

CURRICULUM for the international PhD Doctoral Degree Programme “Interactive and Cognitive Environments” at the Alpen-Adria-Universität Klagenfurt

§ 1. Guiding Principles and Qualification Profile

The doctoral degree programme for “Interactive and Cognitive Environments (ICE)” is undertaken as joint international PhD doctoral degree programme by the ICE Consortium, and shall henceforth be referred to as ICE Doctoral Degree Programme. The legal basis of the ICE Consortium is provided by the “ICE Consortium Agreement”, which consequently also serves as the basis for this curriculum. The current members of the ICE Consortium are: Università degli Studi di Genova (Italy), Technische Universiteit Eindhoven (the Netherlands), Universitat Politècnica de Catalunya (Spain), Alpen-Adria-Universität Klagenfurt (Austria) and Queen Mary, University of London (U.K.).

In accordance with § 51 paragraph 2 line 12 of the 2002 Universities Act (hereinafter referred to as “UA”) the ICE Doctoral Degree Programme shall serve to develop students’ ability to undertake independent academic work, and promote the training and career advancement of junior academics. Parts of the degree programme must be completed at no less than two universities belonging to the ICE Consortium. At least 18 months must be spent at the so-called home university, and no less than 12 months must be spent at the so-called host university. In accordance with § 54 paragraph 1 line 2 AU, the ICE Doctoral Degree Programme is assigned to the group of “Engineering Sciences” degree programmes.

In terms of the graduates’ qualification profile, the ICE Doctoral Degree Programme aims to promote

- (a) a high level of scientific competence, both in theory and in methodology, in the area of “Interactive and Cognitive Environments”,
- (b) research and publication competence, and
- (c) experience of and competence in research conducted internationally.

The graduates shall thus gain sound knowledge of important research areas pertaining to the field of Information and Communication Technology, such as, for example, “networked embedded systems”, “assistive technologies for health and autonomous living”, “people inspired technologies”, “designed intelligence” and “multi-sensor surveillance”. Due to the international focus and the pronounced emphasis on a high level of scientific competence, a range of interesting professional careers are available to graduates, particularly in the sphere of academic and industrial research.

The working language of the ICE Doctoral Degree Programme is English. The doctoral thesis shall therefore be written in the English language. The thesis remains indispensable evidence of the research achievement and thus serves as centrepiece of the ICE Doctoral Degree Programme.

The ICE Doctoral Degree Programme is concluded with the academic degree “Doctor of Philosophy”, abbreviated to PhD. Depending on the respective agreements between the ICE Consortium partners, this degree is awarded either as “joint degree” or as “double degree”.

§ 2. Admission

- 1) The maximum number of students that can be admitted to the ICE Doctoral Degree Programme each year is determined by the ICE Consortium. This number shall reflect an even distribution of available places among the universities belonging to the ICE Consortium.
- 2) Admission is conditional upon the successful completion of a selection process, which is described in detail by the ICE Consortium in the annual “ICE Call for Applications” (available at <http://www.icephd.org>). The essential criteria of the selection process include the subject studied and the academic success achieved in previously completed degree programmes, research achievements to date and English language proficiency.
- 3) Upon successful completion of the selection process, the ICE Consortium assigns students to their respective home and host universities.
- 4) Admission to the ICE Doctoral Degree Programme is granted by the Rectorate in accordance with the relevant provisions of the UA, following the successful completion of the selection process and the candidate’s assignment to the Alpen-Adria-Universität Klagenfurt by the ICE Consortium.
- 5) As stipulated in § 64 paragraph 4 AU, admission to the ICE Doctoral Degree Programme is contingent upon proof of successful completion of
 - (a) a relevant diploma or master’s degree programme, particularly in Electrical Engineering, Information Technology and Computer Science,
 - (b) a relevant diploma or master’s degree programme from a university of applied sciences or
 - (c) other equivalent programme at a recognised domestic or foreign post-secondary educational institution.

§ 3. Degree Programme Duration, Courses and Other Academic Achievements

- 1) In accordance with §54 paragraph 4 UA, the workload associated with the ICE Doctoral Degree Programme shall amount to 180 ECTS credit points (CP) and the programme shall last for a duration of three years, i.e. six semesters. Parts of the degree programme must be completed at no less than two universities belonging to the ICE Consortium.
- 2) Every student shall be individually supervised during the writing of the doctoral thesis by a university teacher with the authorisation to teach the respective academic subject (University Statutes Part B § 19). In addition, every student shall also be supervised by an appropriately qualified university teacher at the host university.
- 3) In consultation with both supervisors, students must complete relevant courses amounting to a total of 20 ECTS CP – of these at least 10 ECTS CP must be achieved at the home university and at least 5 ECTS CP at the host university. To facilitate this, every university belonging to the ICE Consortium shall combine suitable courses in a separate module, and shall coordinate this module with the ICE Consortium. The Alpen-Adria-Universität Klagenfurt offers a module entitled “networked embedded systems”.
- 4) In addition to the doctoral thesis, students must provide evidence of their ability to undertake independent academic work by actively participating in the “ICE summer school“ and/or by producing scientific publications. A total of 40 ECTS CP shall be

deemed as sufficient for this purpose. The ICE Consortium annually organises an “ICE summer school“, where the following rules for the allocation of ECTS CP shall apply:

