral Committee shall, based on the referees' reviews as well as any special reviews that have been submitted, decide whether to accept the dissertation. The Committee may obtain further reviews before making its decision.
- (2) If one of the two referees refuses to accept the dissertation or if a special review has been submitted, the Doctoral Committee shall appoint a third referee. If the third referee recommends acceptance of the dissertation, it shall be deemed to have been accepted.
- (3) If there is no majority of reviews in favor of acceptance of the dissertation, the procedure shall be terminated without success. A renewed doctoral application may be made after one year at the earliest.
- (4) In exceptional cases, the Board of Examiners may decide to return the dissertation to the doctoral candidate for amendments or additions to be made within a stipulated period. The conditions and the stipulated period shall be communicated in writing. The period should not exceed one year, but may be extended on special grounds. If the doctoral candidate resubmits the dissertation within the stipulated period, an assessment shall be given and a decision made in accordance with the aforementioned provisions. If the doctoral candidate does not adhere to the stipulated period, the dissertation shall be deemed to have been rejected.
- (5) If the dissertation is accepted, the chairperson of the Board of Examiners shall promptly set the date of the dissertation defense. The doctoral candidate shall have the right to view the reviews and special reviews in order to prepare his or her examination.

- (6) If the reviews differ by more than one grade, the Doctoral Committee shall likewise appoint a third referee in order to prepare the decision.
- (7) The grade for the dissertation shall be derived from the arithmetical mean of the prepared reviews. If the decision was reached by three appointed referees, as in Article 13 (2) sentence 2 and Article 13 (6), the median shall be calculated.

Article 14 Dissertation Defense

- (1) The oral examination shall be carried out by the Board of Examiners for each individual doctoral candidate and shall take the form of a dissertation defense. The dissertation defense shall be conducted no later than three months after submission of the reviews. It shall consist of a presentation on the topic of the dissertation and subsequent discussion pursuant to paragraph 4 below.
- (2) The Dean, members of the Board of Examiners, the Doctoral Committee members, members of the Faculty Council, all professors within the faculty, and members of the faculty's group of fellows holding a doctoral degree shall be invited to attend the dissertation defense. The date and venue for the dissertation defense shall be publicized throughout the university.
- (3) In the case of a binational doctorate, cooperation agreements may specify which persons from the partner university may be invited to attend the dissertation defense.
- (4) The chairperson of the Board of Examiners shall lead the dissertation defense, which should not exceed one and a half hours in duration. The doctoral candidate shall also give a public presentation of his or her dissertation, which should last about 30 minutes, and shall include a dissertation defense.

The defense shall also cover selected problems in the discipline, similar areas of other disciplines, and the state of research in these areas. The members of the Board of Examiners shall be primarily responsible for conducting the discussion with the doctoral candidate, but the chairperson may permit questions to be asked by the persons mentioned in paragraph 2.

- (5) The doctoral candidate shall choose either German or English as the language of the examination.
- (6) The chairperson of the Board of Examiners or a doctorate-holder instructed by him or her shall prepare minutes with respect to the course of the examination, the subject matter of the examination, the outcome of the defense, and must include a grade. The minutes must be signed by the members of the Board of Examiners and the minutes taker if he or she is not a member of the Board of Examiners.
- (7) One of the following grades must be awarded for the oral examination:
 - Grade 1 for a very good performance
 - Grade 2 for a good performance
 - Grade 3 for a satisfactory performance
 - Grade 4 for an adequate performance
 - Grade 5 for an inadequate performance.

To enable differentiated assessment of performances, the grade digits may be lowered or raised by 0.3. Grades 0.7, 4.3, 4.7, and 5.3 shall be precluded.

Article 15

Overall Assessment

- (1) Immediately after the dissertation defense, the Board of Examiners shall decide *in camera* the outcome of the oral examination. If the candidate has passed the dissertation defense, the Board of Examiners shall also assign a composite grade for the doctorate, based on the reviews and performances in the oral examination. The doctoral candidate may only be awarded a doctorate if the dissertation and the dissertation defense have each been assigned the minimum grade of "adequate".
- (2) In calculating the overall grade, the dissertation grade shall be given a $\frac{3}{4}$ weighting and the defense grade a $\frac{1}{4}$ weighting.

