

University of Freiburg doctoral degree regulations for the Faculty of Mathematics and Physics

On 25 May 2016 the University of Freiburg Senate passed the following doctoral degree regulations in accordance with section § 38 paragraph (4) item (1) of the state law governing institutions of higher education (Landeshochschulgesetz, LHG) of 1 January 2005 (GBl. p. 1), as amended on 23 February 2016 (GBl. p. 108).

Approved by the Rector on 6 June 2016.

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§ 1 Purpose of doctoral process and awarding of doctoral degree

(1) Formal doctoral studies demonstrate an ability to conduct in-depth academic work in a subject represented at the Faculty of Mathematics and Physics. It is based on an independent piece of academic work (doctoral thesis) and an oral defense of the contents of the doctoral thesis.

(2) On the basis of a pass in the doctoral examination process, the Faculty of Mathematics and Physics confers the academic degree of Doctor of Sciences (Doctor rerum naturalium – Dr. rer. nat.); women may use the title in the feminine form.

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(3) Doctoral studies may not exceed five years. In justified cases the doctoral examination committee may extend the deadline by a maximum of two years upon application prior to the expiry of the deadline. If the maximum duration of doctoral studies has been exceeded, admission as a doctoral candidate is extinguished unless the doctoral examination process has already begun. Protection provisions and leaves of absence in accordance with section § 20 are not counted towards the duration of doctoral studies.

(4) Persons who are admitted to a doctoral program at the University of Freiburg are enrolled as doctoral students. Other persons who aim to complete a thesis and who have been accepted as doctoral candidates must register with the Registration Office; upon application they may be enrolled as doctoral students.

§ 2 Doctoral examination committee

(1) The doctoral examination committee is responsible for the organization of the doctoral qualification process, particularly for decisions on the acceptance of doctoral candidates, the appointment of supervisors, the launch of the doctoral examination process, the choice of reviewers, the appointment of examination board members, overseeing the prompt carrying out of the doctoral qualification process, as well as documenting the faculty's number of doctoral candidates; and it is responsible for all tasks assigned to it under these doctoral degree regulations. In all other matters, the responsibilities of the head of the doctoral examination committee remain unaffected.

(2) The doctoral examination committee is made up of the faculty's academic staff who are members of the faculty board. The head of the doctoral examination committee is the Dean. The doctoral examination committee elects from its members a member of academic teaching staff to be the committee's deputy head; if the Dean represents the subject of Mathematics, his/her deputy must represent the subject of Physics and vice versa. The head of the doctoral examination committee and the deputy head serve as the senior representative of their subjects.

(3) The doctoral examination committee usually deliberates and makes decisions in a formally convened and conducted meeting; its meetings are not open to the public. The doctoral examination committee has a quorum when all members have been formally notified and a majority of members is present and entitled to vote. Decisions are passed strictly on a simple majority. In the event of a tie, the committee head has the deciding vote. Decisions may be made in a written or electronic process, if no member disagrees and at least two-thirds of members participate. In decisions on the regulation of examinations and in particular decisions on the withdrawal of a doctoral degree, abstentions, secret ballots and the transferring of the right to vote are not permissible.

(4) Members of the doctoral examination committee are obliged to maintain confidentiality in matters of assessment and/ or when the duty to maintain confidentiality has been specifically decided. The duty to maintain confidentiality includes keeping secret the documentation of the committee's deliberations, and it continues after membership of the committee ends.

(5) The doctoral examination committee must ensure transparency and quality in the awarding of grades. The doctoral examination committee must deliver a report to the faculty board every five years on its measures to ensure transparency and quality in the awarding of grades; this report is to be made available to the other faculties by the Vice-President for Research in order to share results and further develop quality assurance measures.

(6) The doctoral examination committee may revocably transfer the execution of certain tasks to the committee head or his/her deputy; this is not true for decisions on the acceptance of doctoral candidates, the retraction and revocation of acceptance of a doctoral candidate, the invalidity of doctoral work for assessment, the revocation of a doctoral degree, or in the case of objections.

(7) The doctoral examination committee is an administrative authority under Germany's administrative procedures and court procedures laws.

§ 3 Reviewers and examiners

(1) The following may be appointed as reviewers of a doctoral thesis and/ or as examiners in the oral defense of a thesis: The Faculty of Mathematics and Physics academic staff, adjunct professors, extraordinary professors, emeritus professors, retired professors as well as academics with a habilitation. The doctoral examination committee may also temporarily appoint - as reviewers and examiners in the doctoral examination process - full-time working group directors at the Faculty of Mathematics and Physics who have a special qualification for academic work or other academic staff members employed full-time

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at the faculty and who have shown academic excellence within the framework of academic review processes. For this they are required to have demonstrated a special qualification for academic work with a thesis of outstanding quality or a piece of academic work at least its equivalent and via an external review by a recognized research-sponsoring institution.

(2) The doctoral examination committee may furthermore appoint members of other University of Freiburg faculties or other institutions of higher education in Germany or abroad, or members of research institutions, as reviewers and examiners. In the case of interdisciplinary and/or multi-faculty theses members of other faculties are to be included among the reviewers and examiners. The requirements set out in paragraph (1) apply accordingly.

(3) In each doctoral examination process, at least one reviewer must meet the prerequisite set out in paragraph (1) item (1).

