

Statutes of the Doctoral School
Information and Communications Engineering ICE
at Graz University of Technology

in cooperation with the
University of Music and Performing Arts Graz

Version 1.0, Coordinating Team 12/09/2007

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incorporated by G. Kubin

Version 1.2, Minor typing errors corrected by E. Brenner

1 Content of the Doctoral Programme Offered by the Doctoral School of Information and Communications Engineering and Associated Fields

Graduates of the Doctoral School of Information and Communications Engineering will have achieved the very highest technical and scientific educational level in information and communication engineering. The curriculum comprises a broad range of specialist fields, such as microelectronics, communications engineering, signal processing and systems theory, measurement technology and sensing, computer engineering, language and audio communication, acoustics, telematics and control and automation engineering.

2 Academic Degree

As a rule, graduates will be awarded the degree of “Doctor of Engineering Sciences” (Dr. techn.).

3 Objective and Subject-Specific Qualification Profile

[cf. § 1, section 2; § 3, section 4 of the doctoral programme curriculum].

Based on the qualification profile outlined in § 1, section 2 of the doctoral programme curriculum, a graduate of the Doctoral School ICE will be able to recognise, abstract, address and solve complex problems belonging to the field of information and communications engineering. The doctoral programme prepares candidates equally for technological/scientific top performance in global competition as well as for the assumption of leading industry positions.

4 List of Member Institutes

[§ 3, section 3]

The following institutes of the Faculty of Electrical Engineering and Information Technology are represented at the ICE:

4380 Institute of Electrical Measurement and Measurement Signal Processing

4390 Institute of Electronics

4400 Institute of Communication Networks and Satellite Communications

4410 Institute of Broadband Communication

4420 Institute of Signal Processing and Speech Communication

4430 Institute of Automation and Control

4480 Institute of Technical Informatics

5 For Inter-University Doctoral Schools: Cooperative Framework

[§ 3, sections 1 and 4].

As the bachelor's and master's degree programmes in Electrical and Audio Engineering are also carried out in cooperation with the University of Music and Performing Arts Graz, ICE candidates have the option of choosing an area of specialisation that falls within the scope of the Institute of Electronic Music and Acoustics. Such doctoral projects will be supervised in close cooperation with the teaching staff at the institute in question at the University of Music and Performing Arts Graz (institute 98720). These parties shall be considered equal to other supervisors who hold teaching positions at the Faculty of Electrical and Information Engineering.

6 Specific Guidelines for Doctoral Project Supervision

[§ 4].

The educational agreement as outlined in the study plan is concluded upon registration of the dissertation project at the Dean's Office at the Faculty of Electrical and Information Engineering at the beginning of the doctoral programme. This agreement also stipulates

the candidates' mandatory requirement of spending time at TU Graz (campus requirement). The extent of this requirement shall be agreed upon in consultation with the supervisor and shall also be communicated to the Coordinating Team (§ 3, section 3).

All members of the doctoral school who are entitled to teach shall receive a list of all working titles and names of the doctoral candidates who newly registered during the previous semester as well as the names of their supervisors once every semester. The short description of the doctoral project (§ 5, section 1) shall be submitted at the Dean's Office, where it is accessible to all members of the doctoral school who are entitled to teach. In consultation with the doctoral candidate and his/her supervisor, the short description of the project may also be published on the websites of the doctoral school.

The annual report completed by the doctoral candidate as outlined in § 4, section 4 as well as the supervisor's comments shall also be deposited at the Dean's Office, where it is accessible to all members of the doctoral school who are entitled to teach.

7 Specific Guidelines for Completion and Assessment of the Dissertation [§ 5, section 3]

The doctoral candidate shall have the right to complete his/her dissertation in a language other than German, subject to his/her supervisor's approval (§ 59, section 1, line 7, University Studies and Organisation Act 2002). For the field of information and communications engineering, it is recommended that the candidate choose English as the language for his/her dissertation should he/she want to exercise this right.

The dissertation shall contain an annotated list of publications explaining the relation between these publications and the dissertation presented and/or which parts of the dissertation are based on previously published material. In addition, the dissertation must also contain a section highlighting any work completed jointly with third parties.

The dissertation will be assessed by the supervisor and at least one further expert in the field of the dissertation. As a rule, this expert will not be an employee of TU Graz. Exceptions are subject to approval by the supervisor and the supervisory body responsible for study regulations.

Once the doctoral candidate has successfully passed his/her viva voce, the dissertation shall, in its entirety, be made available to the scientific community (cf. publication requirement according to § 86, section 1, University Studies and Organisation Act 2002). As a rule, the dissertation will be published online using the server of the supervising institute or the Faculty of Electrical and Information Engineering. Publication is intended to foster traceable quality control by the scientific community. According to § 86, section 2, University Studies and Organisation Act 2002, candidates have the right to delay publication of their dissertation for a limited period after its submission. To do this, an application must be made to the supervisory body responsible for study regulations, containing a convincing outline of the legal or economic interests at stake in case of early publi-

cation. No other aspects shall be admissible for delayed publication. The official answer shall specify the shortest delay period required to protect the candidate's interest; an extension of the delay period may not exceed a total duration of five years.

8 Specification of the Publication Process and Review Requirements

[§ 5, section 7]

The acquisition of scientific publication skills and participation in international scientific discourse are essential objectives of the doctoral programme.

