CURRICULUM B.SC. CLOUD COMPUTING
DISTANCE LEARNING

Semester FT	PT I	PT II	Module	Course Code	Course	ECTS	Type of Exam
1. Semester	1. Semester	1. Semester	Introduction to Computer Science	DLBCSICS01	Introduction to Computer Science	5	Exam
			Cloud Computing	DLBDSCC01	Cloud Computing	5	Exam
			Introduction to Academic Work for IT and Technology	DLBIAWITT01	Introduction to Academic Work for IT and Technology	5	Advanced Workbook
		2.	Techniques and methods for agile software development	IWNF01_E	Techniques and methods for agile software development	5	Exam
			Project: Agile Software Engineering	IWNF02_E	Project: Agile Software Engineering	5	Written Assessment: Project Report
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
2. Semester	2. Semester	3.	Mathematics I	DLBCSM101	Mathematics I	5	Exam
			Database Modeling and Database Systems	DLBCSDMDS01	Database Modeling and Database Systems	5	Exam
			Big Data Technologies	DLBDSBDT01	Big Data Technologies	5	Exam
	3. Semester	4.	Introduction to the Internet of Things	DLBINGEIT01_E	Introduction to the Internet of Things	5	Exam
			Project: Build a Data Mart in SQL	DLBDSPBDM01	Project: Build a Data Mart in SQL	5	Portfolio
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
3. Semester		5.	Operating Systems, Computer Networks, and Distributed Systems	DLBIBRVS01_E	Operating Systems, Computer Networks, and Distributed Systems	5	Exam
			IT Infrastructure	DLBSEPITI01_E	IT Infrastructure	5	Exam
	4. Semester		Introduction to Low-Code Development	DLBDBEILCD01	Introduction to Low-Code Development	5	Written Assessment: Case Study
		6.	Computer Science and Society	DLBCSCSAS01	Computer Science and Society	5	Written Assessment: Written Assignment
			Project: Low-Code Development	DLBDBEPLCD01	Project: Low-Code Development	5	Oral Project Report
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
4. Semester	5. Semester	7.	Introduction to Data Protection and Cyber Security	DLBCSIDPITS01	Introduction to Data Protection and Cyber Security	5	Exam
			Technical and Operational IT Security Concepts	DLBCSEEISC01_E	Technical and Operational IT Security Concepts	5	Exam
			Security Controls in the Cloud	DLBCSEEECS01_E	Security Controls in the Cloud	5	Exam
		8.	Seminar: Current Topics in Cloud Computing	DLBCSOSCTICC01	Seminar: Current Topics in Cloud Computing	5	Written Assessment: Research Essay
			Project: Security by Design in the Cloud	DLBCSEECS02_E	Project: Security by Design in the Cloud	5	Written Assessment: Project Report
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
5. Semester	6. Semester	9.	ELECTIVE A*		e.g. Smart Devices I, Smart Devices II	10	
			ELECTIVE B*		e.g. Smart Services I, Smart Services II	10	
		10.	Project: Agile DevSecOps Software Engineering	DLBCSEEDSO01_E	Project: Agile DevSecOps Software Engineering	5	Written Assessment: Project Report
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
6. Semester	7. Semester	11.	ELECTIVE C*		e.g. Smart Factory I, Smart Factory II	10	
			Internship: Bachelor Cloud Computing[1]	DLBCCOEIBCC01	Internship: Bachelor Cloud Computing[1]	5	Internship Reflection Paper
	8.	12.	Project: Cloud Programming	DLBSEPCP01_E	Project: Cloud Programming	5	Portfolio
			Bachelor Thesis		Bachelor Thesis / Thesis Defense	9 / 1	Bachelor Thesis / Presentation: Colloquium
Total 180 ECTS							

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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.

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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.

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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.

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Majors	Elective A:	Elective B:	Elective C:
Strategy	IT Architecture Management	Managerial Economics	Project: IT Service Management
	IT Service Management	Corporate Governance and Strategy	IT Law
Data	Introduction Programming with Python	Exploratory Data Analysis and Visualization	Data Analytics and Big Data
	Project: Object Oriented and Functional Programming with Python	Data Engineering	Advanced Data Analysis
Smart	Smart Devices	Smart Services	Smart Factory
	Project: Smart Devices	Project: Smart Services	Project: Smart Factory
Security	Theoretical Computer Science and Mathematical Logic	Threat Modeling	Cryptography
	Requirements Engineering	Information Security Standards	Attack Models and Threat Feeds
Machine Learning	Mathematics: Analysis	Statistics: Probability and Descriptive Statistics	Machine Learning - Supervised Learning
	Mathematics: Linear Algebra	Statistics - Inferential Statistics	Machine Learning - Unsupervised Learning and Feature Engineering
Additional modules	Mathematics II		Mathematics II
			Project: AWS - Cloud Essentials
			Project: AWS - Cloud Advanced
			Studium Generale I
			Studium Generale II

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You can find more information about your degree program in the module handbook on our website.

[1] **Internship:**
Decide at the beginning between an internship at a company or modules from compulsory elective D. You complete the internship with a practical reflection. If you decide on the modules from compulsory elective D, all modules from this area must be completed. Mixed forms of internship and compulsory elective D are not possible.

Elective D

Internship: Cloud Computing[1]
or:
Personal Career Plan
Intercultural and Ethical Decision-Making
Conflict Management and Mediation
Collaborative Work
DevOps and Continuous Delivery
Project: Digitalization and Automation Hackathon

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