

These doctoral regulations have been worded carefully to be up to date; however, errors cannot be completely excluded. The official German text available from L 1 – Office of Legal Affairs and Academic Quality Management is the version that is legally binding.

## Faculty Doctoral Regulations for the Faculty of Engineering at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) – FPromO Tech – Dated 21 January 2013

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## I. General Provisions

### Section 1 Scope

<sup>1</sup>These doctoral regulations (FPromO Tech) supplement the FAU General Doctoral Regulations (**RPromO**) and are structured in a similar manner. <sup>2</sup>Therefore some sections do not contain further provisions.

### Section 2 Doctoral Degree

### Section 3 Doctoral Titles

The title of the honorary doctoral degree awarded by the Faculty of Engineering is Doktorin or Doktor der Ingenieurwissenschaften ehrenhalber (Dr.-Ing. e.h.).

### Section 4 Bodies Responsible and Procedural Regulations

(1) <sup>1</sup>The body responsible for doctoral degrees at the Faculty of Engineering is the Doctoral Affairs Committee. <sup>2</sup>It consists of the dean of studies for doctoral degrees as the chairperson and two full-time university lecturers employed at the Faculty of Engineering per department, one women's representative who is an authorised examiner of doctoral degrees and one representative of research staff who is also an authorised examiner of doctoral degrees. <sup>3</sup>The elected doctoral candidates' representative also participates in meetings and is entitled to vote, other than in the cases stipulated in paragraph 2. <sup>4</sup>The dean and a representative of the Office of Doctoral Affairs participate in the meetings in an advisory capacity. <sup>5</sup>Each department only has one vote in the meetings. <sup>6</sup>The term of office of the elected members shall be four years. <sup>7</sup>The Doctoral Affairs Committee can delegate tasks to its chairperson or another of its members.

(2) If the Doctoral Affairs Committee takes a decision pursuant to Section 14 in conjunction with Sections 11, 12 and 14 of the **RPromO** on the assessment of doctoral examinations, only the members of the Doctoral Affairs Committee who are authorised examiners for doctoral research according to Section 5 of the **RPromO** shall be eligible to vote.

(3) <sup>1</sup>All consultations of the Doctoral Affairs Committee and the examining committee pursuant to paragraph 4 related to procedures regulated by these regulations shall be held in non-public sessions. <sup>2</sup>The reviewers shall be invited to all consultations governed by Section 11 (5)(1) of the **RPromO** (recommending rejection of the thesis).

(4) <sup>1</sup>The examining committee shall consist of at least four members and is appointed by the Doctoral Affairs Committee. <sup>2</sup>The examining committee shall consist of:

1. A chairperson from the full-time professors at the Faculty of Engineering or professors according to Section 5 (2)(1)(2) of the **RPromO**, usually with the same discipline as the doctoral candidate; an adjunct professor may be appointed chairperson if they are employed on a full-time basis at the Faculty of Engineering;
2. The reviewers and
3. An authorised examiner from another department of the Faculty of Engineering or another FAU faculty in exceptional cases.

<sup>3</sup>The chairperson shall not be permitted to act as a reviewer in the same procedure. <sup>4</sup>If a member of the examining committee cannot take part in the oral examination and

fewer than four members of the examining committee remain, the Doctoral Affairs Committee can appoint another university lecturer to replace them at the request of the candidate.

### **Section 5 Reviewers and Supervisors**

(1) <sup>1</sup>Full-time and part-time university lecturers who are primary or secondary members of the Faculty of Engineering are entitled to supervise doctoral degrees (Section 5 (2) sentences 2 and 3 **RPromO**). <sup>2</sup>Outstanding young researchers who are able to continually supervise the doctoral research due to their employment at FAU or an institution associated with FAU can be appointed as supervisors according to Section 5 (2)(3) **RPromO** on an individual basis. <sup>3</sup>Outstanding young researchers within the meaning of sentence 2 are persons with a doctoral degree and particularly relevant research experience, in particular heads of junior research groups as part of the Emmy Noether programme run by the German Research Foundation or comparable programmes. <sup>4</sup>Section 18 **RPromO** shall remain unaffected.

(2) As a rule, the supervisor of the doctoral research is also appointed as a reviewer.

