

Module Handbook (<https://modhb.uni-kl.de/>)

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## Course of Study "Computer Science" (B.Sc.)

Department	[INF] Informatik
Degree	[B.Sc.] Bachelor (B.Sc.)
Course of Study	Computer Science
State	[NORM] Active
Short Name	<b>B.Sc. Computer Science</b>
Additional informations	<a href="https://www.uni-kl.de/fileadmin/ha-4/42-Pruefung/Pruefungsordnungen/Bachelor/Bachelor-PO_Informatik_u_Sozioinformatik.pdf">Examination regulations</a> ( <a href="https://www.uni-kl.de/fileadmin/ha-4/42-Pruefung/Pruefungsordnungen/Bachelor/Bachelor-PO_Informatik_u_Sozioinformatik.pdf">https://www.uni-kl.de/fileadmin/ha-4/42-Pruefung/Pruefungsordnungen/Bachelor/Bachelor-PO_Informatik_u_Sozioinformatik.pdf</a> ) <a href="https://www.uni-kl.de/studiengang/22769/Informatik_Bachelor_of_Science">Homepage of the Course of Study</a> ( <a href="https://www.uni-kl.de/studiengang/22769/Informatik_Bachelor_of_Science">https://www.uni-kl.de/studiengang/22769/Informatik_Bachelor_of_Science</a> )

### Section *Software Development*

Compulsory Modules

P	INF-02-01-M-2 (/mhb/modules/INF-02-01-M-2/)	Foundations of Programming	10.0 CP
P	INF-02-02-M-2 (/mhb/modules/INF-02-02-M-2/)	Modelling of Software Systems	4.0 CP
P	INF-02-06-M-2 (/mhb/modules/INF-02-06-M-2/)	Algorithms and Data Structures	8.0 CP
P	INF-02-21-M-2 (/mhb/modules/INF-02-21-M-2/)	Programming Lab	4.0 CP
P	INF-02-03-M-2 (/mhb/modules/INF-02-03-M-2/)	Distributed and Concurrent Programming	4.0 CP
P	INF-02-16-M-2 (/mhb/modules/INF-02-16-M-2/)	Project Management	6.0 CP
P	INF-02-20-M-2 (/mhb/modules/INF-02-20-M-2/)	Software Development Project	8.0 CP

### Section *Computer Science Systems*

Compulsory Modules

P	INF-02-09-M-2 (/mhb/modules/INF-02-09-M-2/)	Digital Systems and Computer Architecture	8.0 CP
P	INF-02-10-M-2 (/mhb/modules/INF-02-10-M-2/)	Computer Organization and System Software	8.0 CP
P	INF-02-13-M-2 (/mhb/modules/INF-02-13-M-2/)	Communication Systems	4.0 CP
P	INF-00-12-M-2 (/mhb/modules/INF-00-12-M-2/)	Information Systems	8.0 CP
P	INF-02-07-M-2 (/mhb/modules/INF-02-07-M-2/)	Scientific Computing	4.0 CP
P	INF-02-11-M-2 (/mhb/modules/INF-02-11-M-2/)	Artificial Intelligence	4.0 CP

### Section *Theoretical Foundations*

Compulsory Modules

P	MAT-02-11-M-1 (/mhb/modules/MAT-02-11-M-1/)	Mathematics for Computer Science Students: Algebraic Structures	8.0 CP
P	MAT-02-13-M-1 (/mhb/modules/MAT-02-13-M-1/)	Mathematics for Computer Science Students: Analysis	5.0 CP
P	MAT-02-12-M-1 (/mhb/modules/MAT-02-12-M-1/)	Mathematics for Computer Science Students: Combinatorics, Stochastics, and Statistics	8.0 CP
P	INF-02-04-M-2 (/mhb/modules/INF-02-04-M-2/)	Formal Languages and Computability	6.0 CP
P	INF-02-05-M-2 (/mhb/modules/INF-02-05-M-2/)	Logic and Semantics of Programming Languages	6.0 CP

### Section *Interdisciplinary Qualification*

Compulsory Modules

P	INF-01-11-M-4 (/mhb/modules/INF-01-11-M-4/)	Bachelor Seminar	4.0 CP
P	INF-02-22-M-2 (/mhb/modules/INF-02-22-M-2/)	Computer Science and Society	3.0 CP

### Section *Computer Science Specialization*

Compulsory Elective Modules

One specialization (teaching area) to be selected. The two modules of the specialization must be chosen together.

