Hochschule Kempten
University of Applied Sciences

Computer Science
– Master of Science –

PROFESSIONAL ENVIRONMENT

Today, computer science is a central base for the modern communication and knowledge society. The need for highly qualified experts can hardly be covered at the moment and will continue to rise. With the Master in Computer Science you will get the best prerequisites for getting started in an activity of an advanced qualification, and also in the higher public service. In principle the master's degree also qualifies for a doctorate. Not only will this training prepare for a professional career in business and administration, but also will it open the door for a career in science and research.

WHO SHOULD STUDY THIS MASTER'S DEGREE COURSE?

You have already acquired a basic degree in computer science, business informatics or a similar discipline and would like to deepen your knowledge to reach a higher level. You want to work at challenging tasks of computer science with scientific methodology, which you intend to include in application-oriented research. In this case the Master's degree program offers you a high-quality supplementary qualification for application-oriented scientific activities in business, administration and research.

ADMISSION REQUIREMENTS

Admission requirement is a first university degree in Computer Science, Business Computer Science or an equivalent degree passed with an average grade of 2.5 or better. If less than 210 but at least 180 credit points were achieved during the Bachelor's degree, the credit points missing to achieve a total of 300 must be acquired from the first-level degree courses of the university.

STRUCTURE OF THE COURSE

The Master's Degree Course "Computer Science" can be completed either as a full-time course in three (3) semesters or as a part-time course in six (6) semesters.

After successful graduation the university will award the academic degree Master of Science (M. Sc.).

AS A FULL-TIME COURSE

The first two semesters comprise academic training. The subjects are divided into compulsory subjects and compulsory electives. The compulsory subjects include the advanced seminar during which a presentation has to be given about a demanding topic and a project in which a complete task from the field Computer Science has to be dealt with.

In the third semester, a master's thesis is prepared, which is preferably done within the scope of a project involving a partner from industry, business or administration with a view to the rapid integration of the student into working life. In this master's thesis you are to show that you are able to apply the knowledge and skills obtained during your course of study to complex tasks in an independently prepared, application-oriented and scientific paper.

Following the European Credit Transfer System (ECTS) a total of 90 ECTS credits are awarded for the three semesters that means an average of 30 ECTS credits per semester. In all, 25 ECTS credits are awarded for compulsory subjects, 35 ECTS credits for compulsory electives and 30 ECTS credits for the Master's thesis.

AS A PART-TIME COURSE

If you attend the course on a part-time basis, you have to obtain a total of 15 ECTS credits per semester. Theoretical training takes place in the first four semesters and the last two semesters are reserved for preparation of the Master's thesis.

LIST OF STUDY MODULES

Compulsory modules **credit points**

- Efficient Algorithms 5
- Mathematics 5
- Software Architecture 5
- Advanced Seminar 5
- Project 5

Compulsory Electives and allocation to fields of application	Data Science	Business Computer Science and e-Business	Autonomous Systems and Technical Informatics
Self-Made Operating Systems			x
Real-Time Systems			x
Multi-Modal Sensor Systems			x
Deep Learning	x		x
Mobile Robots			x
Bus Systems			x
Microcontrollers			x
Pattern Recognition	x		x
Simulation and Visualisation of Data	x		
Parallel Programming	x		x
Algorithms and Strategies for Decision-Making	x	x	
Augmented Reality			x
Computer Vision			x
Requirements Engineering and Management		x	
Big Data	x	x	
eBusiness Management	x	x	
Identity & IT Architecture Management		x	
eHealth		x	
Data Protection		x	

* Provisional information. The list of subjects will be set up anew in the study plan each semester. Students do not have a claim that all compulsory electives that are listed are actually offered.

CONTACT

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IMPORTANT LINKS

(Information in English on our website)

www.hs-kempten.de > INTERNATIONAL > click English flag (in the top left-hand corner)

Information for international exchange students
(> INTERNATIONAL > EXCHANGE STUDENTS / INCOMING)

Study programmes – short description in English
(> INTERNATIONAL > DOWNLOADS > Study Programmes)

Guests and Visitors at Kempten University
(> INTERNATIONAL > GUESTS AND VISITORS)

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PLEASE NOTE that, although this description is written in English, the study course is taught in German.