



BSc Computer Science curriculum Part-time / PiBS***

Status in June 2023

1 st semester	2 nd semester	3 rd semester	4 th semester	5 th semester	6 th semester	7 th semester	8 th semester
Project and Training 1 BT13001 – 6 ECTS	Programming 2 with Java or Kotlin BT1011 – 4 ECTS BT1012 – 4 ECTS	Project and Training 2 BT13011 – 6 ECTS	Project and Training 3 BT13021 – 6 ECTS	Project 1 BT13031 – 6 ECTS	Specialisation 1.1 BT14x01 – 4 ECTS	Project 2 BT13041 – 6 ECTS	Bachelor-Thesis BT13051 – 12 ECTS
BB – 2 ECTS*	Databases BT11311 – 4 ECTS	BB – 2 ECTS*	BB – 2 ECTS*		Specialisation 1.2 BT14x02 – 4 ECTS		
Programming 1 with Java or Kotlin BT1001 – 4 ECTS BT1002 – 4 ECTS	Algorithms and Datastructures BT11401 – 4 ECTS	Web Programming BT11301 – 4 ECTS	Software Engineering BT11121 – 4 ECTS	IT-Controlling BT11201 – 4 ECTS		Specialisation 2.1 BT14x03 – 4 ECTS	
Requirements Engineering BT11111 – 2 ECTS	Operating Systems BT11341 – 4 ECTS	Computer Networks BT11331 – 4 ECTS	Automata and Formal Languages BT11411 – 2 ECTS	Computability and Complexity BT11421 – 2 ECTS	Information Technology Law BT11211 – 2 ECTS		
Computer Science Basics BT11021 – 4 ECTS	Interaction Design BT11101 – 2 ECTS	Computer Networks BT11331 – 4 ECTS	Introduction to IT-Security BT11321 – 2 ECTS	Specialist optional module 3 BT12xxx – 2 ECTS	Specialist optional module 4 BT12xxx – 2 ECTS	Specialisation 2.2 BT14x04 – 4 ECTS	Specialisation 3.1 BT14x05 – 4 ECTS
Discrete Mathematics 1 BZG1155 – 4 ECTS	Linear Algebra BZG1157 – 4 ECTS	Discrete Mathematics 2 BZG1156 – 4 ECTS	Analysis BZG1158 – 4 ECTS	Specialist optional module 5 BT12xxx – 2 ECTS	Specialist optional module 6 BT12xxx – 2 ECTS	Specialist optional module 7 BT12xxx – 2 ECTS	Specialisation 3.2 BT14x06 – 4 ECTS
Communications 1 BZG3x10 – 2 ECTS	Communications 2 BZG3x11 – 2 ECTS	English 1 BZG34x1 – 2 ECTS	Specialist optional module 1 BT12xxx – 2 ECTS	Specialist optional module 2 BT12xxx – 2 ECTS	Specialist optional module 9 BT12xxx – 2 ECTS	Specialist optional module 8 BT12xxx – 2 ECTS	
Special Week 1 BT15204 – 2 ECTS	Compulsory-elective module 2 2 ECTS**	Special Week 2 BT15205 – 2 ECTS	English 2 BZG34x2 – 2 ECTS	Special Week 3 BT15206 – 2 ECTS	Compulsory-elective module 5 2 ECTS**	Compulsory-elective module 7 2 ECTS**	Compulsory-elective module 8 2 ECTS**
				Compulsory-elective module 4 2 ECTS**			

*** Work-study Bachelor's degree programme

Module subjects

■ Project / Internship

(part-time: 42 ECTS, work-study: 32 ECTS)

* Work-study modules (BB modules) for professionals in relevant jobs, with certificate. BT130*1 will be reduced to a total of 4 ECTS.

■ Specialist modules (52 ECTS)

■ Specialist optional modules (18 ECTS)

■ Specialisation modules (24 ECTS)

– Distributed Systems and IoT
– IT-Security
– Digital Business Systems
– Computer Perception and Virtual Reality

■ Mathematics modules (20 ECTS)

■ Communication (8 ECTS)

■ Special Weeks / interdisciplinary modules (16 ECTS)

** Work-study modules (for professionals in relevant jobs, with certificate).

The studies take place in Biel.

