

Contact



Study Software Engineering, BSc at UE Innovation Hub

a new Berlin-Potsdam campus
for digital pioneers of tomorrow

Your career starts with **Software Engineering, BSc**



Why study this programme?

Studying Software Engineering at the University of Europe for Applied Sciences will provide you with the latest industry skills and prepare you to enter the job market of tomorrow. Combining theory with practice, nearly all our courses are taught in state-of-the-art computer labs with focusing on completing real-time working projects with corporate partners at the end of the semester. This study programme is aimed specifically at ambitious students who have the creative mindset and passion to learn something and develop software that will have a true impact on people's lives.

Your career prospects

Software developer | Front end back developer | Artificial intelligence expert | Full stack developer | Data analyst | Cloud expert | Software designer

Degree:

Bachelor of Science (BSc)

Duration, Credits:

6 Semesters, 180 ECTS

Start of studies:

Winter Semester - September

Summer Semester - March

Teaching language:

English

Offers:

Study abroad / Internship

Locations:

Berlin - Potsdam UE Innovation Hub

Admission limitations:

Proof of Academic and / or vocational experience in Computer Science gained (3 years min.)

Modules

Software Engineering, BSc

1 st Semester	2 nd Semester	3 rd Semester	4 th Semester	5 th Semester
Programming <ul style="list-style-type: none"> algorithm and data structure object oriented programming using Python sorting, searching tree, stack, graphs, etc. 	Big Data & Analytics <ul style="list-style-type: none"> relational data base SQL My SQL big data characteristic and sources data analytics and techniques R programming languages 	IT Platform <ul style="list-style-type: none"> networking principles networking components network protocols, TCP/IP-ISO IT service management docker/virtual machine/cloud systems 	Artificial Intelligence <ul style="list-style-type: none"> Mars, trees and forest decision super vector machine naive bayes AI applications using Python text and image recognition 	Internship / Semester Abroad
Computer Architectures <ul style="list-style-type: none"> processors, memory types, counters main components of the computers HHD, SSD, optical disks interrupts and threads 	Software Engineering 1 <ul style="list-style-type: none"> planning and project management requirement specification intro to software modelling clean coding/software quality 	Cloud Computing & Distributed Systems <ul style="list-style-type: none"> implementation of distributed systems grid computing, cluster computing super computing AWS, Azure, Google clouds 	IT Agile Development <ul style="list-style-type: none"> agile methodologies product owner, team member Scrum and Kanban using Jira and Confluence 	
Start-up Management <ul style="list-style-type: none"> the importance of innovation idea generation-small and SME cooperation and network management industry analyses and case studies 	Backend Development <ul style="list-style-type: none"> design and build relation data base high quality object oriented programming build micro services applications, APIs design GUI using Java 	Digital Media & Communication <ul style="list-style-type: none"> awareness of the media basics on digitization and media basics and models of communication media competence knowledge 	IT Security & Crypto Technologies <ul style="list-style-type: none"> IT security management malware and attack detection and prevision RSA crypto system block chain technology 	6th Semester
Management Basics <ul style="list-style-type: none"> decision theory fundamentals of business administration process management project management 	GUI Design & Web Optimization <ul style="list-style-type: none"> web page design principles GUI design requirement search engine optimization Google analytics, Facebook... 	Software Engineering 2 <ul style="list-style-type: none"> software modelling techniques object oriented software design UML language domain driven design principles 	Advanced Programming <ul style="list-style-type: none"> the fundamentals of web programming HTML, CSS and JavaScript responsive website, bootstrap, etc. mobile app development iOS, Android 	Thesis & Colloquium
Mathematics & Statistics <ul style="list-style-type: none"> linear algebra, linear systems of equations matrix calculation, linear optimization differential calculus descriptive evaluation methods process management project management 	Parallel Programming <ul style="list-style-type: none"> multi core processors programming thread and multi threading single and shared memory programming MPI, POSIX, IEEE, and C and Matlab 	Software Testing & Software Quality <ul style="list-style-type: none"> black/white box testing static/automated testing performance testing software quality and performance 	Machine Learning & Smart Systems <ul style="list-style-type: none"> machine learning application deep learning and neural networks using Python programming Python libraries like NumPy, SciPy, Scikit 	
Business English <ul style="list-style-type: none"> recognize and master the stylistic forms in TOEFT and IELTS understand and utilize professional terminology 	Quantitative & Qualitative Methods <ul style="list-style-type: none"> location and object determination general research strategies and application hypothesis development and evaluation qualitative and quantitative data 	Operating Systems <ul style="list-style-type: none"> the fundamental structure Windows/iOS/Linux OS mobile OS system calls/interrupt/interconnection 	Corporate Management <ul style="list-style-type: none"> business development strategic management strategy process/planning external business analysis 	

Specialized Modules | Faculty-wide Modules | University-wide Modules

Your University - Your Partner!

The University of Europe for Applied Sciences (UE) is a state-approved private university that educates the designers and decision makers of tomorrow in the fields of business, psychology, media and communication, sport and event management and art and design.

With campuses in Iserlohn, Berlin and Hamburg, and new Innovation hub in Potsdam, UE offers undergraduate and postgraduate programmes tailored to the requirements of the job market 4.0.

Apply now at www.ue-germany.com/innovation-hub