

CURRICULUM M.Sc. CYBER SECURITY

myStudies, 120 ECTS

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



Here you see the order in which you study your courses in presence depending on your personal study start in October, January, April or July. Each semester consists of two blocks. In each block, you attend classes on campus for usually three courses to deepen the content in direct exchange with your fellow students and lecturers. You have semester breaks in June and September. Attending the courses on campus is mandatory and will be verified due to Visa regulations (not valid for DACH students).

Each block concludes with a two-week exam preparation phase. You can defer those exams to a later date that you do not want to take during this period. This way, your exam phases are always spread evenly over the year. Exceptions to this are courses that count as admission requirements for other courses.

Attention: Attendance times may vary slightly depending on public holidays and the federal state holidays the campus is located in.

Elective A*	Elective B*
<p><i>Cyber Criminality</i></p> <p>a) Attack Scenarios and Incident Response</p> <p>b) Project: Cyber Forensics</p> <p><i>Blockchain and Quantum Computing</i></p> <p>a) Blockchain</p> <p>b) Quantum Computing</p> <p><i>Secure Software Development</i></p> <p>a) Secure Software Development</p> <p>b) Project: Secure Software Implementation</p>	<p><i>Organizational Transformation</i></p> <p>a) Tools in Organizational Analysis</p> <p>d) Management of IT Services and Architecture</p> <p><i>IT Law for IT Security</i></p> <p>c) International IT Law</p> <p>d) Seminar: Legal Framework for IT Security</p> <p><i>Audit- and Security Testing</i></p> <p>c) Attack Models and Auditing</p> <p>d) Seminar: IT Security Tests</p> <p><i>Business Analyst</i></p> <p>c) Business Intelligence I</p> <p>d) Project: Business Intelligence</p>

* Electives: Choose one module with two courses from the Elective A and one module from the Elective B. Every elective module can only be chosen once.

Note: Those elective modules where the minimum number of participants is not reached will only be offered online (distance learning). However, IU ensures that there are always electives on campus.

Module	Course Code	Course	ECTS	Type of Exam
Corporate Governance of IT, Compliance, and Law	DLMIGR01-01_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	DLMCSEPCCS01_E	Project: Current Challenges of Cyber Security	5	Project Report
Cryptography	DLMCSEAITSC02	Cryptography	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		Thesis Defense	27	Master Thesis
			3	Presentation: Colloquium

If you are studying Model 2 or 4 you will have to start your Master Thesis before completing your Elective B courses.