

1. Semester (SuSe)	2. Semester (WS)	3. Semester (SuSe)	4. Semester (WS)
Big Data and noSQL Databases ENG (5 ECTS)	Parallel Programming (5 ECTS) ENG	Machine Learning ENG (5 ECTS)	<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 100%; height: 100%; background-color: #4a86e8; opacity: 0.5;"></div> <div style="margin-left: 20px;"> <p>■ Essential Module, not replaceable</p> <p>■ Compulsory Module, replaceable</p> <p>*Four compulsory modules from the first three semesters can be replaced by an additional elective module</p> </div> </div>
Distributed Applications (5 ECTS)	Business Applications (5 ECTS)	Data Analysis and Visualization (5 ECTS)	
Discrete Mathematics (5 ECTS)	Virtual Reality and Augmented Reality (5 ECTS)	Graphs and Networks (5 ECTS)	
Advanced Computer Networks (5 ECTS)	Cloud Computing ENG (5 ECTS)	Research Project (5 ECTS)	
Computer Graphics (5 ECTS)	Team Project (5 ECTS)	Master Seminar (5 ECTS)	
Work and Management Techniques (5 ECTS)	Elective Compulsory Module* (5 ECTS)	Elective Compulsory Module* (5 ECTS)	

\* Students can choose different “Compulsory Elective Modules” (not all electives are offered every semester, please ask the course coordinator)

- Advanced Multimedia Communications (5 ECTS)
- Agent-based Modelling and Simulation (5 ECTS)
- Applied Design Theory (5 ECTS)
- ENGLISCH Building Web and Mobile Apps (5 ECTS)
- Business Intelligence (5 ECTS)
- Business Process Management (5 ECTS)
- Computer Arithmetic (5 ECTS)
- Compiler Construction (5 ECTS)
- Computer Games (5 ECTS)
- Computer Science and Society (5 ECTS)
- Complexity Theory (5 ECTS)
- Cryptography - Theory and Applications (5 ECTS)
- Current Topic of Applied Computer Science (5 ECTS)
- Data-Analysis in Business Applications (5 ECTS)
- Data Mining and Predictive Analytics (5 ECTS)
- Embedded Internetworking - Internet of Things (5 ECTS)
- Error-correcting Codes (5 ECTS)
- Methods of data analysis (5 ECTS)
- Predictive Network Management (5 ECTS)
- ENGLISCH Reconfigurable Computing (5 ECTS)
- SCM: Processes, Models, Algorithms and Applicationsystems (5 ECTS)
- Visual Effects (5 ECTS)