- Attendance and active participation per “ICE summer school“: 10 ECTS CP
- Presentation and discussion of the student’s own research contribution (recommended in the third year of the programme): 10 ECTS CP

Active participation in the “ICE summer school“ includes (a) producing a written report about the academic efforts of the past year, (b) attending the presentations and lectures of the “ICE summer school“, and (c) autonomously preparing a presentation about the current status of the student’s own research work. Students must attend no less than two “ICE summer schools“. The presentation and discussion of the students’ own research contribution is mandatory.

Up to 10 ECTS CP can be achieved through scientific publications at internationally reviewed conferences or in scientific journals, with one scientific publication accounting for 5 ECTS CP.

- 5) Evidence of additional academic achievements amounting to a total of 20 ECTS CP is governed by the following rules:
 - (a) Completion of additional courses assigned to the modules described in §3 (3) provided by the universities belonging to the ICE Consortiums and not exceeding 10 ECTS CP
 - (b) Completion of courses not assigned according to §3 (3), not exceeding 10 ECTS CP. The selection of courses must be made in consultation with both supervisors. Adequate consideration must be given to Women’s and Gender Studies when selecting courses (University Statutes Part E/I. § 26), in consultation with the supervisor.
 - (c) International recognition/distinction of a scientific publication, e.g. a “Best Paper Award“, can be reflected in an ECTS allocation of 5 CP each per recognition/distinction, with a maximum possible award of 10 ECTS CP in total. The allocation of ECTS CP for a scientific publication in accordance with § 3 paragraph 4 excludes the possibility of an additional ECTS CP allocation as a result of international recognition/distinction.
 - (d) Research achievements that are produced at certain external institutions can be allocated an amount not exceeding 10 ECTS CP. In particular, these external institutions include all associated ICE partner organisations. A research period at an external institution lasting one month can lead to an ECTS allocation of 5 CP. Any such research visits require the prior approval of both supervisors.
- 6) The allocation of ECTS CP to individual academic achievements not produced through the successful completion of courses (particularly § 3 paragraphs 4 and 5), is determined by the ICE Consortium, which is also responsible for the relevant documentation of the academic achievements and for the timely provision of the information to Klagenfurt University.

§ 4. Doctoral Thesis

- 1) The student’s doctoral thesis must demonstrate his/her acquired capacity to independently provide solutions to problems presented by current scientific research. The thesis must represent an autonomous and innovative original effort, which has been independently prepared and written by the student; the latter fact must be confirmed by the student in a signed declaration affixed to the thesis.

- 2) The subject of the doctoral thesis shall be approved by the Dean of Studies in accordance with §19 paragraph 3 of the University Statutes Part B and must be confirmed by the ICE Consortium. The doctoral thesis shall be assigned 100 ECTS CP.
- 3) It is recommended that each supervisor shall be provided with a bound copy of the doctoral thesis.

§ 5. Examination Regulations

- 1) The ICE Doctoral Degree Programme is concluded with an oral defence, which takes the form of a comprehensive oral examination before an examination board.
- 2) The student is entitled to submit an application to the Dean of Studies to take the final board examination once the following conditions have been met:
 - positive grades achieved in all courses prescribed in §3 (3), as well as the fulfilment of the requirements detailed in §3 (4)-(5),
 - positive assessment of the doctoral thesis.
- 3) On the one hand, the examination topics for the comprehensive board examination shall include the subject area to which the topic of the doctoral thesis is attributed (including the defence of the principle propositions of the doctoral thesis), and on the other hand a further, closely related relevant subject area is also identified. Following a proposal by the student, the examiner representing the subject area of the doctoral thesis shall specify the second subject area.
- 4) The overall grade, as per § 73, paragraph 3 UA, is based on
 - the subject grade resulting from the courses defined by §3 (3),
 - the grade awarded to the doctoral thesis in accordance with § 19 paragraph 7 of the University Statutes, Part B, and
 - the grades awarded for the two examination subjects included in the oral defence.

§ 6. Academic Degree

Graduates of the ICE Doctoral Degree Programme shall be awarded the academic degree of “Doctor of Philosophy“, abbreviated to „PhD“. Depending on the respective agreements in place between the ICE Consortium partners, this degree is awarded either as “joint degree” or as “double degree”.

§ 7. Effective Validity and Transitional Provisions

This curriculum enters into force on the 1st of October 2010, and applies to all students who commence their studies from this date onward.