

UNIVERSITY OF KONSTANZ
Regulations of the University of Konstanz on the admission of applicants to the Master's Programme in Computer and Information Science

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(as of 23 March 2015, and amended on 21 July 2016)

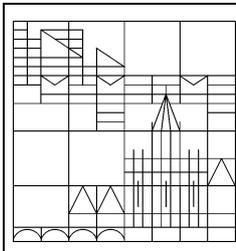
The German version of this document is the only *legally binding version*. This English translation is for your convenience only.

§ 1 Application

- (1) Enrolment takes place in the summer and winter semester.
- (2) Application deadlines for applicants who need a visa to study in Germany are 15 December (summer semester) and 15 May (winter semester). For applicants who do not need a visa, the application deadlines are 15 January (summer semester) and 15 June (winter semester). The application for enrolment, including the required documents, must have been received by the University of Konstanz on the dates stated above.
- (3) The application for enrolment must be submitted in the form requested by the university.
- (4) The following copies of documents have to be attached:
 - a) Certificate of university degree as per § 3 no. 1
 - b) Exact description of the curricular contents of the study programme that led to the degree (does not apply to graduates of the Bachelor's Programmes in Information Engineering or Computer Science at the University of Konstanz)
 - c) Proof of English language skills as per § 3 no. 3
 - d) Results of the aptitude test as per § 3 no. 4 (only applies to applicants with an undergraduate university degree obtained in a country that is not a member of the Bologna Process, see attachment 2).
 - e) Letter of motivation

It is mandatory for students who apply for the one-year master's programme that they outline which research field from the Department of Computer and Information Science they plan to specialize in and that they name an academic supervisor (mentor).

- (5) In duly substantiated exceptional cases applications may be possible until the start of the semester the student wishes to enrol. The Examination Board Computer and Information Science (*Ständiger Prüfungsausschuss (StPA-CIS)*) decides about such exceptions.
- (6) Students of a bachelor programme who cannot present their examination/degree certificate up to the end of the application deadline have to document their academic performance so far to prove that they will probably meet the admission requirements as per § 3 no. 1. The examination/degree certificate has to be submitted no later than two months after the start of the semester that was applied for. Enrolment can be granted on condition that the applicants submit documentation of having completed their qualifying degree within this time limit.



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- (7) Enrolment must be denied if the documents are not submitted by the due date or are incomplete.

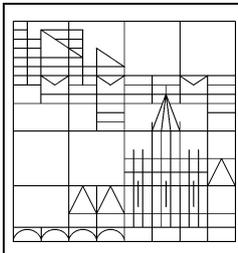
§ 2 Competencies

The rector decides on admission to the master's programme based on the proposals of the Examination Board Computer and Information Science.

§ 3 Admission requirements

The admission requirements for the Master's Programme in Computer and Information Science are:

1. A three-year (minimum) study programme at a state, or officially recognised, institution of higher education or *Berufsakademie* (minimum degree Bachelor of Sciences (BSc) or equivalent) completed with above-average success; usually at least with the result "good". When recognising degrees completed outside of Germany the following have to be considered:
 - Recommendations of the Kultusministerkonferenz, Zentralstelle für ausländisches Bildungswesen (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, Central Office for Foreign Education)
 - Agreements on Equivalence of the Federal Republic of Germany
 - Agreements with partner universities.
2. Passing the admission examination as per § 4. Applicants who completed their bachelor's degree (or equivalent qualification) in Information Engineering, Computer Science at the University of Konstanz or a related study programme, are exempt from the admission examination. A study programme is considered related if the students have acquired competencies similar to those they would have acquired in the Bachelor's Programmes in Information Engineering or Computer Science at the University of Konstanz. The competencies are considered similar if contents, learning objectives and examinations largely correspond to the University of Konstanz study programmes mentioned above. The Examination Board (*StPA-CIS*) decides whether a study programme is related content-wise.
3. The study programme is taught in English. English skills of at least level B2 of the Common European Framework of Reference for Languages are required. These can be proved by:
 - a) Continuous English lessons at a German secondary education school for five years with the minimum grade 'satisfactory' (usually certified by the higher education entrance qualification)
 - b) Successful completion of a minimum of four courses held in English in a previous study programme in the Bologna area



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- c) Test of English as a Foreign Language (TOEFL-iBT): 90 points internet-based or better
- d) International English Language Testing System (academic IELTS), test result band scale 6 or better
- e) Cambridge First Certificate in English (FCE), grade C or better

The test results have to be submitted with the application for enrolment (IELTS-TRF, FCE user ID and secure number), or they are sent directly to the university by the test institute (TOEFL-iBT).

Applicants with a bachelor's degree from the following countries do not have to prove their English language skills: USA, Canada, Great Britain, Ireland, Australia, New Zealand and South Africa.

Study certificates of programmes held in English from countries other than the Bologna area and the ones mentioned above are not accepted. Language test results from other institutions of higher education are not accepted.

4. Applicants with a higher education degree acquired outside of the Bologna area have to pass an aptitude test. The *StPA-CIS* determines the passing thresholds and which tests are accepted. This information is published on the department website at "Master's Programme - Prospective students and application".

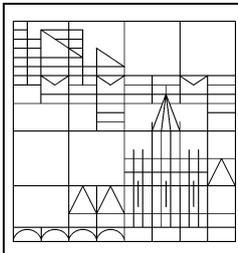
The certificates of the language test and aptitude test, if applicable, must not be more than three years old at the time of the application.