(3) <sup>1</sup>At least one reviewer must be a full-time university lecturer at the Faculty of Engineering. <sup>2</sup>Retired professors maintain the same rights as full-time university lecturers at the Faculty of Engineering for five years after their retirement. <sup>3</sup>If professors are appointed pursuant to sentence 2, the second reviewer must be an active university lecturer.

(4) If a university lecturer from a foreign university who holds an equivalent position or a person according to Section 5 (3)(1)(5) of the **RPromO** is proposed as a reviewer, an additional reviewer according to Section 3 (1) shall be required; Section 3 (2) must be applied accordingly.

(5) Cooperative doctoral degrees with other institutions shall require that at least two reviewers are university lecturers.

## **II. Admission to a Doctoral Degree**

### **Section 6 Admission Requirements**

(1) <sup>1</sup>To be admitted to a doctoral procedure, the candidate must present proof of one of the following degrees:

1. A pass in a Diplom examination (Diplomhauptprüfung) or Master's examination, including a Diplom thesis or Master's thesis, after a usually five-year long degree programme at a German university or an equivalent degree programme at a foreign university in an engineering, science or maths-related subject.
2. A pass in a Master's examination after a usually five-year long degree programme at a University of Applied Sciences in a subject stated in (1). Generally, applicants must have achieved 300 ECTS credits over the course of their Bachelor's and Master's degree programmes and must have written a Master's thesis.
3. A pass in the first State Examination for teaching secondary education (Gymnasium) in computer science or another engineering, science or maths-related subject.

<sup>2</sup>In the case of doubt, the decision as to whether the qualifications required pursuant to numbers 1 to 3 are sufficiently relevant shall be taken by the Doctoral Affairs Committee.

(2) According to Section 6 (1)(3) of the **RPromO**, in exceptional cases, the Doctoral Affairs Committee can also consider equivalent university degrees for admission, in particular those which were not obtained in the subjects in (1)(1) if the candidate passes the qualifying examination according to Section 7.

(3) In individual cases, candidates who have obtained an undergraduate degree may be admitted on the condition that proof of the degree according to (1)(1) is provided within one year after submission of the application form and that no more than 30 outstanding ECTS credits are required in order to complete this degree.

### **Section 7 Qualifying Examination**

(1) Individuals shall be admitted to the qualifying examination on request if:

1. They have not completely met all general admission requirements as set forth in Section 6 or
2. They have completed an undergraduate degree at a university of applied sciences or
3. They are to be admitted to the doctoral procedure in accordance with Section 6 (2).

(2) <sup>1</sup>In the qualifying examination, the candidate must prove that they have sufficient skills and knowledge in the subject of the pursued doctoral degree. <sup>2</sup>A pass in the qualifying examination confirms the subject qualification of the candidate and qualifies the candidate for studying a doctoral degree in the subject of the examination.

(3) <sup>1</sup>The qualifying examination consists of an oral examination which lasts approximately 45 minutes. <sup>2</sup>The examining committee is appointed by the Doctoral Affairs Committee following the supervisor's recommendation and consists of two university lecturers from the pursued subject and a university lecturer from another subject.

(4) <sup>1</sup>The examining committee may stipulate further conditions which must be fulfilled for awarding a pass in the qualifying examination according to (3). <sup>2</sup>These conditions are limited to:

1. Examinations in two subjects in the discipline of the pursued doctoral degree
2. An admissions essay with a maximum duration of four months.

(5) <sup>1</sup>The examinations imposed are subject to the General Degree Programme and Examination Regulations for Bachelor's and Master's examinations at the Faculty of Engineering – **ABMPO/TechFak** – dated 18 September 2007 in conjunction with the currently valid degree programme examination regulations and must be completed by the deadlines outlined in the degree programme examination regulations. <sup>2</sup>Oral examinations shall be conducted in the presence of a second university lecturer from the discipline. <sup>3</sup>The oral examination shall last approximately half an hour. <sup>4</sup>The examinations must be completed by one year after the admission to the qualifying examination at the latest. <sup>5</sup>If this deadline is exceeded due to circumstances within the candidate's influence the qualifying examination shall count as failed. <sup>6</sup>If the candidate does not achieve a minimum grade of 2.3 in all examinations, the qualifying examination shall count as failed.

