

Innovation & Entrepreneurship

(to be combined with a technical major, mandatory for all students)

	I&E	Technical Major
1 st Semester	FüS - Entrepreneurship and Innovation Management 6 ECTS	19 ECTS
	Electives 5 ECTS	
2 nd Semester	Venture Campus 6 ECTS	17 ECTS
	Ideation Seminar 3 ECTS	
	Summer School 4 ECTS	
3 rd Semester	I&E Thesis 6 ECTS	24 ECTS
4 th Semester		Master Thesis 30 ECTS

Electives:

The Human Side of Innovation	6 ECTS
Innovation Economics	6 ECTS
Innovation Marketing	6 ECTS
Intellectual Property Management	6 ECTS
Strategic Management	6 ECTS
Strategic Standardisation	6 ECTS
Innovation Policy	6 ECTS
Open Source and IP in the Digital Society	6 ECTS
Strategic Innovation Management	6 ECTS

Although the electives all technically have 6 credits, only 5 credits can be counted towards your degree since the I&E Minor only requires 30 credits in total.

Human Computer Interaction and Design

(3rd and 4th semester at TU Berlin)

	Technical Major		
1 st Semester	19 ECTS (not at TU Berlin)		
2 nd Semester	17 ECTS (not at TU Berlin)		
3 rd Semester	Speech Signal Processing and Speech Technology 6 ECTS	Introduction to Physiological Computing 6 ECTS	Computer-Supported Interaction 3 ECTS
	Electives 9 ECTS		
4 th Semester	Master Thesis 30 ECTS		

Electives:

Photogrammetric Computer Vision	9 ECTS
Study Project Quality and Usability	6 ECTS
Biometric Identification	3 ECTS
Quality and Usability	3 ECTS
Usable Privacy	3 ECTS

Internet Technology and Architecture

Technical Major				
1 st Semester	Network Architectures – Basics 6 ECTS	Next Generation Networks – Basis 1 9 ECTS	Network Technologies (Small) 6 ECTS	Electives 9 ECTS
2 nd Semester	Mobile Services 6 ECTS			
3 rd Semester	Electives 24 ECTS			
4 th Semester	Master Thesis 30 ECTS			

Electives:

Parallel Systems	6 ECTS
Embedded Operating Systems	6 ECTS
Operating System Design	6 ECTS
Operating System Project & Seminar	9 ECTS
Computational Complexity	9 ECTS
DBT: Database Technology	6 ECTS
IDB-PRA: Implementation of a Database Engine	6 ECTS
Parameterized Algorithmics	6 ECTS
Special Topics in Communication Networks and Autonomous Security	3 ECTS
Network Architectures – WirelessLab	9 ECTS
Network Architectures – RouterLab	9 ECTS
Network Architectures – Specialization (big)	9 ECTS
Network Architectures – Specialization (small)	6 ECTS
Network Architectures – Master Project	12 ECTS
Network Architectures – Master Project (small)	6 ECTS
Network Architectures – Seminar	3 ECTS
Network Algorithms	6 ECTS
Digital Communities	6 ECTS
Ad-hoc- and Sensor Networks	6 ECTS
Network Technologies (Medium)	9 ECTS
Performance Evaluation of Computer Communication Systems	6 ECTS
Project in advanced network technologies	6 ECTS
Next Generation Networks and Future Internet Technologies – Project 1	9 ECTS
Next Generation Networks and Future Internet Technologies – Project 2	9 ECTS
Hot Topics in Next Generation Networks & Future Internet Technologies	3 ECTS
Master Seminar: Operating Complex IT Systems	3 ECTS
Advanced Algorithmics	9 ECTS
Network Technologies (Small)	6 ECTS

Distributed Systems and Services / Cloud Computing and Services

Technical Major			
1 st Semester	Distributed Algorithms 6 ECTS	Network Architectures - Basics 6 ECTS	Electives 9 ECTS
2 nd Semester	Cloud Computing 6 ECTS	Internet of Services Lab 9 ECTS	
3 rd Semester	Electives 24 ECTS		
4 th Semester	Master Thesis 30 ECTS		

Electives

Network Architectures - Router Lab	9 ECTS
Operating System Design	6 ECTS
Mobile Services	6 ECTS
IDB-PRA: Implementation of a Database Engine	6 ECTS
Advanced Information Management 1 (AIM-1) – Heterogeneous and Distributed Information Systems	6 ECTS
Parallel Systems	6 ECTS
Network Architectures - WirelessLab	9 ECTS
Performance Evaluation of Computer Communication Systems	6 ECTS
Digital Communities	6 ECTS
Advanced Information Management 3 (AIM-3) – Scalable Data Analysis and Data Mining	6 ECTS
IMSEM – Seminar Hot Topics in Information Management	3 ECTS
IMPRO 3: Big Data Analytics Project (BDAPRO)	9 ECTS
Sustainable Information Systems Management	6 ECTS
Distributed Algorithms	6 ECTS
Network Architectures – Basics	6 ECTS
Cloud Computing	6 ECTS
Internet of Services Lab	9 ECTS
Cloud Service Engineering and Management	6 ECTS
Enterprise Computing	6 ECTS
Hot Topics in Information Systems Engineering	3 ECTS
Cloud Prototyping	12 ECTS
DBT: Database Technology	6 ECTS
Next Generation Networks – Basis 1	9 ECTS
Next Generation Networks and Future Internet Technologies – Project 1	9 ECTS
Next Generation Networks and Future Internet Technologies – Project 2	9 ECTS
Hot Topics in Next Generation Networks and Future Internet Technologies	3 ECTS

Embedded Systems

	Technical Major			
1 st Semester	Applied Embedded Systems Project 6 ECTS	Embedded Operating Systems 6 ECTS	Compiler Design 6 ECTS	Quality Assurance of Embedded Systems 6 ECTS
2 nd Semester	Advanced Computer Architectures 6 ECTS		Electives 6 ECTS	
3 rd Semester	Analysis and Optimization of Embedded Systems 6 ECTS	Multicore Architectures 6 ECTS		Electives 12 ECTS
4 th Semester	Master Thesis 30 ECTS			

Electives

Ad-hoc- and Sensor Networks	6 ECTS
Parallel Systems	6 ECTS
Multicore Architectures	6 ECTS
Analysis and Optimization of Embedded Systems	6 ECTS
Operating Systems Project & Seminar	9 ECTS
Recent Advances in Computer Architecture	3 ECTS
Hot Topics in Operating Systems and Distributed Systems	3 ECTS
Computer Arithmetic: Circuit Perspective	6 ECTS
Communication Technologies for Embedded Systems	12 ECTS
Seminar Software Engineering for Embedded Systems	3 ECTS
Embedded Systems Security Labor	6 ECTS
Networked Embedded Systems	6 ECTS

Security & Privacy

Technical Major				
1 st Semester	Computer Security-Specialization Large 9 ECTS (3 ECTS WS, 6 ECTS SS)	Communication Network Security 9 ECTS (3 ECTS WS, 6 ECTS SS)	IT Security Lab: Vulnerability Assessment 6 ECTS	Quality Assurance of Embedded Systems 6 ECTS
2 nd Semester			Embedded System Security Labor 6 ECTS	
3 rd Semester	Computer Security Project 9 ECTS	Software Security 6 ECTS	Electives 9 ECTS	
4 th Semester	Master Thesis 30 ECTS			

Electives

Hot Topics in Operating Systems and Distributed Systems	3 ECTS
Embedded Operating Systems	6 ECTS
Operating System Design	6 ECTS
Special Topics in Communication Networks & Autonomous Security	3 ECTS
Computer Security – Seminar	3 ECTS