§ 4 Admission examination

- (1) The Examination Board Computer and Information Science *StPA-CIS* decides on the admission to the admission examination based on the application documents and determines the date, the examiners and the contents.
- (2) The admission examination consists of single modules on the following subject areas of Information Engineering at the University of Konstanz:
 - a) Foundations of computer science
 - b) Information systems
 - c) Applied information science
 - d) Information science

A content description of these modules can be found at the end of these regulations.

- (3) A maximum of three of the four modules listed above will be tested. The *StPA-CIS* decides on a case-by-case basis which three modules will be selected for the admission examination. Previous knowledge will be taken into account and it will be tested to



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what extent knowledge can be considered equivalent to the module contents stated above. Exact descriptions of the curricular contents of the previous study programme have to be attached to the application documents to prove equivalence. On a case-by-case basis the modules to be tested are determined for each candidate individually.

- (4) The admission examination is held as an oral or written examination on one day. The oral examination per module will take 30 minutes and is held by two examiners. Overall, the oral examination will take a maximum of 90 minutes. The written examination will take 60 minutes per module, and a maximum of 180 minutes overall. The applicants will receive the date for the admission examination in writing.
- (5) The modules of the admission examination can also be completed in the context of an aptitude assessment procedure by taking the corresponding tests of the Bachelor's Programme in Information Engineering. Applicants will be enrolled at the University of Konstanz for the time of the aptitude assessment procedure if they fulfil the admission requirements as per § 3 no. 1. The *StPA-CIS* decides in this case individually, based on the application and previous knowledge, which tests the applicant will have to pass.
- (6) If the applicant passed single modules before taking the admission examination, these modules do not have to be tested again and the duration of the oral or written admission examination will be reduced accordingly.
- (7) The admission examination must have been passed by the end of the first semester of this master's programme. The admission examination is passed if each module is passed with the grade "sufficient" or better. If a module was not passed, the applicant can repeat it only once. If it was again not passed, the applicant has failed the entire admission examination.

§ 5 Coming into effect

These regulations come into effect the day after their publication in the "*Amtlichen Bekanntmachungen*" (official announcements) of the University of Konstanz. They apply for the first time to the admission procedure for the winter semester 2015/16.

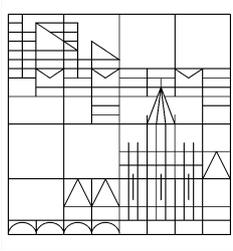
At the same time the admission regulations for the Master's Programme in Information Engineering as of 17 January 2014) ("*Amtlichen Bekanntmachungen*" 3/2014) become invalid.

The amendments as of 21 July 2016 came into effect the day after their publication in the "*Amtliche Bekanntmachungen*" of the University of Konstanz.

Appendices

Attachment 1 Content description of the modules of the admission examination

Attachment 2 List of countries that are members of the Bologna Area (as of December 2013)



Attachment 1

Content description of the modules of the admission examination:

a) Foundations of Computer Science

- Mathematical Foundations: □ Discrete Structures, Calculus of Probability, Linear Algebra, Analysis
- Theoretical Computer Science: □ Formal Languages, Automata Models, Predictability, Complexity Theory
- Algorithms and Data Structures: □ Asymptotic Growth, Sort Algorithms, Search Trees, Hashing, Graphs

b) Information Systems

- Foundations of Computer Architecture: □ von-Neumann Architectures, System Programming, Computer Networks
- Programming Techniques: □ Concepts of Imperative Programming Languages, Object-Oriented Programming, Object-Oriented Analysis and Modelling
- Implementation □ Fundamental Algorithms and Data Structures

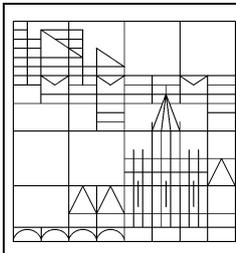
c) Applied Computer Science

- Data Modelling: □ ER Model, Relational Model, Normal Forms, Relational Database Design
- Database Systems: □ Relational Database Languages, SQL, Transaction Management, Index Structures
- Human-Computer Interaction: □ Design Principles, Process Models, Design Methods, Evaluation Methods, Development Tools

d) Information Science

- Information Processing: □ Methodology of Controlled Vocabularies with a Focus on Thesaurus; Term-Oriented Content Cataloguing, Indexing, Automatic Indexing; Abstracting / Summarizing
- Information Retrieval: □ Classification of Databases; Query Formulation; Evaluation of Query Results; Internet Search Engines

You can find a list of recommended reading to prepare yourself for the admission examination on the department website at www.informatik.uni-konstanz.de.



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Attachment 2

List of countries that are members of the Bologna Process (Bologna Area), as of December 2013

(source: Federal Ministry of Education and Research, <http://www.bmbf.de/en/3336.php>)

Albania, Andorra, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, the "Former Yugoslav Republic of Macedonia", France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, the Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom (Great Britain), Vatican

Note:

These regulations were published in the *Amtliche Bekanntmachungen* (official announcements) of the University of Konstanz No. 17/2015 of 23 March 2015.

The amendments to these regulations were published in the *Amtliche Bekanntmachungen* of the University of Konstanz No. 38/2016 of 21 July 2016.