§ 4 Supervision of doctoral thesis; supervision agreement

(1) The doctoral examination committee appoints a responsible supervisor for each doctoral candidate; a second academic supervisor may be appointed in addition. In the case of theses overlapping another faculty, the responsible supervisor appointed must be a member of the Faculty of Mathematics and Physics, and the second supervisor appointed must be a member of the other faculty. Supervisors may only be such persons as may also be appointed as reviewers under section § 3 paragraph (1) or (2). If a member of the Faculty of Mathematics and Physics academic staff retires or otherwise withdraws from office, he or she may continue to exercise his/her rights and carry out his/her duties in connection with that office for up to three years after withdrawal; the doctoral examination committee may extend that period to a maximum of five years as required.

(2) The prospective supervisor or supervisors (if two are to be appointed) and prospective doctoral candidate conclude a supervision agreement using the form provided by the Faculty of Mathematics and Physics; the agreement must include the following:

1. a timetable appropriate to the thesis project and the candidate's personal situation; this timetable must include regular formal meetings with the supervisor and regular status reports, and it must be updated annually;
2. details of the individual program of study,
3. a mutual commitment to observe the rules of good academic practice,
4. rules governing the solving of disputes, and
5. the review period(s), which are to be fixed upon submission of the thesis.

(3) The written supervision agreement only comes into effect once the doctoral candidate has been accepted.

§ 5 Prerequisites for admission to doctoral studies

(1) To be admitted to doctoral studies, the applicant

1. must have an above average degree in Mathematics or Physics
 - a) from a Master's program at a German institution of higher education,
 - b) from a degree course at a German university, College of Education or Art with at least a four-year prescribed minimum period of study or
 - c) from a graduate program following on from Bachelor's Degree studies at a German university, a College of Education or other institution of higher education with the right to confer doctorates
2. may not already be accepted as a doctoral candidate or admitted to doctoral studies in the same subject by another faculty or institution of higher education and may not have already passed a corresponding doctoral examination in the same subject at an institution of higher education and
3. may not be unworthy to hold the title of doctor as legally defined.

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If the above average degree under item (1)(1) was not obtained in Mathematics or Physics or not obtained solely in Mathematics or Physics, the doctoral examination committee may in exceptional cases admit the applicant to doctoral studies if the other requirements have been met.

(2) International degrees must be recognized by the doctoral examination committee. For this recognition, it must be established that the international degree is equivalent to the German degree which would otherwise be required. The decision on equivalency must be in accordance with the equivalency agreements approved by the Standing Conference of the Ministers of Education (and Cultural Affairs of the Länder in the Federal Republic of Germany) and the German Rectors' Conference as well as agreements within the framework of partnerships between institutions of higher education. If there are doubts about equivalency, the relevant authority (Zentralstelle für ausländisches Bildungswesen) may be consulted. If the equivalency of an international degree cannot be established because individual coursework and assessment cannot be documented, the applicant may be admitted to doctoral studies if the undocumented coursework and assessment may be performed in retrospect following a recommendation of appraisal by the Zentralstelle für ausländisches Bildungswesen within the framework of an aptitude test, and the appraisal is completed successfully; the appraisal may not exceed two semesters.

(3) Particularly well qualified graduates of Bachelor's and Staatsexamen programs, who are not covered by paragraph (1) item (1)(b), may be admitted to doctoral studies if they are among the best five percent of that program's graduates over the previous six semesters, and if they demonstrate their ability to carry out academic work in an aptitude test. For admission to the aptitude test, the applicant must have the approval of a member of academic staff, an extraordinary professor or a Privatdozent of the Faculty of Mathematics and Physics. The doctoral examination committee considers the proposed thesis topic and determines the modules in the Faculty of Mathematics and Physics' Master's programs which are to be taken within the framework of the aptitude test. The aptitude test, which may not last for longer than two semesters, is completed with an oral examination before two members of the faculty who are entitled to conduct doctoral examinations. The proceedings and result of the oral examination - which must be evaluated as a "pass" or a "fail" - must be documented in the minutes. Requirements for admission to the doctoral process are the successful completion of the set modules as well as a pass in the oral examination.

(4) Particularly qualified graduates of Mathematics or Physics diploma programs at a university of applied science, a university of cooperative education or the Notarakademie Baden-Württemberg may be admitted to doctoral studies by the doctoral examination committee if they demonstrate in an aptitude test that they are fundamentally capable of academic work in the subject in which the doctoral thesis is proposed to the same extent as required of graduates under paragraph (1). For admission to the aptitude test, the applicant must have completed his/her previous degree with a grade of "very good" (1.5) or better and have the approval of a member of academic staff, an extraordinary professor or a Privatdozent of the Faculty of Mathematics and Physics, who has declared his/her willingness to supervise the thesis. The doctoral examination committee considers the proposed thesis topic and determines the modules in the Faculty of Mathematics and Physics' Master's programs which are to be taken within the framework of the aptitude test. The aptitude test, which may not last for longer than two semesters, is completed with an oral examination before two members of the faculty who are entitled to conduct doctoral examinations. The proceedings and result of the oral examination - which must be evaluated as a "pass" or a "fail" - must be documented in the minutes. Requirements for admission to the doctoral process are the successful completion of the set modules as well as a pass in the oral examination.

§ 6 Acceptance as a doctoral candidate

(1) A student who intends to complete a doctoral thesis and meets the requirements under section § 5 must apply as early as possible for acceptance as a doctoral candidate. A written application describing the thesis topic must be submitted to the doctoral examination committee. If the thesis topic covers more than one subject, and the subjects are taught in different faculties, the application need be lodged with one of the relevant faculties only. Accordingly in such a case of a multi-faculty thesis, only one of the relevant faculties will confer the doctoral degree. The faculties involved must decide on this before the applicant is accepted as a doctoral candidate.