(6) <sup>1</sup>The admissions essay must demonstrate that the candidate is capable of solving a problem relating to the subject in which they are pursuing the doctoral degree independently and according to academic methods (Section 8 (2)(4) **RPromO**). <sup>2</sup>The Doctoral Affairs Committee shall appoint a supervisor from the examiners according to (3). <sup>3</sup>A topic and deadline shall be agreed upon with the candidate. <sup>4</sup>The admissions essay shall be assessed by the supervisor. <sup>5</sup>The supervisor shall recommend acceptance or rejection of the admissions essay to the examining committee according to (3). <sup>6</sup>The examining committee shall accept or reject the admissions essay and request a further evaluation if deemed necessary. <sup>7</sup>The admissions essay shall count as rejected if the candidate does not submit it before the deadline. <sup>8</sup>If the admissions essay is rejected or counts as rejected, the qualifying examination shall be failed.

### **Section 8 Admission to a doctoral degree**

The CV according to Section 8 (2)(1) of the **RPromO** may also be submitted in English.

## **III. The Doctoral Procedure**

### **Section 9 Initiation of the Doctoral Procedure**

(1) Three printed copies of the doctoral thesis must be submitted when the doctoral procedure is initiated.

(2) In the event of a cumulative doctoral thesis pursuant to Section 10 (4), evidence must be submitted pursuant to Section 10 (4) sentences 3 and 4.

### **Section 10 Requirements for the Thesis**

(1) <sup>1</sup>The thesis must be a standalone monograph that provides evidence of scientific findings which can be accredited to the author. <sup>2</sup>The doctoral candidates shall use scientific methods to investigate, document and provide sound reasons for their scientific findings. The findings are required to generate added value for the specific subject area.

(2) The thesis must include a detailed summary in English.

(3) <sup>1</sup>Publishing partial results while the thesis is being written is encouraged and therefore not damaging for publication of the thesis (Section 10 (2) **RPromO**). <sup>2</sup>If publications with several authors are included in monographs or cumulative doctoral theses (see (4)), it must be clearly indicated which content originates directly from the doctoral candidate.

(4) <sup>1</sup>If the supervisor agrees, a cumulative thesis can be submitted in place of a monograph. <sup>2</sup>This shall consist of

1. At least three essays published or accepted for publication in a recognised publication medium with independent reviewers which the candidate can be proven to have written as a lead author, and
2. a previously unpublished exposition of at least 40 pages in length which illustrates the contextual links between the published articles and relates their content to broader knowledge of the subject.

<sup>3</sup>The candidate and co-authors shall provide written confirmation of the authorship of individual contributions if jointly published articles are used. <sup>4</sup>The declaration pursuant

to sentence 3 can be waived in the event of a publication with an author contribution statement which clearly indicates the contribution made by each of the authors.

(5) The Doctoral Affairs Committee may also request evidence pursuant to paragraph 4 sentences 3 and 4 for monographs if they include cumulative aspects.

### **Section 11 Evaluation, Acceptance and Rejection of the Thesis**

(1) The evaluations shall be written in German or English.

(2) The Doctoral Affairs Committee can request more than two evaluations if it considers this necessary, for example if the supervisor is not (or is no longer) a full-time member of the Faculty of Engineering at the initiation of the doctoral procedure, if the first evaluations do not cover the required breadth of the subject, or if a further review of the thesis is deemed necessary due to the interdisciplinary nature of the research.

(3) <sup>1</sup>At least one of the reviewers is not permitted to have published with the candidate in the last five years. <sup>2</sup>The Doctoral Affairs Committee shall decide on any exceptions.

(4) <sup>1</sup>The evaluations shall include a grade. <sup>2</sup>The following grades shall apply:

sehr gut = 1 for an outstanding achievement

gut = 2 for a commendable achievement

befriedigend = 3 for an acceptable achievement

ausreichend = 4 for a sufficient achievement

ungenügend = 5 for an unsatisfactory achievement.

<sup>3</sup>The grade may be increased or decreased by 0.3 to reflect the level of the achievement.

<sup>4</sup>The grades 0.7 and 5.3 shall not be awarded; a grade of 4.3 and higher shall be considered as unsatisfactory.

### **Section 12 Oral Examination**

(1) The oral examination shall be conducted by the examining committee (Section 4 (4) and shall comprise:

1. A public, academic presentation by the candidate lasting 30 minutes and expressed freely, followed by a 15-minute public discussion on the objectives, methodology and results of the thesis and
2. A non-public defence lasting approximately 45 minutes.

