CURRICULUM M.Sc. CYBER SECURITY
myStudies, 120 ECTS

Month	Model 1: Programme Start October — Courses			Model 2: Programme Start January — Courses			Model 3: Programme Start April — Courses			Model 4: Programme Start July — Courses		
Oct / Nov / Dec	Corporate Governance of IT, Compliance, and Law	Advanced Mathematics	Cyber Security and Data Protection									
Jan / Feb / Mar	Advanced Research Methods	Cyber Risk Assessment and Management	IT Systems: Software	Advanced Research Methods	Cyber Risk Assessment and Management	IT Systems: Software						
Apr / May	IT Systems: Hardware	Cyber Systems and Network Forensics	Theoretical Computer Science for IT Security	Corporate Governance of IT, Compliance, and Law	Advanced Mathematics	Cyber Security and Data Protection	Corporate Governance of IT, Compliance, and Law	Advanced Mathematics	Cyber Security and Data Protection			
Jun	Semester Break											
Jul / Aug	Seminar: Advanced Cyber Security	Seminar: Standards and Frameworks	Project: Current Challenges of Cyber Security	Seminar: Advanced Cyber Security	Seminar: Standards and Frameworks	Project: Current Challenges of Cyber Security	Advanced Research Methods	Cyber Risk Assessment and Management	IT Systems: Software	Advanced Research Methods	Cyber Risk Assessment and Management	IT Systems: Software
Sep	Semester Break											
Oct / Nov / Dec	Cryptology	Secure Networking		IT Systems: Hardware	Cyber Systems and Network Forensics	Theoretical Computer Science for IT Security	IT Systems: Hardware	Cyber Systems and Network Forensics	Theoretical Computer Science for IT Security	Corporate Governance of IT, Compliance, and Law	Advanced Mathematics	Cyber Security and Data Protection
Jan / Feb / Mar	Elective A Course a	Elective A Course b		Elective A Course a	Elective A Course b		Seminar: Advanced Cyber Security	Seminar: Standards and Frameworks	Project: Current Challenges of Cyber Security	Seminar: Advanced Cyber Security	Seminar: Standards and Frameworks	Project: Current Challenges of Cyber Security
Apr / May	Elective B Course c	Elective B Course d		Cryptology	Secure Networking		Cryptology	Secure Networking		IT Systems: Hardware	Cyber Systems and Network Forensics	Theoretical Computer Science for IT Security
Jun	Semester Break											
Jul / Aug	Master Thesis			Master Thesis			Elective A Course a	Elective A Course b		Elective A Course a	Elective A Course b	
Sep	Semester Break											
Oct / Nov / Dec				Elective B Course c	Elective B Course d		Elective B Course c	Elective B Course d		Cryptology	Secure Networking	
Jan / Feb / Mar							Master Thesis			Master Thesis		
Apr / May										Elective B Course c	Elective B Course d	

Elective A*

Cyber Criminality
a) Attack Scenarios and Incident Response
b) Project: Cyber Forensics

Blockchain and Quantum Computing
a) Blockchain
b) Quantum Computing

Secure Software Development
a) Secure Software Development
b) Project: Secure Software Implementation

Elective B*

Organizational Transformation
c) Tools in Organizational Analysis
d) Management of IT Services and Architecture

IT Law for IT Security
c) International IT Law
d) Seminar: Legal Framework for IT Security

Audit- and Security Testing
c) Attack Models and Auditing
d) Seminar: IT Security Tests

Business Analyst
c) Business Intelligence I
d) Project: Business Intelligence

Continuous and Lifecycle Security
c) Cyber Resilience
d) Seminar: Applying Threat Intelligence

Data Science and Big Data Technologies
c) Data Science
d) Big Data Technologies

Industrial Automation and Internet of Things
c) Industrial Automation
d) Internet of Things

Artificial Intelligence
c) Artificial Intelligence
d) Seminar: AI and Society

Internship

Course Information

Module	Course Code	Course	ECTS	Type of Exam
Corporate Governance of IT, Compliance, and Law	DLMIGCR01-01_E	Corporate Governance of IT, Compliance, and Law	5	Exam
Advanced Mathematics	DLMDSAM01	Advanced Mathematics	5	Exam
Cyber Security and Data Protection	DLMCSITSDP01	Cyber Security and Data Protection	5	Oral Assignment
Advanced Research Methods	DLMARM01	Advanced Research Methods	5	Written Assignment
Cyber Risk Assessment and Management	DLMCSECRAM01_E	Cyber Risk Assessment and Management	5	Exam
IT Systems: Software	DLMIMITSS01_E	IT Systems: Software	5	Exam
IT Systems: Hardware	DLMIMITSH01_E	IT Systems: Hardware	5	Exam
Cyber Systems and Network Forensics	DLMCSECSNF01_E	Cyber Systems and Network Forensics	5	Exam
Theoretical Computer Science for IT Security	DLMCSETCSITS01_E	Theoretical Computer Science for IT Security	5	Exam
Seminar: Advanced Cyber Security	DLMCSEAITSC01	Seminar: Advanced Cyber Security	5	Research Essay
Seminar: Standards and Frameworks	DLMIMSSF01_E	Seminar: Standards and Frameworks	5	Research Essay
Project: Current Challenges of Cyber Security	DLMCSEPCCCS01_E	Project: Current Challenges of Cyber Security	5	Project Report
Cryptology	DLMCSEAITSC02	Cryptology	5	Oral Assignment
Secure Networking	DLMCSEESN01_E	Secure Networking	5	Exam
ELECTIVE A*		e.g. Blockchain and Quantum Computing	10	
ELECTIVE B*		e.g. Data Science and Big Data Technologies	10	
Master Thesis		Master Thesis	27	Master Thesis
		Thesis Defense	3	Presentation: Colloquium

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