(2) The application must be accompanied by:

1. documentation of compliance with admission requirements under section § 5;
2. the supervision agreement under section § 4 paragraph (2);
3. a declaration of acknowledgement of the faculty's current doctoral degree regulations;
4. a current curriculum vitae including a summary of personal and professional development;

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5. a declaration on current or previous applications for admission to doctoral studies, specifying the time, topic and faculty or department to which the application was made and where applicable giving a reason why the process was not completed, or providing a notarized copy of the doctoral degree certificate if a doctorate has already been conferred;

6. for non-German applicants, documentation of sufficient knowledge of German or English, where applicable;

(3) The doctoral examination committee usually decides on applications within three months, in the case of doctoral degree programs by the start of the program. Applications will be rejected if

1. the admission requirements under section § 5 have not been met;

2. the proposed thesis topic does not fit the faculty's subject orientation or there is no member of the faculty meeting the requirements under section § 3 paragraph (1) who is able to judge the specialties of the thesis topic,

3. none of the faculty members under section § 3 paragraph (1) consider the proposed topic worthy of a doctoral thesis or the applicant's prior education appropriate or

4. the availability of the materials/ equipment necessary to carry out the doctoral project cannot be guaranteed.

(4) ¹If the applicant is accepted as a doctoral candidate, he/she receives written notification. ²At the same time as it makes a decision to accept a candidate, the doctoral examination committee appoints the academic described in the supervision agreement as the supervisor; furthermore the committee allocates the doctoral thesis to the subject of either Mathematics or Physics, depending on the topic chosen. If the doctoral examination committee decides to reject an application, reasons for the decision must be given in writing and must include information on the right to appeal.

(5) ¹Admittance as a doctoral candidate may be revoked if

1. the supervision agreement under § 4 paragraph (2) is invalid or is rescinded,

2. reasons for a rejection of the application for acceptance as a doctoral candidate arise in retrospect,

3. there is no prospect of the doctoral thesis being completed successfully in an appropriate period of time, or

4. the doctoral candidate is in severe violation of his/her duties under the supervision agreement (§ 4 paragraph (2)).

Acceptance as a doctoral candidate may be revoked under item (1)(4) above only if the formal process of consulting an ombudsman has been concluded without success and no new supervision agreement has been signed.

(6) By accepting a person as a doctoral candidate, the faculty expresses its basic willingness to evaluate a thesis on the proposed topic as a piece of academic work. Accepting a person as a doctoral candidate obliges the faculty to provide academic supervision for the candidate.

(7) Acceptance as a doctoral candidate does not confer any legal right to be admitted to the doctoral examination process.

(8) The responsible supervisor must ensure that the doctoral candidate is familiarized with the rules of good academic practice.

(9) Two years after the applicant's acceptance as a doctoral candidate the responsible supervisor reviews the case to see if the doctoral project may be continued, and communicates the result of this review to the doctoral examination committee.

§ 7 Launch of the doctoral examination process

(1) ¹The launch of the doctoral examination process assumes that the doctoral candidate continues to meet the admission prerequisites set out in section § 5. ²The application to begin the doctoral examination process (review and oral defense of the thesis) must be submitted in writing to the doctoral examination committee. ³The application must be accompanied by:

1. the notice of acceptance as a doctoral candidate under section § 6 paragraph (4) item (1);

2. the current supervision agreement under section § 4 paragraph (2);

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3. a current curriculum vitae including a summary of personal and professional development;
 4. four copies of the thesis in printed and bound form as well as in electronic form on the required data storage system and in the required file format;
 5. a declaration of any prior or current attempts to obtain a doctoral degree, giving details of the place, date, institution of higher education, and thesis topic, as well as a notarized copy of the degree certificate for any previously obtained doctoral degree;
 6. a statutory declaration in accordance with the attachment to these doctoral degree regulations;
 7. a copy of the legal notice of the significance and legal consequences of making a statutory declaration, provided by the faculty and signed by doctoral candidate;
 8. in the case of a doctoral program or participation in a structured doctoral program, documentation of work completed therein;
 9. where applicable, a complete list of academic work published or submitted for publication;
 10. where applicable, documentation of studies preparatory to the doctoral project or of other requirements met.
- (2) The application may be retracted once only, and then only by means of a written declaration. There may be no retraction if a review has already been submitted to the doctoral examination committee or if more than four weeks have passed since the appointment of reviewers.
- (3) One of the requirements for the application described in paragraph (1) may only be repudiated if there is a legal reason for revoking the doctoral degree. This is to be decided by the doctoral examination committee.
- (4) The board of examiners will decide on admission to the doctoral examination process. In cases which present no particular difficulties the doctoral examination committee may transfer this decision to the senior representative of the relevant subject. The doctoral candidate is to receive written notice of admission. If admission is not approved, the reason for the decision must be given in writing to the doctoral candidate together with information on the right to appeal.