As a rule, it is assumed that the most important points of the dissertation are published as peer-reviewed papers prior to the submission of the dissertation. Such publications must be based on a written review process for the full text by several reviewers and certain minimum selection requirements. In the field of information and communications engineering, this would apply to journals as well as international conferences and symposia. Position papers shown in the context of workshops and abstracts with or without peer review as well as conference-style events that apply only formal criteria as publication requirements shall not be considered publications in the true sense outlined above. If in doubt, the candidate must show evidence to specify the type of review process that has been applied.

Publications are to be made in agreement with the supervisor and the affiliation of the doctoral candidate with Graz University of Technology must, independent of any other existing employment contracts with third parties, be clearly indicated in the address of the doctoral candidate.

At the time when the dissertation assessors are elected, at least one accepted publication in the field of the dissertation must be presented; failing that, § 5, section 6 shall apply. Three successful publications are considered standard for an average dissertation. Normally, acceptance of an article for publication is considered equivalent to successful publication.

9 Curricular Workload (Semester Course Hours)

[§ 6, section 1]

The curricular workload shall comprise 14 semester course hours.

10 Specification of Subject-Specific Basic Modules According to § 6, Section 2.

A total of 8 semester course hours of subject-specific basic modules must be elected in consultation with the supervisor and the supervisory organ responsible for study regulations.

The following list of subject-specific basic modules is offered especially for the Doctoral School of Information and Communications Engineering. The catalogue below represents the currently valid planning schedule and will be adapted on an ongoing basis by the supervisory body responsible for study regulations in consultation with the Coordinating Team.

Note	Type	Title	Semester course hours
*	Lecture	ICE Circle Lecture Series	2.0
*	Seminar	ICE Spring School	2.0
*,**	Lecture/Tutorial	Selected Topics in Advanced Mathematics	3.0
*,**	Lecture	Otto-Nußbaumer Visiting Lecture Course	2.0
		Note 1: Modules marked with an asterisk * have a strong emphasis on improving students' English skills through the practical application of English to technical/scientific discourse (active and passive).	
		Note 2: Modules marked with two asterisks ** do not necessarily take place under this title but may be replaced in a given year by other modules to be specified by the supervisory body responsible for study regulations in consultation with the coordinating team.	

Subject-relevant advanced modules from appropriate master's degree programmes offered at TU Graz may also be selected.

11 Organisational Stipulations for Modules Within “Scientific Methods and Communication”

[§ 6, section 3].

A total of 4 semester course hours must be selected from this module range. For the two-hour mandatory module “Approach to Scientific Work”, candidates choose from the following modules:

Module number	Type	Title	Semester course hours
FO3	Internal training event	Scientific Proposal and Paper Writing	1.0
FO5	Internal training event	Describing and Presenting Scientific Issues	1.0
373.374	Lecture	Patent Law	2.0
501.101	KFU	Introduction to Scientific Theory	2.0
710.007	SE	Scientific Communication	2.0

In addition, all candidates registered at the doctoral school are required to attend the joint doctoral seminar (2 x 1 semester course hours) from the second year of their studies onwards. Preferably, this seminar is to be held as a block session, for instance one week each semester. A presentation length of 40 minutes is envisaged, with a 20-minute slot for discussion. If a candidate is unable to attend one or several of the scheduled dates, he/she may make up the time lost by attending in a different semester.

12 Details Regarding the Composition of the Board of Examiners for the Viva Voce

[§ 7, section 2].

The board of examiners consists of 3-5 persons and shall function in the capacity outlined by § 7, section 2. The Dean of Studies for Electrical Engineering chairs the board or appoints a habilitated member of the faculty as a stand-in. Furthermore, the examination board comprises the supervisor and at least one further member, usually one of the assessors. At least one member of the board of examiners must come from outside TU Graz.

If the supervisor or the candidate requests this, the board of examiners may be extended from 3 to 4 or 5 members. If the candidate and the supervisor fail to agree on the desired number of board members, the largest suggested board of examiners will be formed to ensure the broadest possible range of opinion. If no publications according to section 7 of these statutes have been presented, the board of examiners shall comprise 5 members.

All members of the board of examiners must have a scientific qualification that is equivalent to habilitation.

13 Details on the Viva Voce

[§ 7, section 3 and annotations].

The viva voce shall be between 60-90 minutes long, with the presentation by the candidate taking a maximum of 30 minutes. All members of the board of examiners are entitled to ask technical questions. The oral examination part of the viva voce has the character of a defence of the dissertation and entails questions on the dissertation as well as the subject area most closely related to it. Listeners may ask questions once the board of examiners has completed their round of questions.

All members who hold a teaching entitlement and all doctoral candidates associated with the Doctoral School of Information and Communication Engineering shall be informed of the dates and times of the viva voce examinations via e-mail. An abstract of the presentation must be included in this communication.

14 Confidentiality Agreement for Members Regarding Any Confidentiality Obligations That May Arise in Ethical, Personal and Development-Strategic Fields

[cf. in particular § 5, sections 1 and 7]

Upon admission to the Doctoral School of Information and Communication Engineering, all members agree in writing to comply with confidentiality regulations according to § 5, section 1 of the doctoral study curriculum. These confidentiality regulations refer in particular to (i) the reports and comments of the doctoral candidate and his/her supervisor, (ii) to all matters regarding the assessment of a dissertation and (iii) the entire dissertation project and the dissertation itself, where candidates apply to the supervisory body in charge of study regulations for delayed/restricted publication of a dissertation and this is granted by the supervisory body responsible for study regulations.

15 Final Remarks

The Coordinating Team may, in individual cases and in conjunction with the supervisory body responsible for study regulations, grant exemptions from these statutes, in compliance with all legal provisions, in particular the latest doctoral study plan, by means of a majority voting procedure.