

*Legal note: This English translation is for your information only. The legal basis for a Course of Examination of Doctoral Candidates is the original German text (see <http://www.physik.uni-jena.de/formulare/Promotion.pdf>).*

# **Course of Examination for Doctoral Candidates**

## **Faculty of Physics and Astronomy**

### **Friedrich-Schiller-Universität Jena**

Given on 30<sup>th</sup> July 2008.

According to § 3 paragraph 1, in conjunction with § 34 paragraph 3 of the Thuringian Higher Education Act (Thüringer Hochschulgesetz [ThürHG]) of 21 December 2006, the Friedrich-Schiller-Universität Jena issues the following regulations for doctoral study at the Faculty of Physics and Astronomy. This programme of study was decided by the Council of the Faculty on 14 June 2007. The Senate of the Friedrich-Schiller-Universität Jena agreed to the programme on 4 December 2007. The Rector approved the programme on 5 December 2007.

## **I. Doctoral Degree**

### **§ 1**

(1) The Friedrich-Schiller-Universität Jena, through the Faculty of Physics and Astronomy according to this doctoral studies regulation, confers the doctoral degrees:

- doctor rerum naturalium (Dr. rer. nat)

for the fields of optics, solid state physics /materials science, gravitational physics and quantum theory as well as astronomy/astrophysics

- Doktor-Ingenieur(in) (Dr.-Ing.)

for the fields of materials science and technical physics.

(2) The Friedrich-Schiller-Universität Jena, through the Faculty of Physics and Astronomy (as in § 18), may also confer the honorary degree and distinction of Doktor ehrenhalber or doctor honoris causa (Dr. rer. nat. h.c. or Dr.-Ing. E.h.).

(3) Designators of function or status within this document (i.e., pronouns and other identifiers) are presumed to refer to both the masculine and the feminine forms.

## **§ 2**

(1) The conferral of the doctorate serves as certification of the holder's ability to carry out advanced scientific work within one of the fields represented by the Faculty of Physics and Astronomy as well as their profound knowledge in a second field according to appendix 2.

(2) The certification will be granted, except in the case of an honorary degree, through the successful submission of a written scientific thesis (dissertation) in accordance with §§ 8 and 9 and public defence of the dissertation as in §§ 10 and 11.

## ***II. Admission to apply to a doctoral programme***

### **§ 3**

(1) Admission to apply to a doctoral programme, as a rule, assumes that the applicant has successfully completed a Diplom or Master program, or a state examination (Staatsexamen), at a university or peer academic institution.

Those who wish to earn the degree Dr. rer. nat. must have earned a Diplom or Master at a postsecondary institution in a subject within natural or technical natural science, or have passed a final examination in education studies (Lehramtsstudium) for grammar schools (Gymnasien) at the level Sekundarstufe II with physics as a major subject.

Admission to earn the degree Dr.-Ing. requires a completed Diplom or Master at a postsecondary institution with a research-oriented profile in a subject within engineering or natural science.

(2) Exceptions from paragraph 1 are possible only in accordance with the then present majority of the members of the Faculty Council holding a doctoral degree and only if the candidate can prove that his prior education was equivalent. In order to assure this and in accordance with appendix 1, the Faculty Council may ask for an evaluation of the candidate's prior academic performance as part of an individual evaluation of the candidate's ability (Eignungsfeststellungsverfahren). If necessary, the Faculty Council may rule that the candidate completes a number of study courses which are part of the degree course regulations of the Faculty of Physics and Astronomy. These additional courses must be specified in the letter of admission to the doctoral study. This also goes for the admission of especially qualified Bachelors according to §3 paragraph 4 of the General Regulations of Doctoral Studies of the Faculties of FSU (Allgemeine Bestimmungen für die Promotionsordnungen der Fakultäten der FSU [ABPO]). These additional requirements may also be fulfilled by successfully completing a recognized program of the structured doctoral education offered by the graduate academy and supported by the supervisors, university teachers or heads of junior research groups of the Faculty of Physics and Astronomy. The candidate has to complete these courses until the opening of the doctoral examination procedures.

(3) As a general rule, an applicant cannot be admitted if he or she has already applied to a doctoral programme elsewhere within the same discipline, or has previously terminated other doctoral examination procedures unsuccessfully.