§ 8 Doctoral thesis

- (1) The thesis topic must be selected from a research area formally represented at the Faculty of Mathematics and Physics. The thesis must demonstrate the candidate's ability to perform independent, in-depth academic work and it must represent a substantial contribution to the advancement of academic knowledge.
- (2) Usually the doctoral thesis must be written in German or English. Upon justified application by the doctoral candidate the doctoral examination committee may allow the doctoral thesis to be written in another language, if the review process within the Faculty of Mathematics and Physics can be ensured. The application must be submitted to the doctoral examination committee prior to completion of the thesis, together with a statement by the responsible supervisor. If the thesis is written in a language other than German, an abstract in German must be appended.
- (3) ¹The thesis must be submitted as a monograph. Notwithstanding item (¹) the doctoral examination committee may, upon application, deviate from this for the subject of Physics by allowing for several connected academic works by the doctoral candidate to be submitted as a cumulative thesis. Pieces of work collated into a cumulative thesis must have arisen from a common academic issue and must have been published in or accepted by reviewed, internationally-recognized journals. The doctoral candidate must have made a significant contribution to each of these pieces of work; none of the pieces of work submitted may be the subject of another thesis or of a current or completed doctoral studies by the doctoral candidate. The works must be prefaced by a detailed outline placing the research topics in critical relation and the most important findings from the publications in the context of the academic literature on the topic, and where applicable, appraising the candidate's own individual contribution as well as the contribution of the other author or authors of each publication.
- (4) If the thesis is based on experiments which were carried out as part of joint research work, the doctoral candidate's individual performance must be clearly delineated and assessable.
- (5) The thesis must contain a title page in accordance with the template provided by the Faculty of Mathematics and Physics, a table of contents, an abstract, and a detailed register of sources and literature used.

§ 9 Review of doctoral thesis

(1) The senior representative of the relevant subject appoints a first and second reviewer within two weeks of the launch of the doctoral examination process to assess the doctoral thesis; at least one of the two reviewers must belong to the Faculty of Mathematics and Physics. The first reviewer is to be the responsible supervisor of the thesis. The names of the reviewers are communicated to the doctoral candidate.

(2) The reviewers present their written reports on the doctoral thesis to the doctoral examination committee within two months, recommending therein whether to accept or reject the thesis, or to send it back for revision. If there is no recommendation to send back the thesis for revision, it must be given one of the following ratings:

1.0	summa cum laude,
1.3, 1.7, 2.0 and 2.3	magna cum laude,
2.7, 3.0 and 3.3	cum laude,
3.7 and 4.0	rite,
5.0	insufficenter.

A rating of summa cum laude may only be given if the thesis is distinguished by a high degree of originality and academic maturity.

(3) If the two reviews differ on their recommendations for the thesis to be accepted, rejected or revised, or if their assessments deviate by more than 1.0, the doctoral examination committee will appoint a third reviewer. A third reviewer is to be appointed also in the case of a cumulative thesis, if one of the two reviewers is a co-author of one of the pieces of work submitted. Neither the other of the two reviewers nor the third reviewer may be a co-author of one of the pieces of work. Furthermore the doctoral examination committee may appoint a third reviewer upon justified application by the doctoral candidate or a member of the doctoral examination committee. The third reviewer must present his/her review within a period of two months.

(4) After all reviews have been received, the thesis together with the reviews is to be made available for inspection for at least two weeks during semester and at least three weeks during semester break; theses in Mathematics are made available at the Dean's office and theses in Physics are made available at the Physikalisches Institut examination office. Theses shall not be made available for inspection for longer than four weeks. In urgent cases the doctoral examination committee may shorten the deadline to no less than one week. The senior representative of the relevant subject notifies the faculty members authorized to conduct assessment in the doctoral examination process in writing or electronically of the time and location in which a thesis is made available for inspection; he/she may in addition make the thesis and all examiners' reports available to them in electronic form. These persons authorized to inspect the thesis have the right to make an objection in writing to the acceptance, rejection or evaluation of the thesis by the end of the inspection period. Reasons for such an objection must be given in writing within one week of the objection being lodged. If there is an objection, the doctoral examination committee decides whether to reject the objection or to appoint an additional reviewer. This further reviewer must present his/her review within a period of two months.

(5) If the reviewers are unanimous in their decision to recommend acceptance of the thesis, it is thereby accepted - as long as no objection is made or the objection is rejected by the doctoral examination committee. If a majority of reviewers recommends rejecting the thesis, it is thereby rejected. In all other cases the doctoral examination committee decides whether to accept or reject a doctoral thesis on the basis of the reviewers' reports and the grades recommended therein.

(6) ¹The overall grade of a doctoral thesis is calculated from the arithmetic mean of the grades given by the reviewers. The ratings for an accepted doctoral thesis are:

summa cum laude	for an average of 1.1 or less,
magna cum laude	for an average greater than 1.1 to 2.5,
cum laude	for an average greater than 2.5 to 3.5,
rite	for an average greater than 3.5 to 4.0,

²If a doctoral thesis is accepted by a majority of the reviewers and if the arithmetic mean of the grades given by the reviewers results in a value over 4.0, the overall grade for the doctoral thesis is to be rounded to 4.0.

(7) If the thesis is rejected, the doctoral examination process has been unsuccessfully concluded. If the thesis is rejected, the doctoral candidate receives written notification of this from the doctoral examination committee. This notification must include reasons for the denial and instructions on the right to appeal. In this case, the doctoral candidate may apply just once more to launch a doctoral examination process; this

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must be on a different topic and application for it may not take place within one year. If that thesis is also rejected, the candidate has failed the doctoral examination with no option to retry.

(8) Upon justified application by a reviewer the doctoral thesis may be sent back once to the doctoral candidate for revision; the doctoral examination committee sets an appropriate deadline for submission. The doctoral examination committee may extend the deadline for submission upon justified application by the doctoral candidate. If the thesis is not resubmitted in revised form within the allotted time, it counts as rejected.

§ 10 Oral defense

(1) Following acceptance of the doctoral thesis the doctoral examination committee appoints an examination board and sets a date for the oral defense and decision on the overall rating of the doctorate. For the oral defense, the examination board consists of the first reviewer and at least two, or at most three, further examiners. If the thesis has been completed in the subject of Physics, the examination board must include at least one representative each of experimental physics and theoretical physics. The examination board is headed by a member chosen by the doctoral examination committee; this person must be a member of the academic teaching staff. The responsible supervisor of the thesis may not be head of the examination board. At least half of the members of the examination board must belong to the Faculty of Mathematics and Physics.

