

CURRICULUM B.SC. CYBER SECURITY

DISTANCE LEARNING

Semester			Module	Course Code	Course	ECTS credits	Type of Exam
FT	PT I	PT II					
1. Semester	1. Semester	1. Semester	Operating Systems, Computer Networks, and Distributed Systems	DLBIBRV501_E	Operating Systems, Computer Networks, and Distributed Systems	5	Exam
			Introduction to Data Protection and Cyber Security	DLBCSIDPITS01	Introduction to Data Protection and Cyber Security	5	Exam
			Introduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam
		2. Semester	Introduction to Academic Work for IT and Technology	DLBIAWITT01	Introduction to Academic Work for IT and Technology	5	Advanced Workbook
			Project: Object Oriented and Functional Programming with Python	DLBDSOOFPP01	Project: Object Oriented and Functional Programming with Python	5	Portfolio
			ELECTIVES C		Internship or modules to choose	5	
2. Semester	2. Semester	3. Semester	Introduction to Network Forensics	DLBCSEINF01_E	Introduction to Network Forensics	5	Exam
			Mathematics I	DLBCSM101	Mathematics I	5	Exam
			Statistics: Probability and Descriptive Statistics	DLBDSSPDS01-01	Statistics: Probability and Descriptive Statistics	5	Exam
		4. Semester	Requirements Engineering	DLBCSRE01	Requirements Engineering	5	Exam
			Project: Agile Project Management	DLBCSAPM01	Project: Agile Project Management	5	Project Report
			ELECTIVES C		Internship or modules to choose	5	
3. Semester	3. Semester	5. Semester	System Pentesting Basics	DLBCSESPB01_E	System Pentesting Basics	5	Exam
			Theoretical Computer Science and Mathematical Logic	DLBCSTCSML01	Theoretical Computer Science and Mathematical Logic	5	Exam
			Social Engineering and Insider Threats	DLBCSEESE01_E	Social Engineering and Insider Threats	5	Case Study
		6. Semester	Technical and Operational IT Security Concepts	DLBCSEEISC01_E	Technical and Operational IT Security Concepts	5	Exam
			Project: Social Engineering	DLBCSEESE02_E	Project: Social Engineering	5	Oral Project Report
			ELECTIVES C		Internship or modules to choose	5	
4. Semester	4. Semester	7. Semester	DevSecOps and Common Software Weaknesses	DLBCSEDCSW01_E	DevSecOps and Common Software Weaknesses	5	Written Assignment
			Cryptography	DLBCSCT01-01	Cryptography	5	Case Study
			Host and Software Forensics	DLBCSEHSF01_E	Host and Software Forensics	5	Exam
		8. Semester	Seminar: Current Topics in Computer Science	DLBCSSCTCS01	Seminar: Current Topics in Computer Science	5	Research Essay
			Project: Configuration and Application of SIEM Systems	DLBCSEEISC02_E	Project: Configuration and Application of SIEM Systems	5	Project Report
			ELECTIVES C		Internship or modules to choose	5	
5. Semester	5. Semester	9. Semester	Threat Modeling	DLBCSEEFFT01_E	Threat Modeling	5	Exam
			Information Security Standards	DLBCSEISS01_E	Information Security Standards	5	Case Study
			ELECTIVES A*		ELECTIVES A*	10	
		10.	Project: Threat Modeling	DLBCSEEFFT02_E	Project: Threat Modeling	5	Project Report
			ELECTIVES C		ELECTIVES C	5	
			ELECTIVES B*		ELECTIVES B*	10	
6. Semester	8.	11.	Project: General Programming with C/C++	DLBMINPAPCC01_E	Project: General Programming with C/C++	5	Portfolio
			ELECTIVES C		ELECTIVES C	5	
		12	Bachelor Thesis	DLBBT01 DLBBT02	Bachelor Thesis Colloquium	9 2	Bachelor Thesis Colloquium
Total							
180 ECTS credits							

Electives A:	Electives B:	Electives C:
Cloud Computing Static and Dynamic Malware Analysis Principles of Ethical Hacking Object-oriented Programming with Java Techniques and methods for agile software development Attack Models and Threat Feeds Mobile Software Engineering Wireless and Telecom Security Protocols, Log- and Dataflow-Analysis in Depth Smart Factory Production Engineering Industry 4.0 Introduction to the Internet of Things Software Engineering Principles	Security Controls in the Cloud Project: Security by Design in the Cloud Seminar: Sandbox Interpretation Project: Pentesting Algorithms, Data Structures, and Programming Languages Project: Agile DevSecOps Software Engineering Project: Defense against APTs Project: Mobile Software Engineering Software Architectures of Mobile Devices Seminar: Threat Hunting, Analysis and Incident Response Project: Smart Factory Automation and Robotics Internet of Things Security Database Modeling and Database Systems Studium Generale I Studium Generale II	Internship: Computer Science or: Collaborative Work Intercultural and Ethical Decision-Making Conflict Management and Mediation Interaction and Communication in Organisations Business Intelligence Project: AI Excellence with Creative Prompting Techniques



You've already planned out exactly how your course schedule should look? Wonderful!
The IU International University of Applied Sciences offers you the flexibility to choose any available module you like from any semester. You can work on a number of modules at the same time or one by one.



At the beginning, choose modules that particularly interest you or that you can use directly in your job. This motivates you and gives you success right from the start.



Information about electives C:
Decide at the beginning between an internship at a company or modules from electives C. You will complete the internship with a practical reflection. If you decide on the modules from electives C, all modules from this area must be completed. Mixed forms of internship and compulsory electives C are not possible.



* Electives: Two modules per elective to choose from, each elective module can only be chosen once.

FT: Full-Time, 36 months
PT I: Part-Time I, 48 months
PT II: Part-Time II, 72 months