### ***III. Acceptance as a doctoral candidate***

#### **§ 4**

(1) Persons who fulfil the admission requirements in § 3 and who intend to complete a dissertation may apply to the Faculty of Physics and Astronomy for acceptance as doctoral candidates. With the acceptance of the applicant, the Faculty takes on the responsibility to evaluate his or her dissertation as a piece of scientific work. The written application is to include the intended dissertation topic. In the application form a professor or lecturer of the Faculty of Physics and Astronomy (Professor, Hochschuldozent, Privatdozent, or head of a junior research group) has to give a written guarantee that he or she will act as the applicant's scientific advisor, the applicant has to certify his or her prior education with a signature. A cooperation of two advisors – one from the Faculty of Physics and Astronomy and the other from a university of applied sciences – is possible. Applications must be accompanied by copies (in the case of external candidates: certified copies) of the diploma or degree certificate.

(2) The Dean of the Faculty of Physics and Astronomy decides whether to accept or reject the application [see (1)] within two months. Rejections require the consent of the Faculty Council. The application may be rejected if the chosen topic of the dissertation is not appropriate to the Faculty or originates in a field which is not usually covered by the Faculty, and, further, if the technical requirements for the completion of the dissertation are not available.

(3) The decision to accept or reject the application is to be given to the applicant in writing. A rejection of the application must be given according to § 17. The certificate of acceptance (Annahmebescheinigung) must specify the subject area of the doctoral work (main field), the topic and the scientific advisor of the dissertation as well as additional requirements as in § 3 paragraph 2 (if applicable).

(4) The dissertation of an accepted doctoral candidate must be produced either at an institute of the Faculty of Physics and Astronomy or at a peer research institution. Peer institutions are here defined as those in which professors and lecturers of the Faculty are involved as active, full-time or part-time members. Dissertations produced outside these institutions require a primary supervision by a professor or lecturer of the Faculty of Physics and Astronomy. The Faculty Council decides on how to handle exceptions.

(5) Having been accepted to the doctoral program, the candidate commits him- or herself to report to the supervisor regularly about the state of his dissertation project. The supervisor commits him- or herself to let him- or herself be informed regularly about the state of the candidate's dissertation project (Betreuungsvereinbarung). This shall be affirmed in the letter of acceptance.

(6) The acceptance of an applicant does not grant him or her any legal rights to the opening doctoral examination procedures. Acceptance as a doctoral candidate can be revoked if there is no prospect of the dissertation being successfully completed within a reasonable period of time. The candidate is to be given the opportunity of a hearing before the Faculty Council prior to such a decision.

(7) Acceptance as a doctoral candidate is usually tied to the registration as a doctoral student at the Friedrich-Schiller-Universität .

## ***IV. Opening of the examination procedures***

### **§ 5**

The application to open the doctoral examination procedures is to be given to the Dean of the Faculty in writing. The following documents are to accompany the application:

1. The certificate of the existence of requirements following § 3 as well as, where applicable, the certificate of acceptance as a doctoral candidate as in § 4;
2. four copies of the dissertation and 20 copies of the conclusion/summary (max. 1 page);
3. a written declaration of honour, from which it can be determined:
  - 3.1. that the applicant is familiar with the relevant course of examination for doctoral candidates (Promotionsordnung),
  - 3.2. that the applicant has composed and written the dissertation him or herself (Selbständigkeitserklärung), that he or she has not taken over any textual passages of other persons or his or her own texts relevant to examination without identifying them, and that he or she has acknowledged all additional assistance, personal communication, and sources within the work,
  - 3.3. which persons have assisted the applicant with the choice and assessment of materials and/or supported him or her in writing the manuscript,
  - 3.4. that the applicant has not enlisted the assistance of a doctoral consultant (Promotionsberater) and that no third parties have received either direct or indirect monetary benefits from the applicant for work connected to the submitted dissertation,
  - 3.5. that the applicant has not already submitted the dissertation as an examination paper for a state or other scientific examination,
  - 3.6. whether the applicant has submitted the same, a substantially similar, or a different paper to another postsecondary school and, if so, with what result;
4. a mentioning of the scientific field in which the dissertation was produced as well as a second field according to appendix 2 which is not directly connected

to the first field and which will also be subject of the oral examination;

5. an official certificate of good conduct (amtliches Führungszeugnis), if the applicant has not been enrolled as a student for the three months prior to application or in the case that the applicant is not in civil service;
6. the certificate of payment of tuition fees (Promotionsgebühr) in the appropriate amount as according to the regulations (Gebührenordnung);
7. a certified copy of all degree certificates and documents relevant to the applicant's prior education
8. a curriculum vitae (CV) of the applicant's scientific career;
9. a list of scientific publications and presentations.

