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BACHELOR (B.SC.) COMPUTER SCIENCE

Computer science is revolutionising industries from within and is at the core of innovation, efficiency, and improvement of our daily lives. From the way we live to the way we work, communicate and travel, computer science is enabling brand new concepts to be realised. As society expects more and more information at our fingertips and communication in an instant, computer science specialists are in high demand.

The IU bachelor's in computer science is designed to train you in the fundamentals of the field, while also teaching you practical application and human impact. You'll explore cutting-edge topics like Big Data, cloud computing, and you will learn to develop a variety of IT systems and software. You'll learn to adapt quickly to challenges, designing, developing, and applying computational processes to ensure high functionality and security for users. With our practical approach to learning, you'll earn a competitive advantage in the job market as a graduate, mastering both technical and soft skills that companies look for in potential candidates.



Degree

Bachelor of Science (B.Sc.)



Study start

Online: Anytime

On Campus: Each Oct, Jan, Apr or Jun*



Study model available

Online, or On Campus



Duration

Online: 36, 48, 72 months

On Campus: 36 months



Credits

180 ECTS



Ultimate flexibility

Our On Campus model means that...

- You can start your degree online for distance learning while taking care of visa issues and join us later in Germany to experience campus life. You say which semester you want to spend on campus or online.
- You want to go on a trip during your studies? No problem. You can study online at your own pace without missing any classes.



Fees

Online: From €75 per month

On Campus: From €449 per month

*In your first year of studying, you will join in October or April if you want to start on campus.

Study Content

PRESENCE TIMEFRAME	MODULE TITLE	SEMESTER	CREDITS (ECTS)	TEST TYPE
		1		
Oct/Nov/Dec	Introduction to Computer Science		5 ECTS	E
Oct/Nov/Dec	Object-oriented Programming with Java		5 ECTS	E
Oct/Nov/Dec	Intercultural and Ethical Decision-Making		5 ECTS	WACS
Jan/Feb/Mar	Mathematics I		5 ECTS	E
Jan/Feb/Mar	Statistics: Probability and Descriptive Statistics		5 ECTS	E
Jan/Feb/Mar	Collaborative Work		5 ECTS	OA
		2		
Apr/May/June	Data structures and Java class library		5 ECTS	E
Apr/May/June	Mathematics II		5 ECTS	E
Apr/May/June	Web Application Development		5 ECTS	WB
Jun/Jul/Aug	Project: Java and Web Development		5 ECTS	PO
Jun/Jul/Aug	Computer Architecture and Operating Systems		5 ECTS	E
Jun/Jul/Aug	Introduction to Academic Work		5 ECTS	WB
		3		
Oct/Nov/Dec	Database Modeling and Database Systems		5 ECTS	E
Oct/Nov/Dec	Project: Build a Data Mart in SQL		5 ECTS	PO
Oct/Nov/Dec	Requirements Engineering		5 ECTS	E
Jan/Feb/Mar	Algorithms, Data Structures and Programming Languages		5 ECTS	E
Jan/Feb/Mar	IT Service Management		5 ECTS	E
Jan/Feb/Mar	Project: IT Service Management		5 ECTS	WAPR
		4		
Apr/May/June	Computer Networks and Distributed Systems		5 ECTS	E
Apr/May/June	Theoretical Computer Science and Mathematical Logic		5 ECTS	E
Apr/May/June	Introduction to Programming with Python		5 ECTS	E
Jun/Jul/Aug	Software Quality Assurance		5 ECTS	E
Jun/Jul/Aug	Specification		5 ECTS	E
Jun/Jul/Aug	Computer Science and Society		5 ECTS	WAWA
		5		
Oct/Nov/Dec	Cryptography		5 ECTS	E
Oct/Nov/Dec	Introduction to Data Protection and IT Security		5 ECTS	E
Oct/Nov/Dec	Agile Project Management		5 ECTS	WAPR
Jan/Feb/Mar	Seminar: Current Topics in Computer Science		5 ECTS	WARE
Jan/Feb/Mar	IT Law		5 ECTS	WACS
Jan/Feb/Mar	Project Software Engineering		5 ECTS	WAPR
		6		
Online	Elective A		10 ECTS	
Online	Elective B		10 ECTS	
Online	Bachelor Thesis		10 ECTS	WABT & PC

E = Exam, OA = Oral assignment, PC = Presentation: Colloquium, PO = Portfolio, WB = Workbook, WABT = Written assessment: Bachelor thesis, WACS = Written assessment: Case study, WAMT = Written assessment: Master thesis, WAPR = Written assessment: Project report, WARE = Written assessment: Research essay, WAWA = Written assessment: Written assignment, OPR = Oral project report

CHOOSE YOUR ELECTIVES

Choose one specialisation from the Electives A programmes:

- Big Data and Cloud Technologies
- Business Intelligence
- IT Project and Architecture Management
- Mobile Software Engineering
- Salesforce Platform Development
- Software Engineering with Python

Choose one specialisation from the Electives B programmes:

- Big Data and Cloud Technologies
- Business Intelligence
- IT Project and Architecture Management
- Mobile Software Engineering
- Salesforce Platform Development
- Software Engineering with Python

Choose one specialisation from each block.

WHAT YOU'LL LEARN

- Get trained in the technical fundamentals as well as learn the practical application and human impact.
- Learn to develop a variety of IT systems and software.
- Explore cutting-edge topics like Big Data and cloud computing.

CAREER

IU's Bachelor in Computer Science offers promising career prospects, supporting many different industries with programming or business intelligence, such as finance, automotive, commerce or engineering. With our practical approach to learning, you'll earn a competitive advantage in the job market, mastering both technical and soft skills.