(2) The oral defense must take place at the latest one year after acceptance of the doctoral thesis. The head of the doctoral examination committee sets the date upon the recommendation of the first reviewer. The date of the oral defense must be announced in good time. Members of the examination board must be given access to the doctoral thesis, reviewers' reports and any objections.

(3) The oral defense, which is conducted in German or English, is an in-depth academic discussion intended to demonstrate that the doctoral candidate has mastered the subject in which the thesis was written and is familiar with current developments in his/her subject. It also covers selected topics in adjoining disciplines which are connected with the candidate's field in terms of content and method. The oral defense has a duration of approximately 90 minutes; it begins with a lecture on the thesis by the doctoral candidate lasting approximately 30 minutes. The head of the examination board guides the oral defense; he/she may also admit questions from the audience of the doctoral candidate's lecture.

(4) The oral defense is open to all members of the faculty. Public observers must be excluded if there is good cause to do so or if the doctoral candidate applies for such exclusion. Public attendance does not extend to deliberations or the announcement of the examination result. Upon application by the doctoral candidate the head of the examination board may admit guests from outside the university to attend the lecture held within the framework of the oral defense.

(5) The examination board meets immediately after the conclusion of the oral defense to determine the grade for the candidate's performance in the oral defense and the overall grade for the doctorate. The examination board gives a grade for the oral defense in accordance with section § 9 paragraph (2). The oral defense is only a pass if the grade is 4.0 or better.

(6) The examination board furthermore determines whether the doctoral candidate must revise the thesis prior to publication, and if so - what revision is necessary and by what date it must be completed. The responsible supervisor reviews the thesis before approving it for print under section § 13 paragraph (2) to ensure that the conditions set by the examination board have been fulfilled.

(7) The examination board deliberates and decides in closed session. The decision is made by a simple majority; in the event of a tie, the committee head's vote decides the matter. Abstentions are not permitted. The proceedings and content of the oral defense as well as the grades awarded and the deliberations of the examination board must be recorded in the minutes, which must be signed by all members of the examination board.

(8) Members of the examination board are obligated to maintain silence on matters which become known to them in closed session, unless the matter in question is already a matter of public knowledge or not of a significance requiring confidentiality. The duty to maintain confidentiality due to contractual employment obligations remains unaffected.

§ 11 Failing and repeating the oral defense

(1) If the oral defense is a fail or counts as a fail, the doctoral examination committee issues written notification, which must include reasons for the decision and instructions on the right to appeal. The oral de-

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ense may be repeated once within one year from the effective date of the committee's written notification. The application for admission to a repeat exam must be submitted to the doctoral examination committee two months after notification at the earliest.

(2) The doctoral examination process is unsuccessfully concluded and the doctoral examination failed with no option to retry if, within one year of the effective date of the exam notification, no application is made for a repeat of the oral defense or the candidate fails the repeat oral defense. The doctoral candidate receives written notification of this from the doctoral examination committee. This notification must include reasons for the decision and instructions on the right to appeal.

§ 12 Overall rating

(1) Once the oral defense has been passed, the examination board determines the overall grade and corresponding overall rating.

(2) The overall grade for the doctorate is calculated from the weighted arithmetic mean of the overall thesis grade according to § 9 paragraph (6) and of the oral defense grade in accordance with section § 10 paragraph (5). The overall grade for the doctoral thesis is doubly weighted and the grade of the oral defense is weighted singly. § 9 paragraph (6) item (2) applies accordingly.

(3) The examination board informs the doctoral candidate of the result of the doctoral examination after the overall rating has been established.

§ 13 Publication of doctoral thesis

(1) The doctoral candidate is obligated to make the doctoral thesis available to the academic public in an appropriate manner via duplication and distribution within one year of a successful oral defense of the doctoral thesis as submitted and accepted, if necessary including changes required/approved by the examination board.

(2) The thesis must be presented to the responsible supervisor before publication for print approval. Print approval must be submitted on an official form and kept on the doctoral file. If the responsible reviewer rejects the version of the doctoral thesis planned for publication, the doctoral examination committee shall decide, upon application by the candidate.

(3) The doctoral candidate has fulfilled his/her duty to publish if he/she delivers free of charge to the Faculty of Mathematics and Physics the following number of archive copies, which must be printed on aging-resistant, wood-free, acid-free paper and with permanent binding:

1. for electronic publication via the Freiburg university library research information system FreiDok plus, four printed paper copies in copyable type together with an electronic version whose data format and data storage medium meet Freiburg university library specifications; the doctoral candidate must ensure that the contents and formatting of the electronic version corresponds to the printed paper copies;
2. for publishing by a commercial publisher via booksellers and with documentation of a minimum print run of 150 copies and identification of the publication as a thesis, listing the thesis location in the imprint: four copies;
3. for publication in an academic journal: four offprints;
4. for publication of individual pieces of work in a cumulative thesis in academic journals: six printed paper copies of the entire thesis.

Of the archive copies delivered to the faculty, the Freiburg university library receives one copy in the cases of item (1)(1-3); and three copies in the case of item (1)(4). In the case of item (1)(1) the doctoral candidate grants the University of Freiburg the non-exclusive right within the framework of the university library's statutory duties to produce and distribute further copies of the doctoral thesis and to make the thesis available in data networks.