#### Specialization in algorithms and deduction

P/WP	INF-Alg_Ba_V-MPOOL-4 (/mhb/modulepools/INF-Alg_Ba_V-MPOOL-4/)	Specialization Bachelor TA Algorithmics and Deduction	[8.0 - 9.0] CP
P/WP	INF-50-45-M-4 (/mhb/modules/INF-50-45-M-4/)	Algorithms and Deduction (Project)	8.0 CP

#### Specialization in embedded systems and robotics

P/WP	INF-ES_Ba_V-MPOOL-4 (/mhb/modulepools/INF-ES_Ba_V-MPOOL-4/)	Specialization Bachelor TA Embedded Systems and Robotics	[4.0 - 8.0] CP
P/WP	INF-60-45-M-4 (/mhb/modules/INF-60-45-M-4/)	Embedded Systems (Project)	8.0 CP

#### Specialization in information systems

P/WP	INF-INSY_Ba_V-MPOOL-4 (/mhb/modulepools/INF-INSY_Ba_V-MPOOL-4/)	Specialization Bachelor TA Information Systems	[8.0] CP
P/WP	INF-20-45-M-4 (/mhb/modules/INF-20-45-M-4/)	Information Systems (Project)	8.0 CP

### Specialization in intelligent systems

P/WP	INF-KI_Ba_V-MPOOL-4 (/mhb/modulepools/INF-KI_Ba_V-MPOOL-4/)	Specialization Bachelor TA Intelligent Systems	[4.0 - 8.0] CP
P/WP	INF-70-45-M-4 (/mhb/modules/INF-70-45-M-4/)	Intelligent Systems (Project)	8.0 CP

### Specialization in software engineering

P/WP	INF-SE_Ba_V-MPOOL-4 (/mhb/modulepools/INF-SE_Ba_V-MPOOL-4/)	Specialization Bachelor TA Software Engineering	[4.0 - 8.0] CP
P/WP	INF-30-45-M-4 (/mhb/modules/INF-30-45-M-4/)	Software Engineering (Bachelor-Project)	8.0 CP

### Specialization in distributed and networked systems

P/WP	INF-VVS_Ba_V-MPOOL-4 (/mhb/modulepools/INF-VVS_Ba_V-MPOOL-4/)	Specialization Bachelor TA Distributed and Networked Systems	[4.0] CP
P/WP	INF-40-45-M-4 (/mhb/modules/INF-40-45-M-4/)	Distributed and networked systems (Project)	8.0 CP

### Specialization in visualization and scientific computing

P/WP	INF-VIS_Ba_V-MPOOL-4 (/mhb/modulepools/INF-VIS_Ba_V-MPOOL-4/)	Specialization Bachelor TA Visualization and Scientific Computing	[4.0 - 8.0] CP
P/WP	INF-10-45-M-4 (/mhb/modules/INF-10-45-M-4/)	Visualization and Scientific Computing (Project)	8.0 CP

## Section *Supplement*

Free Elective Area

Choice of (almost) any modules of the TUK. Restrictions are described in the study plan and a list of exceptions on the homepage of the department.

Keine Module eingebunden

## Section *Bachelor Thesis*

Thesis

P	INF-81-10-M-4 (/mhb/modules/INF-81-10-M-4/)	Bachelor's Thesis	12.0 CP
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