## **§ 6**

(1) The Faculty Council decides whether to open the examination procedures during its first sitting following the submission of the application. The decision is made by a majority vote of its then present doctorate-holding members. Exceptions from the topics of examination as listed in appendix 2 can be made in well-reasoned cases. If one of the examination topics is too close to that of the dissertation, the examination procedures may be opened with the additional requirement that the candidate must name a new second examination topic.

(2) The applicant receives written notice of the opening of the examination procedures from the Dean.

(3) In case of a negative decision by the faculty council, procedures are to be followed as outlined in § 17.

(4) The withdrawal of the application to open the doctoral examination procedures is permissible until either the date for the oral exam (disputation) has been fixed or the procedures have been closed due to the rejection of the dissertation.

## ***V. Doctoral committee***

### **§ 7**

(1) With the decision to open doctoral examination procedures, the Faculty Council, at the suggestion of the Dean, appoints a doctoral committee including the reviewers (Gutachter) and the chairperson. All members of the doctoral committee should be professors or hold postdoctoral degrees (Habilitation). The chairperson of the doctoral committee must be a professor (Hochschullehrer) or head of a junior research group at the Faculty of Physics and Astronomy.

(2) The doctoral committee consists of the three reviewers of the dissertation, at least one of which may not be a member or affiliate of the Friedrich-Schiller-

Universität, and two more university teachers (Hochschullehrer, Privatdozenten or heads of junior research groups). If the dissertation is supervised by an instructor (Hochschullehrer) of the Faculty, then he or she is also to be appointed as the first reviewer. The second reviewer shall be appointed co-referent. He or she must be present at the dissertation defense. He or she is obliged to further a high-level scientific discussion during the defense with suitable questions. The doctoral committee should consist of a university instructor who represents the subject field of the dissertation and one who represents the second field of the oral examination named by the candidate. The majority of the members of the doctoral committee must be university instructors (Hochschullehrer).

(3) The doctoral committee, in closed session, decides about the acceptance or rejection of the dissertation based on written reviews and on possible reviewers' evaluations according to § 9 paragraph 3. The committee also conducts the oral exam according to § 10 and public defence according to § 11 and evaluates the candidate's performance. Its decisions are to be recorded in a procedural log (Verfahrensprotokoll). It suggests the mark of the dissertation and the overall mark to the Faculty Council.

(4) The Dean has the right to participate in the examinations and in the deliberations of the doctoral committee.

(5) The members of the doctoral committee are obliged by § 46 ThürHG to maintain silence on matters that are revealed to them during closed session, with the exception of matters which are already publicly known or whose significance does not require secrecy. Duties to maintain confidentiality based on service and working relationships shall remain undisturbed.

(6) The right of professors to participate in the doctoral examination procedures is not disturbed by their retirement or emeritus status. The Faculty Council makes decisions regarding further participatory rights.

## ***VI. Dissertation***

### **§ 8**

(1) In the dissertation, the applicant demonstrates his or her ability to independently solve scientific problems whose solutions serve the development of his or her chosen discipline.

(2) The dissertation must be assigned to one of the subject areas of the Faculty of Physics and Astronomy. To earn a Dr.-Ing. degree, the dissertation must be oriented towards engineering science. Candidates may include already-published results in the dissertation.

(3) A cumulative dissertation consisting of a compilation of already-published results is not permitted.

(4) The dissertation can be written in German or English. It must be printed and

bound.

(5) The dissertation is to include a title page (see appendix 3), a short CV outlining the applicant's scientific educational background and written declaration that the applicant has composed and written the dissertation him or herself (Selbständigkeitserklärung).

(6) The candidate must submit a German summary of the dissertation along with it, which mentions the goal and results of the work.

(7) The length of the dissertation should not be greater than 100 pages. Anyone who wishes to exceed this length limit requires the Dean's approval to do so.

## ***VII. Evaluation and grading of the dissertation***

### **§ 9**

(1) The Dean submits the dissertation to the reviewers (appointed as in § 7 paragraph 1 and 2) along with the request that they return an opinion within a suitable period of time. This period should not exceed two months after the opening of the examination procedures.