The study programme is completed in German.

Subject to change.



BSc Computer Science curriculum Full-time

Status in June 2023

1 st semester	2 nd semester	3 rd semester	4 th semester	5 th semester	6 th semester
Project and Training 1 BT13001 – 6 ECTS	Project and Training 2 BT13011 – 6 ECTS	Project and Training 3 BT13021 – 6 ECTS	Project 1 BT13031 – 6 ECTS	Project 2 BT13041 – 6 ECTS	Bachelor-Thesis BT13051 – 12 ECTS
Programming 1 with Java BT1001 – 4 ECTS or Kotlin BT1002 – 4 ECTS	Programming 2 with Java BT1011 – 4 ECTS or Kotlin BT1012 – 4 ECTS	Introduction to IT-Security BT11321 – 2 ECTS	Specialisation 1.1 BT14x01 – 4 ECTS	Specialisation 2.1 BT14x03 – 4 ECTS	
Interaction Design BT11101 – 2 ECTS	Web Programming BT11301 – 4 ECTS	Software Engineering BT11121 – 4 ECTS	Specialisation 1.2 BT14x02 – 4 ECTS	Specialisation 2.2 BT14x04 – 4 ECTS	
Requirements Engineering BT11111 – 2 ECTS		Computer Networks BT11331 – 4 ECTS	Automata and Formal Languages BT11411 – 2 ECTS	Computability and Complexity BT11421 – 2 ECTS	Specialisation 3.1 BT14x05 – 4 ECTS
Algorithms and Datastructures BT11401 – 4 ECTS	Databases BT11311 – 4 ECTS	Specialist optional module 1 BT12xxx – 2 ECTS	IT-Controlling BT11201 – 4 ECTS	Information Technology Law BT11211 – 2 ECTS	Specialisation 3.2 BT14x06 – 4 ECTS
Computer Science Basics BT11021 – 4 ECTS	Operating Systems BT11341 – 4 ECTS	Discrete Mathematics 2 BZG1156 – 4 ECTS	Specialist optional module 2 BT12xxx – 2 ECTS	Specialist optional module 3 BT12xxx – 2 ECTS	Specialist optional module 7 BT12xxx – 2 ECTS
Discrete Mathematics 1 BZG1155 – 4 ECTS	Linear Algebra BZG1157 – 4 ECTS	Analysis BZG1158 – 4 ECTS	Probability and Statistics BZG1159 – 4 ECTS	Specialist optional module 4 BT12xxx – 2 ECTS	Specialist optional module 8 BT12xxx – 2 ECTS
Communications 1 BZG3x10 – 2 ECTS	Communications 2 BZG3x11 – 2 ECTS	English 1 BZG34x1 – 2 ECTS	English 2 BZG34x2 – 2 ECTS	Specialist optional module 5 BT12xxx – 2 ECTS	Specialist optional module 9 BT12xxx – 2 ECTS
Special Week 1 BT15204 – 2 ECTS	Compulsory-elective module 2 2 ECTS	Special Week 2 BT15205 – 2 ECTS	Compulsory-elective module 4 2 ECTS	Specialist optional module 6 BT12xxx – 2 ECTS	Specialist optional module 6 2 ECTS
				Compulsory-elective module 5 2 ECTS	Compulsory-elective module 7 2 ECTS
				Special Week 3 BT15206 – 2 ECTS	

Module subjects

- Project / Internship (42 ECTS)
- Specialist modules (52 ECTS)
- Specialist optional modules (18 ECTS)
- Specialisation modules (24 ECTS)
 - Distributed Systems and IoT
 - IT-Security
 - Digital Business Systems
 - Computer Perception and Virtual Real
- Mathematics modules (20 ECTS)
- Communication (8 ECTS)
- Special Weeks / interdisciplinary modules (16 ECTS)

The studies take place in Biel.

The programme can be undertaken in German or bilingually in German and French.

Subject to change.