(4) The names of the reviewers and the Dean along with the date of the oral defense as the day of the completion of the doctoral exam must be given on the back of the title page of the archive copies. If the title is later changed, the title page must state what the original title was.

(5) If the doctoral candidate fails to meet the deadline or to obtain print approval from the responsible reviewer, or fails to meet the deadline under paragraph (1), all rights obtained via the doctoral examination are extinguished; if the doctoral degree certificate has been issued, it must be confiscated. In justified

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cases the deadline may be extended by a maximum of one year under paragraph (1) by the doctoral examination committee upon application prior to the expiry of the deadline.

§ 14 Completion of doctoral studies; degree certificate

(1) The doctorate is completed with the presentation of the degree certificate. The doctoral degree certificate is signed by the Rector of the University of Freiburg and the Dean of the Faculty of Mathematics and Physics and bears the university seal. It sets out the degree obtained, the overall rating for the doctorate, the title and rating of the doctoral thesis, as well as the name, date and place of birth of the holder. The date of the oral defense is given as the date of doctorate completion.

(2) The doctoral degree certificate will only be issued when the doctoral candidate has delivered the archive copies of the doctoral thesis to the Faculty of Mathematics and Physics in accordance with section § 13 paragraph (3).

(3) The presentation of the doctoral degree certificate must be conducted in an appropriate manner. Until the presentation, the doctoral candidate may upon application receive a preliminary certificate documenting a pass in his/her doctoral examination. This certificate details the title and evaluation of the doctoral thesis, the evaluation of oral assessment and the overall evaluation of assessed doctoral work.

(4) Prior to presentation of the doctoral degree certificate, the candidate does not have the right to use the title of doctor, not even while stating that it is conditional or designated.

(5) Procedural regulations based on international agreements remain unaffected.

§ 15 Withdrawal from oral defense

(1) If the doctoral candidate fails to take part in all or part of the oral defense, this is considered a withdrawal.

(2) If the doctoral candidate is prevented from taking part in the oral defense by illness or any other good cause, withdrawal will be approved upon application. The doctoral candidate must submit this application to the doctoral examination committee at the earliest possible opportunity, giving the reason for withdrawal and providing appropriate documentation. In the case of illness the application must be accompanied by a doctor's certificate detailing the medical indications required for an evaluation of the candidate's inability to take the exam.

(3) If the withdrawal is approved by the doctoral examination committee, a new examination date is set. If the withdrawal is not approved, the oral defense counts as failed.

§ 16 Retraction and revocation of admission to doctoral studies; invalidity of assessed work

(1) If it is shown prior to presentation of the doctoral degree certificate that the doctoral candidate has used deception regarding a requirement for admission or that significant requirements for admission were wrongly assumed to have been met, admission to doctoral studies may be cancelled. The same applies if facts become known which would justify the revocation of the doctoral degree under section § 36 paragraph (7) Landeshochschulgesetz.

(2) If it is shown prior to presentation of the doctoral degree certificate that the doctoral candidate has used deception in a piece of assessment for the doctorate, parts or all of the doctoral assessment may be declared invalid; in severe cases, admission to doctoral studies may be retracted.

(3) Before any decision is made under paragraphs (1) or (2), the doctoral candidate must be given an opportunity to speak on the matter. The reason for the decision must be given in writing to the doctoral candidate together with information on the right to appeal.

§ 17 Revocation of doctoral degree

(1) The revocation of the doctoral degree must be in accordance with section § 36 paragraph (7) Landeshochschulgesetz and section § 48 Landesverwaltungsverfahrensgesetz.

(2) If the requirements for admission to the doctoral examination process were not met, and the applicant did not intend to deceive, and if the fact becomes known only after the doctoral degree certificate has been issued, this fault is remedied by the candidate having passed the doctoral examination.

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(3) Before a decision is made to revoke a doctoral degree, the person concerned must be given the opportunity to speak on the matter. The reason for the decision must be given in writing to the person concerned together with information on the right to appeal.

(4) If the doctoral degree is revoked, any doctoral degree certificate already presented must be confiscated.

(5) The revocation of a doctoral degree may be communicated with the necessary details by the Rector to all German institutions of higher education which have the right to confer doctorates.

§ 18 Irregularity in proceedings; objections

(1) Irregularities in the doctoral examination process must be brought before the doctoral examination committee at the earliest possible opportunity.

(2) The person concerned may lodge an objection to notifications negatively affecting him/her, and which are based on these doctoral degree regulations, with the doctoral examination committee in writing within one month of the notification. The doctoral examination committee shall decide on the objection, where appropriate after consultation with the examination board.

(3) Administrative court procedure (Verwaltungsgerichtsordnung) regulations apply to the objection procedure.

§ 19 Consulting an ombudsperson

(1) The ombudspersons appointed by the University of Freiburg senate are the contact persons for all the Faculty of Mathematics and Physics doctoral candidates and for their supervisors in all conflicts arising from the supervisory relationship and from work on a doctoral thesis.

(2) The procedure of consulting an ombudsperson is regulated in the University of Freiburg general statutes.

§ 20 Protection provisions

(1) The application by a doctoral candidate for statutory time off under § 3 paragraph (1) and § 6 paragraph (1) of the Mutterschutzgesetz/ Maternity Protection Act in the version published on 20 June 2002 (BGBl. I p. 2318), as amended, must be taken into consideration. The application must include the necessary documentation. Maternity protection provisions suspend all other deadlines in these doctoral degree regulations.