(2) The reviewers return their opinions and suggest the acceptance or rejection of the dissertation. In case of acceptance, they might assign one the following marks: summa cum laude (outstanding), magna cum laude (excellent = 1), cum laude (good = 2), rite (sufficient = 3).

The acceptance of the dissertation can be given subject to the removal of factual errors (Mängelbeseitigung).

(3) On receiving all the reviews, the chairperson of the doctoral committee makes it known to all university instructors (Professoren und habilitierte Mitglieder) or heads of junior research groups of the Faculty that the dissertation and reviews are made available in the office of the Dean to the other members of the doctoral committee for three weeks. During that period that they may view the document and offer their written comments. At the Dean's office, members of the doctoral committee may read all documents concerning the examination procedure and may offer written comments.

(4) If all the reviewers suggest the acceptance of the dissertation, the chairperson of the doctoral committee initiates the immediate continuation of the doctoral examination procedures. The candidate is to be informed in particular of the receipt of the last review.

(5) The doctoral committee decides about the acceptance or rejection of the dissertation on the basis of the reviews. Should only one reviewer recommend the rejection of the dissertation, the doctoral committee may invite further reviewers to evaluate the dissertation. The decision about the acceptance or rejection of the dissertation must take into account all existing reviews. If two reviewers reject the

dissertation, the examination is to be considered as failed and examination procedures are to be closed unsuccessfully (i.e., without granting a degree).

(6) With the rejection of the dissertation the examination procedure is finished unsuccessfully. The rejected dissertation and all its reviews remain in the archive of the Dean's office. The Dean is to serve a written notice to the doctoral candidate regarding discontinuation of the examination procedures. The doctoral candidate is in this case allowed to view the examination documents.

(7) If the dissertation has been rejected, the candidate may undertake one more try.

## ***VIII. Disputation***

### **§ 10**

(1) After the reviews have been submitted, the disputation takes place in form of an oral exam and a public defence of the dissertation on one and the same day. The chairperson of the doctoral committee sets the time and place for the disputation and makes them known to the candidate, the members of the doctoral committee and the public. The disputation should take place, as a rule, no later than one month after the submission of the reviews.

(2) During this period, the candidate may read the reviews.

(3) The objects of the oral exam are the major subject, in which the dissertation originates, and the second subject, chosen by the candidate according to appendix 2. The subject matter of the exam should be equivalent to at least four hours per week of lectures (60 hours) in each field of study.

(4) The exam should last at least 30 minutes and should not exceed 60 minutes.

(5) All members of the doctoral committee may act as examiners. The two members of the doctoral committee who represent the two scientific fields which are subject to examination must be examiners.

(6) For every exam, a log (Protokoll) is to be recorded. This log is to contain the questions asked by the examiner, the general path of the examination and the extent to which the candidate showed him or herself to be knowledgeable.

The doctoral committee decides right after the oral exam whether the candidate passed or failed it. The oral exam is not marked. The exam results are taken into account when the talk and defence of the dissertation are being evaluated.

(7) Right after the decision about the oral exam has been taken, it is shared by the chairperson of the doctoral committee with the candidate.

(8) If the oral exam is failed, it may be repeated no earlier than eight weeks and no later than one year after. If the oral exam is failed for the second time, the examination procedures are closed unsuccessfully.

## **§ 11**

(1) Right after the successful completion of the oral exam, the public defence of the dissertation takes place. The public defence gives the opportunity to the candidate to present and defend his or her results. It consists of the presentation of the most important results of the dissertation in a talk lasting maximally 30 minutes, and a closing public scientific discussion. In the discussion the candidate defends the results of his dissertation and demonstrates his or her knowledge of the subject which proves that he or she has worked intensively and autonomously in this field and that he or she is well-versed in the state of research in that field.

(2) The defence is conducted by the chairperson of the doctoral committee. At least four members of the doctoral committee must participate in the defence: the chairperson, the primary reviewer (supervisor), the second reviewer (Korreferent) and a representative of the second field of the oral examination. The chairperson may exclude questions which do not belong to the academic field of the dissertation.

(3) The chairperson of the doctoral committee records a log (Protokoll) of the defence which includes an evaluation of the candidate's initial talk and the progression of the discussion. Following the defence, the doctoral committee discusses the mark of the disputation which evaluates the candidate's performance on the oral exam, the scientific talk and discussion. The results of the oral exam and the public defence are weighed about equally. The following marks may be given: magna cum laude (very good = 1), cum laude (good = 2), rite (sufficient = 3), non sufficit (insufficient = 4).