In calculating the overall grade, only the first decimal place shall be taken into account; all other decimal places shall be cancelled without rounding. The following overall grades shall be awarded:

- 1.0 "excellent" (*summa cum laude*) on recommendation pursuant to paragraph 3
 - from 1.0 – 1.5 "very good" (*magna cum laude*)
 - from 1.6 – 2.5 "good" (*cum laude*)
 - from 2.6 – 4.0 "satisfactory" (*rite*)
- (3) "Excellent" (*summa cum laude*) may only be awarded if a referee makes this recommendation and the Board of Examiners unanimously agrees.
 - (4) The Board of Examiners shall specify in writing, based on the reviews, what conditions must be met for the dissertation to be published and whether said conditions have been met.
 - (5) Following the meeting, the chairperson of the Board of Examiners or the Doctoral Committee shall inform the doctoral candidate of the composite grade and any conditions. The candidate's attention shall also be drawn to the fact that, pursuant to Article 2 (2), the right to use the degree shall commence only after the doctorate has been awarded. A temporary certificate containing the assessment of the dissertation, the dissertation defense, and the overall assessment shall be issued to the doctoral candidate.

Article 16

Publication of the Dissertation

- (1) Upon passing the examination, the doctoral candidate must publish the dissertation as an independent work, in accordance with the conditions specified by the Board of Examiners (Article 15 (4)), and disseminate it pursuant to Article 17. It may also be published as a contribution to scientific journals, in a collected volume, in several parts, or in an abbreviated form containing the essential results.
- (2) The publication must be identified as a dissertation of Philipps-Universität Marburg and must specify whether the dissertation is published in an extended version, abbreviated version, or only in extract form. The dissertation shall be deemed to have been published in extract form if it is shortened by more than half its original size.
- (3) Through an arrangement with the university library, publication shall also be possible in a suitable electronic form. Submission of files that do not comply with specifications with respect to file format and data storage medium (or otherwise prove to be partially or completely unreadable) shall not fulfill the publication requirement.

Article 17

Mandatory Copies

- (1) The doctoral candidate must submit four copies of the dissertation to the university library of Philipps-Universität within one year of the dissertation defense. The doctoral candidate shall also submit, to the Doctoral Committee chairperson, a corresponding receipt from a relevant representative of the university library and, where applicable, the registration for publication in a computer network. Submission of the aforementioned documents shall be a prerequisite for presentation of the doctoral certificate. The chairperson of the Doctoral Committee may, in response to a justified request, extend the submission period by no more than one year. If the doctoral candidate fails to adhere to a reasonable grace period set by the Doctoral Committee after expiration of the submission period, the rights acquired by the doctorate shall expire. The same shall apply if the doctoral candidate fails to fulfill the conditions pursuant to Article 15 (4).
- (2) The mandatory copies need to be identified as a dissertation by means of a corresponding title page and must contain the academic history of the author in abbreviated form. The title page shall contain the following: the topic of the dissertation, the faculty and university, the doctoral candidate's name and place of birth, his or her previously acquired degree, titles and names of the referees, submission and examination date, place and year of publication, and the university reference number.

The mandatory copies must be printed on non-ageing paper and durably bound. In addition, dissemination must be assured by:

- a) furnishing proof of publication in a scientific journal with a minimum circulation of 150 copies or in electronic output, or
- b) submitting an electronic version whose data format and data storage medium must be agreed with the university library.

In case b), the doctoral candidate shall assign Philipps-Universität the right to make and to disseminate further copies of his or her dissertation. Furthermore, he or she shall assign the right to make the dissertation available in science networks.

Article 18

Award of the Doctorate

- (1) As soon as the mandatory copies of the dissertation have been submitted, the doctorate shall be awarded the doctoral certificate. From this moment onwards, the recipient shall have the right to use the doctoral degree.
- (2) Exceptionally, in response to a specially justified request, the doctorate may, with the approval of the Doctoral Committee, be awarded before the mandatory copies are submitted if an assurance has been given that, within a reasonable period,
 - the dissertation will be published, and
 - the mandatory copies will be submitted.
- (3) In the event of a binational doctorate, further prerequisites for the award of the doctorate may be specified in a cooperation agreement, in addition to those set forth in paragraph 1 above.