(2) <sup>1</sup>The oral examination shall be open to the public. <sup>2</sup>The non-public part of the examination shall be open to members of the Faculty of Engineering and of other faculties at the University who are authorised examiners for doctoral degrees.

(3) The examining committee may allow the oral examination to be conducted in English at the candidate's request.

(4) <sup>1</sup>The discussion and the defence shall be led by the chairperson of the examining committee. <sup>2</sup>All participants may ask questions at the discussion and the defence. <sup>3</sup>During the defence, questions should focus on the topic of the thesis or be related to the basic concepts and development of the subject area. <sup>4</sup>If the requirements stipulated in sentence 3 are breached, the chairperson can declare questions as inadmissible.

(5) <sup>1</sup>The discussion and presentation shall be awarded a grade according to Section 11 (4) by each member of the examining committee; the same shall apply to the defence. <sup>2</sup>The grade for both parts of the examination shall be calculated from the arithmetic average of the grades calculated to two decimal places.

(6) The oral examination may be conducted with the help of audiovisual telecommunication technologies; Section 12a **RPromO** applies.

### **Section 13 Resitting the Oral Examination**

#### **Section 14 Results of the Doctoral Procedure, Notification**

<sup>1</sup>The final grade is calculated from the arithmetic average of the thesis grades produced by the reviewers multiplied by six, the grade for the presentation and discussion multiplied by two, and the grade for the defence multiplied by two. <sup>2</sup>The average shall be calculated from the individual grades up to two decimal places. <sup>3</sup>The overall assessment of the doctoral degree is as follows (based on the overall grade):

1.00 to 1.50 'sehr gut bestanden'

1.51 to 2.50 'gut bestanden'

2.51 to 3.50 'befriedigend bestanden'

3.51 to 4.00 'ausreichend bestanden'.

<sup>4</sup>The assessment 'mit Auszeichnung bestanden' shall be awarded if all reviewers have assessed the thesis with the grade 1.0 and the overall grade is better than 1.05.

#### **Section 15 Publication of the Thesis and Submission of Mandatory Copies**

In exceptional cases, the Doctoral Affairs Committee can extend the deadline for publishing the thesis up to three years calculated from the date of the oral examination.

#### **Section 16 Completion of the Doctoral Degree**

(1) The Dean of the Faculty of Engineering shall sign the doctoral degree certificate.

(2) <sup>1</sup>The doctoral degree certificate shall be issued in German. <sup>2</sup>The reviewers' names shall be included on the certificate.

(3) The candidate can apply for an additional certificate to be issued in English.

### **IV. Honorary Doctoral Degrees**

#### **Section 17 Honorary Doctoral Degree Certificates**

The decision to award an honorary doctoral degree certificate shall be taken by authorised examiners from the Faculty Council according to Section 5 of the **RPromO**.

### **V. Cooperative Doctoral Degrees**

#### **Section 18 Cooperative Doctoral Degrees**

## **VI. Doctoral Degrees in Cooperation with Foreign Universities**

### **Section 19 General**

### **Section 20 Examination Procedure at FAU**

### **Section 21 Examination Procedure at the Partner Institution**

### **Section 22 Joint Doctoral Degree Certificate**

## **VII. Invalidity and Revocation of Doctoral Degrees**

### **Section 23 Invalidity of Doctoral Examinations**

### **Section 24 Revocation of Doctoral Degrees**

## **VIII. Concluding Provisions**

### **Section 25 Legal Validity and Transitory Provisions**

(1) <sup>1</sup>These regulations come into effect on the day after their publication. <sup>2</sup>After the **RPromO** and **FPromO** come into effect, all of the doctoral procedures which have already been initiated shall be governed by the existing doctoral regulations from 30 July 1975 in the version of 13 January 2011. All doctoral procedures which have been admitted but not initiated will be governed by the new doctoral regulations.

(2) <sup>1</sup>The fifth amendment statute shall come into effect on the day after its publication. <sup>2</sup>It shall apply to all doctoral proposals for which an application for admission is submitted pursuant to Section 8 in conjunction with Section 8 **RPromO** after the fifth amendment comes into effect. <sup>3</sup>Candidates whose doctoral procedures have already been admitted but have not yet been initiated by the date the fifth amendment comes into effect may complete the doctoral procedure according to the previously valid version of the **FPromO** from 18 August 2017 if they inform the respective Office of Doctoral Affairs in writing by 30 April 2021 at the latest.