(4) A failed defence may be repeated once within 12 months following the first attempt. Should the defence not be repeated or should it be failed more than once, the doctoral examination procedures are ended unsuccessfully.

## **IX. Final mark**

### **§ 12**

(1) Immediately following the defence, the doctoral committee assigns a mark for the defence, and the final mark of the disputation, the dissertation and the final mark of the doctoral examination procedures. Written commentaries and reviews according to § 9 paragraph 3 are considered in these decisions. The mark of the dissertation and the final mark of the doctoral examination procedures are suggested to the Faculty Council which decides about them. The mark of the dissertation and the doctoral committee's suggested final mark of the doctoral examination procedures are shared with the candidate immediately following the defence.

(2) The mark for the dissertation is determined from the weighed arithmetic mean of the individual reviewers' marks for the dissertation; the mark "summa cum laude" is equal to the mark "1" (outstanding) and weighs double. All other marks count by

factor 1. If additional reviews were required, because one of the initial reviewers had rejected the dissertation, the marks of all reviewers who recommended an acceptance of the dissertation have to be taken into account when the final mark is decided on. Should the mean mark be 1.5 or 2.5, the committee suggests a mark for the dissertation which takes into account the reviewers' arguments. If there are additional comments by university teachers (Hochschullehrer) or members of the Faculty holding a Habilitation, it is to be determined if their comments are grave enough to influence the arithmetic mark. If this is the case, the arithmetic mark may be changed by one grade at the maximum. However, no mark worse than 3 may be assigned.

Should all marks without exception be "magna cum laude", the final mark of the dissertation may be "summa cum laude" (outstanding); otherwise the following marks can be given: magna cum laude (very good = 1), cum laude (good = 2), rite (sufficient = 3).

(3) The final mark for the doctoral examinations is determined from the arithmetic mean of the marks for the dissertation and the disputation, both of which have equal weight. Should the mean mark be 1.5 or 2.5, the mark for the dissertation determines primarily the final mark for the doctoral examination. If the Mark of the dissertation is "summa cum laude" and the mark for the disputation is "magna cum laude", the final mark of the dissertation may be "summa cum laude" (outstanding); otherwise the following marks can be given: magna cum laude (very good = 1), cum laude (good = 2), rite (sufficient = 3).

(4) All marks are recorded in the log of the defence and are given to the Dean as a recommendation of the doctoral committee along with the suggestion that the candidate be granted an academic degree.

(5) The Council of the Faculty of Physics and Astronomy approves the marks of the dissertation and the final mark of the doctoral examination via a majority vote of its then present doctorate-holding members at its next sitting.

## ***IX. Completion of examination procedures and certification***

### **§ 13**

(1) The doctoral committee can make requirements for the removal of factual errors before the publishing of the dissertation. It is incumbent upon the Dean to assess the fulfillment of these requirements.

(2) The Dean shares the decision of the Faculty Council with the doctoral candidate, in writing, and advises him or her as to the obligation to publish the dissertation as well as to the full terms and benefits of the doctorate.

### **§ 14**

(1) Following acceptance of the dissertation and the successful completion of the public defence, the candidate is obligated to publish the dissertation and to give

copies to the Thuringian Universitäts- und Landesbibliothek (ThULB) as in paragraph (2).

(2) The obligation to publish the dissertation is satisfied when, in addition to four copies for the examination files, the following copies of the dissertation are supplied to the Thüringer Universitäts- und Landesbibliothek (ThULB):

- a) either 15 printed copies, on archival quality, wood- and acid-free paper and durably bound, or
- b) ten printed copies, if the dissertation has been published in a journal or scientific written series, or
- c) ten printed copies, if a commercial publisher will distribute the dissertation as a book, of which at least 150 copies can be demonstrated, and this publishing is announced on the back of the title page of the dissertation, or
- d) five printed copies and an electronic version in a data format and medium which is according to parameters set by the ThULB.

In cases a) and d), the doctoral candidate transfers to the university the right to make and disseminate further copies of the dissertation.

(3) The copies for the Library have to be submitted within six months after the doctoral examination. An extension of that period requires the Dean's approval.