(2) Similarly, provisions for parenting leave under § 15 paragraphs (1) to (3) of the relevant law (Bundeselterngeld- und Elternzeitgesetz) of 5 December 2006 (BGBl. I p. 2748), as amended, must be taken into consideration upon application. The doctoral candidate must communicate to the doctoral examination committee the period in which he/she plans to take parenting leave, providing the necessary documentation, at least four weeks before the planned start date of the parenting leave. The doctoral examination committee must establish whether the legal requirements are met which would trigger the right to parenting leave in an employment situation, and notifies the doctoral candidate of the result as well as any new examination or other deadlines.

(3) Recourse to the protection provisions for care of a close relative as defined by § 7 paragraph (3) under the law governing nursing care periods (Pflegerzeitgesetz of 28 May 2008 (BGBl. I p. 874, 896) as amended) when that relative is in need of care as defined by sections §§ 14 and 15 of Book Eleven of the Social Code (SGB XI of 26 May 1994 (BGBl. I p. 1014, 1015) as amended) is permitted.

§ 21 Disadvantage compensation

(1) ¹Doctoral candidates with a disability or chronic illness which impedes them in performing work required for doctoral studies are to be allowed reasonable disadvantage compensation by the doctoral examination committee, upon application. ²The doctoral examination committee determines the form and scope of the compensation measure in accordance with the severity of the documented disability or illness which impedes the performance of work required for doctoral studies. Compensation measures may comprise in particular a reasonable extension of the exam deadlines set out in these doctoral degree regulations; reasonable compensation may also be allowed additionally or alternatively in some other form.

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(2) An application for disadvantage compensation must be submitted, at the latest, together with the application for the launch of the doctoral examination process. Documentation of the disability or illness as defined by paragraph (1) item (1) must be provided by a doctor's certificate detailing the necessary medical indications. In general or in individual cases the doctoral examination committee may request a medical certificate from a doctor who it nominates.

(3) Before the doctoral examination committee makes a decision under paragraph (1) item (2) in disputed cases it must consult the university's representative for students with disabilities or chronic illnesses, if the doctoral candidate agrees.

§ 22 Storage of examination files

(1) After successful conclusion of the doctoral examination process the documentation relating to it, including the thesis, are placed on the Faculty of Mathematics and Physics files.

(2) If the thesis is rejected or if the doctoral examination is failed with no option to retry, the thesis and all related documentation remain in the faculty files.

(3) Documentation relating to the examination must be kept on file at the faculty for five years. After expiry of this period of storage the exam documentation must be delivered to the University Archive in accordance with paragraph (1) and the exam documentation offered in accordance with paragraph (2).

§ 23 Inspection of doctoral files

Within a year of the completion of the doctoral examination process the doctoral candidate must be permitted to inspect his/her examination files. The head of the doctoral examination committee sets the time and place for inspection.

§ 24 Doctoral studies jointly supervised with other universities

(1) The doctoral examination process may be conducted jointly with one or more other universities inside or outside Germany on the basis of an agreement between the University of Freiburg and the other university or universities. Any such cooperation agreement must be signed by the doctoral candidate and, on behalf of the University of Freiburg, by the supervisor, the head of the doctoral examination committee, and the Rector. The cooperation agreement must regulate the following matters in particular:

1. the nature of the academic supervision of the doctoral candidate,
2. the minimum required of the candidate's research periods at the partner university or universities,
3. rules for assessment including: the language to be used, how the examination board is to be appointed, and which grading scheme is to apply,
4. rules governing the presentation of the doctoral degree,
5. the duty to publish the doctoral thesis,
6. who is to pay travel expenses.

(2) For doctorates conducted by the University of Freiburg in joint supervision with other institutions of higher education with the right to confer doctorates, the general provisions of these doctoral degree regulations apply, if not otherwise provided for below.

(3) The doctoral candidate is supervised by a member of academic teaching staff from the other institution of higher education and by a member of academic teaching staff from the Faculty of Mathematics and Physics who meets the requirements under section § 3 paragraph (1) item (1).

(4) The doctoral candidate decides - in consultation with the supervisors of the thesis - at which of the participating institutions the doctoral examination process is to be conducted.

(5) If a justified application is made, the thesis may be submitted in a language other than German or English, section § 8 paragraph (2) applies accordingly. The participating faculties and institutions of higher education must be listed on the back of the title page.

(6) For the reviewing of the thesis, the conducting of the oral defense, the determining of the overall result in the doctoral examination, and the option of repeating doctoral studies, the provisions of the insti-

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tution of higher education at which the doctoral examination process is being conducted apply; however, the following conditions must be met:

1. If the doctoral examination process is not conducted at the University of Freiburg, it must be ensured that at least one academic representative of the University of Freiburg Faculty of Mathematics and Physics who meets the requirements under section § 3 paragraph (1) participates in the other institution of higher education's doctoral examination process.
2. If the doctoral examination process is not conducted at the University of Freiburg, at least one academic representative of the other institution or one of the other institutions who meets the requirements under section § 3 paragraph (2) must be appointed as a reviewer or examiner.

(7) ¹The doctoral degree certificate contains the names and signatures of the persons designated in accordance with the doctoral degree certificate of the participating institutions of higher education and bears the seal of the University of Freiburg as well as the seal of the other participating institution(s) of higher education and/or faculties. ²It contains the designation of the academic degree "Doktor der Naturwissenschaften" as well as the corresponding foreign academic degree, where appropriate. ³The doctoral degree certificate must include a note to the effect that the doctorate was obtained under joint supervision by two or more universities. If two doctoral degree certificates are issued, items (1) to (3) apply accordingly.

(8) With the receipt of the doctoral degree certificate the holder obtains the right to use the title of doctor in the Federal Republic of Germany, and in the case of a joint doctoral degree with an institution of higher education outside Germany, the right to also use an equivalent title in the state the other institution belongs to. The holder thereby obtains the right to use one doctoral title only.