Article 19
Repetition of the Doctoral Attempt

- (1) If a candidate's first doctoral attempt has failed due to rejection of the dissertation, the candidate may only submit one additional application. The additional application may involve the submission of a new dissertation. This shall also apply if the first application has failed at another university. The core content of the new dissertation shall be clearly different from the core content of the rejected dissertation.
- (2) If a dissertation defense fails, it may only be repeated once, and no later than one year after the failed examination. In special cases, the period may be extended at the request of the doctoral candidate.
- (3) If the doctoral performance has been invalidated due to a failure to fulfill the submission obligation or due to other breaches of these doctoral regulations, the Doctoral Committee shall decide whether and under what conditions the doctorate may be repeated.

Article 20
Doctoral Performance in the Event of Illness and Incapacity and Family Burdens

If a doctoral candidate substantiates, by means of a medical certificate, that he or she is unable to take the examination in whole or in part in the designated form due to illness or incapacity, the chairperson of the Doctoral Committee must allow the doctoral candidate to render the doctoral performance over an extended period. This shall also apply in the event that the candidate furnishes proof of necessary care of a close relative. The same shall apply to persons pursuant to Sections 3 and 6 of the *Mutterschutzgesetz* (Maternity Protection Act). Maternity protection periods and parental leave periods must be taken into account.

Article 21
Doctoral Certificate, Certificate of the Doctoral Examination

- (1) Faculties shall award candidates who have passed the doctoral examination the doctoral degree designated in Article 2 (2).
- (2) The doctoral certificate and the certificate of the doctoral examination shall be dated to the day of the oral examination and prepared in German. In addition, two certified copies and an English translation of each certificate shall be issued. The doctoral certificate and the certificate of the doctoral examination shall bear the signatures of the Dean of the Faculty and the President of the Philipps-Universität Marburg and shall be assigned the university seal in the version applicable to the faculty. Specimens of the German and English doctoral certificate and certificate of the doctoral examination can be found in Annex 1a,b and Annex 2a,b.
- (3) The certificate of the doctoral examination shall bear both the overall grade and the grades for the following sub-components, or, in the alternative, shall confirm that such have been rendered::
 - (i) the grade for the dissertation,
 - (ii) the grade for the oral examination (presentation and dissertation defense).
- (4) The Doctoral Committee must ensure that the documents are issued within one month of the dissertation defense.

- (5) In the event of a binational doctorate, divergent provisions may be made, based on a cooperation agreement of the Doctoral Committees involved.

Article 22

Denial and Withdrawal of the Doctoral Degree

- (1) If, prior to issuance of the doctoral certificate, it is ascertained that the applicant has attempted or has perpetrated a deception or other serious academic malpractice in his or her work during the doctorate procedure, the award of the doctorate shall be denied. Any such decision shall be taken by the Doctoral Committee.
- (2) After issuance of the doctoral certificate, withdrawal of the doctoral degree shall be governed by the applicable statutory provisions. The doctoral degree may only be withdrawn if it is discovered that the doctoral degree has been acquired by deception or by means of other serious academic malpractice. Any such decision shall be taken by the Faculty Council.
- (3) Prior to any decision in respect of the denial or withdrawal of the doctoral degree, the person concerned shall be given an opportunity, within a reasonable period, to respond to the accusations made.

Article 23

Honorary Doctorate

- (1) Figures that have made extraordinary contributions to science through outstanding scientific achievements or by other means may be awarded an honorary doctorate. Prior to initiation of the procedure, the agreement of the President's Office must be obtained. The award shall be made by the Faculty responsible upon the approval of at least 75 percent of both the Doctoral Committee members and the members of the Faculty Council.
- (2) The honorary doctorate shall be awarded through the presentation of a certificate in which the recipient's contributions are highlighted.
- (3) All members of the relevant faculty shall have the right to nominate an honorary doctorate. Nominations shall be submitted in writing to the Dean, who shall present them to the Faculty Council.
- (4) The Faculty Council of the relevant faculty shall deliberate on the nomination at an ordinary or special meeting. The nomination shall be deemed to have been accepted if, in a secret ballot, it obtains the 75 percent majority of the Faculty Council.
- (5) Further proceedings shall be governed by Article 23 of the General Regulations for Doctoral Regulations of the Philipps-Universität Marburg.

