

# CURRICULUM M.SC. CYBER SECURITY, ENGLISCH, 120 ECTS, PART-TIME (48 MONTHS)

Semester	Module	Course Code	Course Name	ECTS	
1. Semester 15 ECTS	Corporate Governance of IT, Compliance, and Law	DLMIGCR01-01_E	Corporate Governance of IT, Compliance, and Law	5	E
	Advanced Mathematics	DLMSAM01	Advanced Mathematics	5	E
	Cyber Security and Data Protection	DLMCSITSDP01	Cyber Security and Data Protection	5	OA
2. Semester 15 ECTS	Programming with Python	DLMDSPPW01	Programming with Python	5	E
	IT Project Management	DLMBITPAM01	IT Project Management	5	E
	Advanced Statistics	DLMDSAS01	Advanced Statistics	5	E
3. Semester 15 ECTS	Advanced Research Methods	DLMARM01	Advanced Research Methods	5	WAWA
	Cyber Risk Assessment and Management	DLMCSECRAM01_E	Cyber Risk Assessment and Management	5	E
	IT Systems: Software	DLMIMITSS01_E	IT Systems: Software	5	E
4. Semester 10 ECTS	IT Systems: Hardware	DLMIMITSH01_E	IT Systems: Hardware	5	E
	Cyber Systems and Network Forensics	DLMCSECSNF01_E	Cyber Systems and Network Forensics	5	E
5. Semester 10 ECTS	Theoretical Computer Science for IT Security	DLMCSETCSITS01_E	Theoretical Computer Science for IT Security	5	E
	Seminar: Standards and Frameworks	DLMIMSSF01_E	Seminar: Standards and Frameworks	5	WARE
6. Semester 15 ECTS	Project: Current Challenges of Cyber Security	DLMCSEPCCS01_E	Project: Current Challenges of Cyber Security	5	WAPR
	ELECTIVE MODULE I **		e.g. Advanced Cyber Security and Cryptology	10	
7. Semester 10 ECTS	ELECTIVE MODULE II **		e.g. Machine Learning and Deep Learning	10	
8. Semester 30 ECTS	Master Thesis	MMTHE01	Master Thesis	27	WAT
		MMTHE02	Colloquium	3	PC
<b>TOTAL 120 ECTS</b>	<b>GOAL: In order to stay on schedule, you should finish modules of about 15 Credit Points per semester!</b>				

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

As you begin your studies, choose modules that are of particular interest to you or that you can use directly in your job. This motivates you and helps you succeed right from the start.

A module with two courses consists of an introduction and a consolidation. In order to successfully complete a module, you must successfully pass both the introduction and the consolidation of the module within the framework of a module examination.

\* All the modules that have been unlocked for the Online Exams can be found in CARE.

**NOTE:**  
If the result of the recognition exam is still pending, you should not choose any courses that you have applied for.

**E** Exam (monthly at study centres or anytime via the online exam\*)  
**OA** Oral Assignment  
**P** Portfolio  
**PC** Presentation: Colloquium  
**WAF** Written Assessment: Research Essay  
**WAF** Written Assessment: Project Report  
**WAT** Written Assessment: Thesis  
**WAI** Written Assessment: Written Assignment

\*\* Electives  
- Choose two modules

**Elective Module I:**

- Advanced Cyber Security and Cryptology
- Secure Networking
- Cyber Criminality
- Blockchain and Quantum Computing
- DevSecOps

**Elective Module II:**

- Organizational Transformation
- IT Law for IT Security
- Audit- and Security Testing
- Business Analyst
- Continuous and Lifecycle Security
- Data Science and Big Data Technologies
- Industrial Automation and Internet of Things
- Artificial Intelligence