(9) For the publication of the thesis and the number of archive copies, the cooperation agreement may refer to the right of the other institution(s) of higher education. It must be ensured that the Faculty of Mathematics and Physics receives the necessary number of copies, depending on the type of publication under section § 13 paragraph (3).

§ 25 Doctoral convention

(1) The doctoral candidates accepted for doctoral studies by the Faculty of Mathematics and Physics comprise a doctoral convention.

(2) The doctoral convention may debate matters affecting doctoral candidates and make recommendations to university bodies. The draft doctoral degree regulations are made available to the doctoral convention for comment; the comments are included in the senate documentation.

(3) The doctoral convention makes its own rules of procedure and elects an executive board. The details of how the doctoral convention is organized and how its executive board is elected are set out in the convention's rules of procedure, which are passed by a majority of the doctoral convention members present.

A member of the doctoral convention executive board may participate in an advisory capacity in meetings of the faculty board for consultations on draft faculty doctoral degree regulations.

§ 26 Doctoral jubilee

The Faculty of Mathematics and Physics may renew a doctorate with a degree certificate on the twenty-fifth and the fiftieth anniversary of the doctoral qualification day, if this appears appropriate in the light of the particular academic achievements, or particular connection to the University of Freiburg, of the person to be thus honored. This is to be decided by the faculty board.

§ 27 Honorary doctorates

(1) The Faculty of Mathematics and Physics confers an honorary Doctor of Science degree (Doctor rerum naturalium honoris causa – Dr. rer. nat. h.c.) as a rare distinction showing particular appreciation of outstanding services to academia in a discipline represented by the faculty. Women may use the title of honorary doctor in the feminine form.

(2) In consultation with the Senate, the faculty board decides on the conferring of an honorary doctorate, and on the revoking of an honorary doctorate under § 17 with the necessary changes.

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(3) Any member of academic staff at the Faculty of Mathematics and Physics may make an application to confer an honorary doctorate. The application must be made in writing to the head of the doctoral examination committee. The application must contain:

1. a biography of the person to receive the honorary doctorate,
2. a publication list of the person to receive the honorary doctorate,
3. comprehensive reasons for the award and
4. a draft of the honorary doctoral certificate.

After reviewing the application for completeness, the head of the doctoral examination committee sends the application on to the faculty board.

(4) The faculty board appoints a commission to review the requirements for an honorary doctorate and to produce a report for the adoption of a resolution by the faculty board. Members of the commission are: the applicant or one of the applicants representing them all, three further members of academic teaching staff, a doctorate holder from the academic staff, and a student in an advisory capacity.

(5) The faculty board takes the commission's report into consideration and decides on the application by a two-thirds majority of its members who are entitled to vote.

(6) The person to receive the honor is only informed of the planned honorary doctorate after the process has been fully completed. The honorary doctorate is offered to him/her by the Dean.

(7) An honorary doctorate is to be conferred by the ceremonial presentation of the honorary doctoral certificate by the Dean in the presence of the members of the faculty. The certificate must detail the academic merits of the person receiving the doctorate. The doctoral degree certificate is signed by the Rector of the University of Freiburg and the Dean of the faculty and bears the university seal.

§ 28 Effective date and transitional arrangements

(1) These doctoral degree regulations go into effect on 1 June 2016. The University of Freiburg doctoral degree regulations for the Faculty of Mathematics and Physics of 7 July 2003 (Amtliche Bekanntmachungen Vol. 34, no. 19, pp. 222–236), last amended on 23 November 2012 (Amtliche Bekanntmachungen Vol. 43, no. 112, pp. 461–462), become invalid concurrently.

(2) The previous regulations apply to doctoral examination processes which had already been launched at the time these doctoral degree regulations come into effect or whose launch had been applied for at that time.

(3) The previous regulations apply to doctoral candidates who have been accepted to doctoral studies at the time these doctoral degree regulations come into effect but have yet to make application to be admitted to the doctoral examination process, unless the doctoral candidate formally requests for these doctoral degree regulations to apply.

Freiburg, 6 June 2016

Professor Dr. Dr. h.c. Hans-Jochen Schiewer
Rector

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Attachment

(regarding section § 7 paragraph (1) item (3)(6))

Statutory declaration

The statutory declaration must usually be submitted in writing. The option of making a statutory declaration to be minuted remains unaffected. The written declaration is worded as follows:

“Statutory declaration

in accordance with § 7 (1)(3)(6) of the University of Freiburg’s Faculty of Mathematics and Physics doctoral degree regulations

1. The doctoral thesis herewith submitted with the following topic:

is my own independent work.

2. I have used only the sources and resources listed therein and have not made use of any inadmissible help from any third party. In particular, I have clearly identified matter from other works, cited verbatim or paraphrased, as such.

3. The doctoral thesis or parts thereof

(Please mark relevant box with an x)

- have not been presented at any institution of higher education in Germany or abroad as part of assessment for an examination or qualification.
- have been presented at any institution of higher education in Germany or abroad as part of assessment for an examination or qualification.

Title of the work presented for assessment somewhere else:

Name of relevant institution of higher education:

Year in which the work was presented:

Type of assessment for examination or qualification:

4. I hereby confirm that the above declaration is true.
5. I am aware of the significance of the statutory declaration and that I am liable to criminal prosecution if my statutory declaration is untrue or incomplete.

I solemnly swear that to the best of my knowledge this information is true and that I have not concealed any relevant information.

Place and date

Signature”