### **§ 15**

(1) As soon as the conditions in § 13 paragraph (1) are fulfilled and the obligation to publish the dissertation as given in § 14 is satisfied, the doctorate is officially granted through the handing over of a certificate (Urkunde) signed by the Rector and the Dean (see appendix 4). The day of the performance of the defence is given as the granting date for the degree.

(2) The right of the doctoral candidate to use the title of Doctor and to display the associated degree begins with the handing over of this certificate only.

(3) As an exception from paragraph (2), the candidate may be granted a provisional right to assume the doctoral degree and title before the handing over of the certificate if the fulfilment of all outstanding requirements has been demonstrated. This decision is issued by the Dean.

(4) After the doctoral examination procedures have been closed, the candidate may read the documents related to the examination procedures.

## ***X. Fraud and denial of the doctorate***

### **§ 16**

(1) The granting of the doctorate is to be revoked if the applicant has lied or cheated in the verification of admission requirements or in any of the activities involved in the earning of the doctorate, or if anything should come to light which would have disqualified the candidate from being granted a degree. The decision to revoke the doctorate is made by a majority vote of the doctorate-holding members of the Faculty Council, after the holder of the degree has been afforded a hearing before the council.

(2) If the requirements for admission to a doctoral programme were not fulfilled, and the applicant did not attempt to lie or cheat about their fulfilment, and if this first becomes known after the handing over of the doctoral certificate, these deficiencies will be considered remedied through the successful completion of the doctoral examination.

(3) In addition to the above conditions, the revoking of a doctorate is subject to the Law in general.

## ***XI. Appeal of decisions***

### **§ 17**

(1) Decisions about the admission to doctoral studies, the acceptance or rejection of the dissertation and the result of the examination procedures are to be given to the candidate in writing. Any negative decision of the Faculty Council and/or the doctoral committee has to give reasons and inform about legal remedies available to the candidate and his or her right to appeal.

(2) Within a month following notification of the decision, the candidate may file a written appeal before the Rector of the Friedrich-Schiller-Universität. The Faculty Council then obtains an opinion from the legal department of the university and subsequently makes a decision regarding the appeal via a majority vote of its doctorate-holding members. The Rector issues notice of the decision after first obtaining the Dean's signature.

(3) The provisions of the administration procedural law (Verwaltungsgerichtsordnung) apply to the appeal and to the appeal process. In addition, § 111 of the Thuringian Higher Education Act (Thüringer Hochschulgesetz [ThürHG]) applies.

## ***XII. Honorary degrees and their renewal***

### **§ 18**

(1) In the recognition of excellent scientific achievement or other special merits, the Friedrich-Schiller-Universität can issue honorary degrees. These may be granted through the Faculty of Physics and Astronomy for any of the fields that it represents as in § 1 paragraph (2). The receipt of such a degree is a rare distinction.

(2) At least three professors of the Faculty must nominate the candidate for an honorary doctorate.

(3) Based on the submitted opinions, the Faculty Council may decide through the approval of three quarters of its doctorate-holding members to grant the honorary doctorate. Before the Faculty Council reaches a decision, the Senate is also to be given the opportunity to offer an opinion.

(4) The degree is granted through the presentation of a certificate signed by the Rector and the Dean, in which the achievements of the honoured personage are recognised. This is issued by the Dean in an event to which the Rector, the Senate, and instructors of the Faculty are invited.

### **§ 19**

(1) The honorary doctoral certificate can be renewed upon the 50<sup>th</sup> anniversary of the day of its initial conferral, if this renewal appears fitting in consideration of the scientific merits or close ties of the recipient with the Friedrich-Schiller-Universität.

(2) The anniversary certificate is granted following the proposal of the Dean and the approval of the Faculty Council. This certificate bears the signature of the Rector and of the Dean.

## ***XIII. Coming into effect of this course of examination (Promotionsordnung) and provisions during transition***

### **§ 20**

(1) This course of examination comes into effect on the first day of the month following its release in the common official journal of the Thuringian Ministry of Culture (Thüringer Kultusministeriums) and the Thuringian Ministry for Science, Research and the Arts (Thüringer Ministeriums für Wissenschaft, Forschung und Kunst). At the same time, the course of examination of 29<sup>th</sup> June 2000 (Amtsblatt des TKM/TMWK 2000 p. 392) becomes invalid, except for doctoral candidates who make use of their right to choose between the two courses of examination according to paragraph 2.