Article 24

Effective Date and Transitional Regulations

These regulations shall take effect on the day after its publication in the *Amtliche Mitteilungen* (Official Bulletin) of the Philipps-Universität Marburg. An applicant that has been accepted as a doctoral candidate prior to the effective date of these doctoral regulations may, following a corresponding request, conclude the doctorate in accordance with the previous regulations.

Marburg, DD/MM/2010

Prof. Dr. Lothar Schmidt-Atzert
Dean of the Department of Psychology (04)

Prof. Dr. Manfred Sommer
Dean of the Department of Mathematics and Informatics (12)

Prof. Dr. Florian Gebhard
Dean of the Department of Physics (13)

Prof. Dr. Gernot Frenking
Dean of the Department of Chemistry (15)

Prof. Dr. Michael Keusgen
Dean of the Department of Pharmacy (16)

Prof. Dr. Uwe Homberg
Dean of the Department of Biology (17)

Prof. Dr. Georg Miehe
Dean of the Department of Geography (19)

Prof. Dr. Matthias Rothmund
Dean of the Department of Medicine (20)

Fachbereich
Mathematik und
Informatik

Philipps



Universität
Marburg

PROMOTIONSURKUNDE

Während der Amtszeit des Präsidenten Prof. Dr. Volker Nienhaus und des Dekans Prof. Dr. Manfred Sommer verleiht der Fachbereich Mathematik und Informatik der Philipps-Universität Marburg durch diese Urkunde

Herrn Xxxxx Ppppppppp

geboren am 00.00.1980 in Marburg den akademischen Grad

Doktor der Naturwissenschaften (Dr. rer. nat.)

nachdem er in ordnungsgemäßem Promotionsverfahren durch seine Dissertation

**Verbesserung der Identifizierung differentiell expremierter
Gene in cDNA microarray-Experimenten**

und durch die Disputation seine wissenschaftliche Befähigung erwiesen hat.

Die Gesamtnote lautet **summa cum laude**

Marburg, den 00.00.2008

Der Präsident
der Philipps-Universität

Der Dekan
des Fachbereichs Mathematik und Informatik

Department of
Mathematics and
Informatics

Philipps



Universität
Marburg

DOCTORAL CERTIFICATE

The Department of Mathematics and Informatics awards during the terms of office of President Prof. Dr Volker Nienhaus and Dean Prof. Dr. Manfred Sommer

Mr. Xxxxx Ppppppp

born on 00/00/1980 in Marburg the doctoral degree

Doctor of natural sciences (Dr. rer. nat.)

pursuant to the regulations of the doctoral study program and upon successful completion of his doctoral dissertation

**Improving the identification of differentially expressed genes
in cDNA microarray experiments**

and the oral dissertation defense. The overall grade is

excellent

Marburg 00/00/2008

President of the University

Dean of the Department of Mathematics and Informatics

Fachbereich
Mathematik und
Informatik

Philipps



Universität
Marburg

PROMOTIONSZEUGNIS

Herr Xxxxx Ppppppppp

geboren am 00.00.1980 in Marburg hat den akademischen Grad eines Doktors der Naturwissenschaften (Dr. rer. nat.) erworben. Titel der Dissertation:

Verbesserung der Identifizierung differentiell expremierter Gene in cDNA microarray-Experimenten

Die einzelnen Prüfungsleistungen wurden folgendermaßen bewertet:

Dissertation	sehr gut
Disputation	sehr gut

Gesamtnote	ausgezeichnet
-------------------	----------------------

Marburg, den 00.00.2008

Prof. Dr. Manfred Sommer
Dekan des Fachbereichs Mathematik und Informatik

Gutachter

Prof. Dr. XXX

Prof. Dr. YYY

Department of
Mathematics and
Informatics

Philipps



Universität
Marburg

CERTIFICATE OF THE DOCTORAL EXAMINATION

Mr. Xxxxx Ppppppppp

born on 00/00/1980 in Marburg has passed the examinations leading to the Doctoral Degree Dr. rer. nat. Title of the dissertation:

**Improving the identification of differentially expressed genes
in cDNA microarray experiments**

The following grades were assigned:

Dissertation	very good
Dissertation defense	very good

Overall grade	excellent
----------------------	------------------

Marburg 00/00/2008

Prof. Dr. Manfred Sommer
Dean of the Department of Mathematics and Informatics

Referees

Prof. Dr. XXX

Prof. Dr. YYY