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# BACHELOR (B.SC.)

# SOFTWARE DEVELOPMENT

From smartphone apps to traffic light control, to complex ERP systems: more and more processes in business and society are based on software systems. According to the World Economic Forum, cloud computing, big data analysis, the Internet of Things, IT security, artificial intelligence, e-commerce and virtual reality will determine our future – topics that are all an integral part of your distance learning programme in software development. You will acquire programming and software engineering skills that will qualify you for key positions in the international IT industry.



## Degree

Bachelor of Science (B.Sc.)



## Study start

Online: April 15th, 2022  
On Campus: October 2022\*



## Study model available

Online, or On Campus



## Duration

Online: 36, 48, or 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 €349 per month

\*Subject to approval by the Thuringian Ministry of Economy, Science and Digital Society. We expect the Ministry's approval no later than the start of the studies. So far, the approval has always been on time.

## Study Content (180 ECTS)

PRESENCE TIMEFRAME	MODULE TITLE	SEMESTER	CREDITS (ECTS)	TEST TYPE
		<b>1</b>		
Oct/Nov/Dec	Requirements Engineering		5 ECTS	E
Oct/Nov/Dec	Software Engineering Principles		5 ECTS	E
Oct/Nov/Dec	IT Architecture Management		5 ECTS	E
Jan/Feb/Mar	Introduction to Academic Work		5 ECTS	BWB
Jan/Feb/Mar	Collaborative Work		5 ECTS	OA
Jan/Feb/Mar	Algorithms, Data Structures, and Programming Languages		5 ECTS	E
		<b>2</b>		
Apr/May	Database Modeling and Database Systems		5 ECTS	E
Apr/May	Object-oriented Programming with Java		5 ECTS	E
Apr/May	IT Service Management		5 ECTS	E
Jul/Aug	Software Quality Assurance		5 ECTS	E
Jul/Aug	Data structures and Java class library		5 ECTS	E
Jul/Aug	Specification		5 ECTS	E
		<b>3</b>		
Oct/Nov/Dec	Web Application Development		5 ECTS	AWB
Oct/Nov/Dec	IT Infrastructure		5 ECTS	E
Oct/Nov/Dec	Ethics and Sustainability in IT		5 ECTS	WACS
Jan/Feb/Mar	Techniques and methods for agile software development		5 ECTS	E
Jan/Feb/Mar	Project: Agile Software Engineering		5 ECTS	WAPR
Jan/Feb/Mar	Programming Information Systems with Java EE		5 ECTS	E
		<b>4</b>		
Apr/May	Mobile Software Engineering		5 ECTS	E
Apr/May	Project: Mobile Software Engineering		5 ECTS	P
Apr/May	IT Project Management		5 ECTS	E
Jul/Aug	Seminar: Software Engineering		5 ECTS	WARE
Jul/Aug	Introduction to Data Protection and IT Security		5 ECTS	E
Jul/Aug	Cloud Programming		5 ECTS	P
		<b>5</b>		
Oct/Nov/Dec	DevOps and Continuous Delivery		5 ECTS	WACS
Oct/Nov/Dec	User Interface Design and Ergonomics		5 ECTS	E
Online	Elective A		10 ECTS	
Jan/Feb/Mar	Introduction to Programming with Python		5 ECTS	E
Online	Elective B		10 ECTS	
		<b>6</b>		
Apr/May	Project: Software Development		5 ECTS	OPR
Online	Electives C		10 ECTS	
Online	Bachelor Thesis		10 ECTS	WABT & PC

## CHOOSE YOUR ELECTIVES

### Choose two electives from "Electives A and B" list:

- Applied Sales
- Data Science and object-oriented programming with Python
- International Management and Leadership
- International Marketing and Branding
- Internet of Things and Embedded Systems
- Mathematics Basics
- Mathematics: Linear Algebra and Analysis
- Robotics and Production Engineering
- Statistics Basics
- Supply Chain Management

### Choose one elective from "Electives C" list:

- AI Specialist
- Augmented, Mixed and Virtual Reality
- Business Consulting
- Business Intelligence
- Data Engineer
- Digital Business
- Infrastructure and Operations
- IT Security Consulting
- Smart Devices
- Smart Factory
- Smart Mobility
- Smart Services
- Studium Generale
- User Experience