(2) Applicants who were already accepted on the basis of the course of examination for doctoral candidates at the Faculty of Physics and Astronomy of the Friedrich-

Schiller-Universität Jena from 29 June 2000, before the coming into effect of this document, have the right, until the termination of the semester during which this course of examination comes into effect, to choose between the current course of examination and the former one.

Jena, 30 July 2008

Prof. Dr. habil. Klaus Dicke  
Rector

Prof. Dr. rer. nat. habil. Richard Kowarschik  
Dean of the Faculty of Physics and  
Astronomy

## ***Appendices to the Course of Examination for Doctoral Candidates of the Faculty of Physics and Astronomy***

### **Appendix 1: Individual assessment and examination procedure (Eignungsfeststellungsverfahren)**

(1) As a general rule, graduates of study programs other than those named in §3 paragraph 1 may, by application to the Faculty of Physics and Astronomy, be admitted doctoral studies at the Faculty of Physics and Astronomy. The Faculty Council decides about the application only after the applicant's individual assessment (Eignungsfeststellungsverfahren).

(2) The assessment is made by a committee appointed especially for this individual candidate by the Faculty Council and headed by the Dean of Studies (Studien-dekan). The committee can in individual cases also determine discrepancies from the requirements for admission.

(3) The assessment committee decides on the program of further study which would be required before the examination depending on the topic of the dissertation project and the type of degree sought after.

(4) If the result of the assessment is insufficient, the assessment can be repeated once only. The assessment committee decides about exceptions.

(5) The application to open the individual assessment and examination procedures must include:

- a curriculum vitae (CV), together with a copy of the prior degree thesis and a copy of the degree certificate,
- a statement as to whether an applicant's ability assessment has already taken place at a university or other academic institution and if so with which result,
- an official certificate of good conduct in the case that the applicant is not employed in civil service,
- a statement regarding whether an academic degree has been revoked or a state legal process (staatsanwaltliches Ermittlungsverfahren) has been begun against the applicant.

## **Appendix 2: Possible oral exam topics**

**Topics for the oral examination for Dr. rer. nat. candidates may be chosen from among the following scientific fields:**

- Astronomy/Astrophysics
- Gravitational and Quantum Theory
- Solid State Physics/Materials Science
- Optics

**Topics for the oral examination for Dr.–Ing. candidates may be chosen from among the following scientific fields:**

- Materials Science
- Technical Physics
- Solid State Physics
- Optics
- Fields of Chemistry
- Astronomy/Astrophysics

**Appendix 3**

**Prototype**  
**for the dissertation title page**  
**(English translation only; please use the German version)**  
*(Some information must be filled in by the candidate)*

Title of the Dissertation

**Dissertation**  
**for the obtainment of the academic degree**  
*(the appropriate degree is to be inserted here)*

doctor rerum naturalium (Dr. rer. nat.)  
Doktor-Ingenieur (Dr.-Ing.)

**submitted to the Council of the Faculty of Physics and Astronomy**  
**of the Friedrich-Schiller-Universität Jena**

by ..... *(previously earned academic degrees, first and last name)*

born on ..... in .....

**Prototype of the back side of the title page (bottom)**  
*(all fields marked ..... on the back side of the title page are to first be filled out in the obligatory copies [Pflichtexemplare])*

**Reviewers**

1. ....
2. ....
3. ....

**Date of the rigorosum:** .....

**Date of the public defence:** .....

Appendix 4: Degree Certificate

# FRIEDRICH-SCHILLER-UNIVERSITÄT JENA



Die Friedrich-Schiller-Universität Jena verleiht  
durch die Physikalisch-Astronomische Fakultät  
unter dem Rektorat des Professors für Politische Theorie und Ideengeschichte  
Dr. rer. soc. habil. Klaus Dicke und unter dem Dekanat des Professors für ...

Herrn Dipl.- Phys.

**Klaus Mustermann**

geboren am .....in ....

den akademischen Grad eines

**"doctor rerum naturalium"**

**- Dr. rer. nat. -**

nachdem er in einem ordnungsgemäßen Promotionsverfahren mit der von  
Prof. Dr. ....betreuten Dissertation  
"Titel der Dissertation"  
(Prädikat der Dissertation:...) sowie einer Disputation seine wissenschaftliche  
Befähigung erwiesen und dabei das Gesamtprädikat

"..."

erhalten hat.

Jena, den ...

Der Rektor

Der Dekan