



AECENAR

Association for Economical and Technological Cooperation
in the Euro-Asian and North-African Region

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AECENAR University

Bachelor in Computer Science

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1. Bachelor degree in Computer Science

The successful completion of the 6-semester course requires a total of 180 credit points being achieved in compulsory, optional and additional modules and in key qualifications. The study has to be completed in the audit period of the 9th semester.

1 Preliminary exam

The study-accompanying preliminary exam has to be taken first-time at latest after the 2nd semester and it has to be passed at the end of the 3rd semester. A repeat of the exam is only possible within this time frame!

The preliminary exam is made up of the following module tests:

Module ID	Module	Number of Credits
IN1INGI	Basic concepts of computer science	4
IN1INPROG	Programming	5
IN1MATHHM (IN1MATHLA) (IN1MATHANA) (IN1MATHLAAG)	Advanced Mathematics (Or Linear Algebra) (Or Analysis) (Or Linear Algebra and Analytic Geometry)	15 (14) (18) (18)

2 Compulsory modules

The core program consists of compulsory modules of the subjects theoretical computer science, practical computer science, technical computer science and mathematics.

The contained courses with in the corresponding semester recommendations are listed in the following table:

Semester	Module ID	Module	Number of Credits
1	IN1INGI	Basic concepts of computer science	4
	IN1INPROG	Programming	5
	IN1MATHHM	Advanced Mathematics I	9
	IN1MATHLA	Linear Algebra I	9
2	IN1INALG1	Algorithms I	6
	IN1INSWT1	Software Engineering I	6
	IN1INTI	Computer Organisation	6
	IN1MATHHM	Advanced Mathematics II	6
	IN1MATHLA	Linear Algebra II	5
3	IN2INTHEOG	Theor. fundamentals of Informatics	6
	IN2INSWP	Software Practical	6
	IN2INBS	Operation Systems	6
	IN1INTI	Digital technology and design methods	6
	IN2MATHPM	Probability theory and Statistics	4.5
4	IN2INKD	Communication and data storage	8
	IN2MATHPM	Numerics	4.5
5	IN3ALG2	Algorithms II	6
	IN3INPP	Programming paradigms	6
		Total	109

3 Optional Modules

Further optional modules have to be completed with max. 29 credits. (To be completed according to the completed mathematics course). It is important to ensure that at least two modules and a proseminar is occupied. The module manual provides a complete list of the various optional modules.

Root modules are:

Module ID	Module	Number of Credits
IN4INCG	Computer graphics	6
IN4INEZS	Real-time systems	6
IN4INFS	Formal systems	6
IN4INKS	Cognitive systems	6
IN4INRS	Computer structures	6
IN4INSEC	Security	6
IN4INSWT2	Software engineering II	6
IN4INTM	Telematics	6

Important:

Not all optional modules are currently selectable! The modules currently offered are listed in the module handbook

4 Additional Modules

Additional modules complete the formal core studies by their practical relevance and represent the scope of computer science in their future careers.

In scope of the selected additional subject, modules amounting to 21 credits have to be provided.

The selectable subjects are:

- Fundamentals of Laws
- Electro and information technology
- Mechanical engineering
- Mathematics
- Physics
- Economics

Important:

Not all optional modules are currently selectable! The modules currently offered are listed in the module handbook

5 Key qualifications

With key knowledge and interdisciplinary qualifications skills are acquired, which are not directly associated with a computer science study, however, benefit for a future career. The key qualifications module includes 6 credits. Major supplier is the House of Competence (HoC).

6 Thesis

The finish of the study is the bachelor's thesis, which is counted with 15 credits.

Requirements for admission:

- The student is generally in the third study year;
- maximum of one compulsory module of the first two years of study has not yet passed;
- the application for approval has been taken at last three months after passing the last module exam

The current range of bachelor theses can be taken from the announcements of the chairs (bulletin board, website) but also from the pages of the faculty.