

**CURRICULUM B.ENG. ENGINEERING**  
**DISTANCE LEARNING**

Semester			Module	Course Code	Course	ECTS credits	Type of Exam	
FT	PT I	PT II						
1. Semester	1. Semester	1. Semester	Engineering: Branches, Methods, Applications, Trends	DLBENGEBMAT01	Engineering: Branches, Methods, Applications, Trends	5	Written Assignment	
			Introduction to Academic Work	BWIR01-01	Introduction to Academic Work	5	Basic Workbook	
			Mathematics: Linear Algebra	DLBDSMFLA01	Mathematics: Linear Algebra	5	Exam	
	2. Semester	2. Semester	1. Semester	Fundamentals of Physics	DLBWINGP01_E	Fundamentals of Physics	5	Exam
				Introduction to the Internet of Things	DLBINGEIT01_E	Introduction to the Internet of Things	5	Exam
				Introduction to Computer Science	DLBSCICS01	Introduction to Computer Science	5	Exam
2. Semester	2. Semester	3. Semester	Fundamentals of Chemistry	DLBMETGC01_E	Fundamentals of Chemistry	5	Exam	
			Production Engineering Industry 4.0	DLBDEAR01	Production Engineering Industry 4.0	5	Exam	
			Mechanics - Statics	DLBROMS01_E	Mechanics - Statics	5	Exam	
	3. Semester	4. Semester	4. Semester	Automation Technology	DLBROEIRA02_E	Automation Technology	5	Exam
				Mathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
				Signals and Systems	DLBROSS01_E	Signals and Systems	5	Exam
3. Semester	4. Semester	5. Semester	Control Systems Engineering	DLBROCE01_E	Control Systems Engineering	5	Exam	
			Materials Science for Engineers	DLBMETGWK01_E	Materials Science for Engineers	5	Exam	
			Sensor Technology	DLBROST01_E	Sensor Technology	5	Exam	
	4. Semester	6. Semester	6. Semester	Electrical Engineering	DLBINGET01-01_E	Electrical Engineering	5	Exam
				Mechanics - Kinematics and Dynamics	DLBROMKD01_E	Mechanics - Kinematics and Dynamics	5	Exam
				Technical Mechanics: Elastostatics	DLBBIWTM01_E	Technical Mechanics: Elastostatics	5	Exam
4. Semester	5. Semester	7. Semester	Introduction to Electromagnetics	DLBENGEE01	Introduction to Electromagnetics	5	Exam	
			Fundamentals of Systems Simulation	DLBENGFS01	Fundamentals of Systems Simulation	5	Advanced Workbook	
			Introduction to Data Protection and Cyber Security	DLBCSIDPITS01	Introduction to Data Protection and Cyber Security	5	Exam	
	6. Semester	8. Semester	8. Semester	Statistics: Probability and Descriptive Statistics	DLBDSPPDS01-01	Statistics: Probability and Descriptive Statistics	5	Exam
				Introduction to Programming with Python	DLBENGPS01	Introduction to Programming with Python	5	Exam
				Project: Simulation of Systems	DLBENGPS01	Project: Simulation of Systems	5	Project Report
5. Semester	6. Semester	9. Semester	Fundamentals of Data-Driven Engineering	DLBENGFDDE01	Fundamentals of Data-Driven Engineering	5	Case Study	
			Seminar: The Big Data Society	DLBENGSTBDS01	Seminar: The Big Data Society	5	Research Essay	
			Electrical Machines and Energy Technology	DLBAETEME01_E	Electrical Machines and Energy Technology	5	Exam	
6. Semester	7. Semester	10. Semester	Project: Control Unit Design for a Mechanical System	DLBENGEESD01	Project: Control Unit Design for a Mechanical System	5	Project Report	
			ELECTIVE A*		e.g. Robot Kinematics and Dynamics	10		
	8. Semester	11. Semester	11. Semester	ELECTIVE B*		e.g. Simulation and Control of Robots	10	
				ELECTIVE C*		e.g. Embedded Systems and Programming with C/C++	10	
			Bachelor Thesis		Bachelor Thesis	9	Bachelor Thesis	
			Thesis Defense		Thesis Defense	1	Thesis Defense	
Total			180 ECTS credits					

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.

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.

\* Electives: Choose three modules, every 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

Specialization Track	Elective A:	Elective B:	Elective C:
Robotics	Robot Kinematics and Dynamics	Simulation and Control of Robots	Embedded Systems and Programming with C/C++
Mechatronics	Mechatronic Systems and Design	Electrical Drive Technology and Fluid Mechanics	Embedded Systems and Programming with C/C++
Cybersecurity Engineering	Operating Systems, Networks and Network Forensics	Pentesting and DevSecOps	Cryptography and IT-Law
Data-Science Engineering	Functional Programming with Python and Inferential Statistics	Machine Learning - Supervised and Unsupervised Learning	Databases and Explorative Data Analysis and Visualization
Engineering Management	Supply Chain Management and Innovation	Agile Project Management and Smart Products	Smart Services
Electrical Engineering: Electromobility	Introduction to Electronics and Electronic Circuits	Electro Mobility	Autonomous Driving
Electrical Engineering: Digital Electronics	Introduction to Electronics and Electronic Circuits	Digital and Information Technology and Programming with C/C++	Embedded Systems, Microcontrollers and Logical Circuits
Electrical Engineering: Renewable Energies	Introduction to Electronics and Electronic Circuits	Energy Technology	Renewable Energies
All available Electives	Elective A:	Elective B:	Elective C:
	Introduction to Electronics and Electronic Circuits Mechatronic Systems and Design Robot Kinematics and Dynamics Supply Chain Management and Innovation Operating Systems, Networks and Network Forensics Functional Programming with Python and Inferential Statistics	Electro Mobility Digital and Information Technology and Programming with C/C++ Energy Technology Electrical Drive Technology and Fluid Mechanics Simulation and Control of Robots Mechatronic Systems and Programming with C/C++ Agile Project Management and Smart Products Pentesting and DevSecOps Machine Learning - Supervised and Unsupervised Learning	Autonomous Driving Embedded Systems, Microcontrollers and Logical Circuits Embedded Systems and Programming with C/C++ Smart Services Renewable Energies Cryptography and IT-Law Databases and Explorative Data Analysis and Visualization Mastering Prompts Career Development

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