CURRICULUM B.ENG. ROBOTICS

DISTANCE LEARNING

Semester FT	Semester PT I	Semester PT II	Module	Course Code	Course	ECTS	Type of Exam
1. Semester	1. Semester	1. Semester	Introduction to Robotics	DLBROIR01_E	Introduction to Robotics	5	Exam
			Introduction to Academic Work	DLBCSIAW01	Introduction to Academic Work	5	Workbook
			Scientific and technical fundamentals	DLBINGNAG01_E	Scientific and technical fundamentals	5	Exam
		2. Semester	Technical Drawing	DLBROTD01_E	Technical Drawing	5	Exam
			Mathematics: Linear Algebra	DLBDSMFLA01	Mathematics: Linear Algebra	5	Exam
	2. Semester		Mathematics II	DLBCSM201	Mathematics II	5	Exam
2. Semester		3. Semester	Production Engineering	DLBDSEAR01	Production Engineering	5	Exam
			Introduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam
			Mathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
	3. Semester	4. Semester	Mechanics - Statics	DLBROMS01_E	Mechanics - Statics	5	Exam
			Electrical Engineering	DLBINGET01-01_E	Electrical Engineering	5	Exam
			Project: Design with CAD	DLBROPDCAD01_E	Project: Design with CAD	5	Oral Project Report
3. Semester		5. Semester	Sensor Technology	DLBROST01_E	Sensor Technology	5	Exam
			Signals and Systems	DLBROSS01_E	Signals and Systems	5	Exam
	4. Semester		Mechanics - Kinematics	DLBROMK01_E	Mechanics - Kinematics	5	Exam
		6. Semester	Mechanics - Dynamics	DLBROMD01_E	Mechanics - Dynamics	5	Exam
			Collaborative Work	DLBCSCW01	Collaborative Work	5	Oral Assignment
			Programming with C/C++	DLBROEPRS01_E	Programming with C/C++	5	Portfolio
4. Semester	5. Semester	7. Semester	Mechatronic Systems	DLBROMSY01_E	Mechatronic Systems	5	Exam
			Control Systems Engineering	DLBROCSE01_E	Control Systems Engineering	5	Exam
			Project: Modeling and Simulation of Robots	DLBROPMSR01_E	Project: Modeling and Simulation of Robots	5	Project Report
		8. Semester	Project: Introduction to Robot Control	DLBROPIRC01_E	Project: Introduction to Robot Control	5	Project Report
			Embedded Systems	DLBROES01_E	Embedded Systems	5	Exam
	6. Semester		Project: Robotics	DLBROPR01_E	Project: Robotics	5	Oral Project Report
5. Semester		9. Semester	Seminar: Human-Robot Interaction	DLBROSHRI01_E	Seminar: Human-Robot Interaction	5	Research Essay
			Project: Applied Robotics with Robotic Platforms	DLBROPARRP01_E	Project: Applied Robotics with Robotic Platforms	5	Oral Project Report
			Seminar: Robots and Society	DLBROSRS01_E	Seminar: Robots and Society	5	Research Essay
	7. Semester		Safety of Industrial Plants and Machines	DLBROSIPM01_E	Safety of Industrial Plants and Machines	5	Exam
		10.	ELECTIVE A*		e.g. Industrial Robotics and Automation	10	
6. Semester			ELECTIVE B*		e.g. Service Robotics	10	
	8.	11.	ELECTIVE C*		e.g. Introduction to Cognitive Robotics	10	
		12.	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 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.

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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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* 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

Elective A:	Elective B:	Elective C:
Introduction to Cognitive Robotics	Industrial Robotics and Automation	Introduction to Cognitive Robotics
Industrial Robotics and Automation	Service Robotics	Industrial Robotics and Automation
Service Robotics	Introduction to Cognitive Robotics	Service Robotics
	AI Specialist	Industrial Robotics and Automation
	Autonomous Driving	Service Robotics
	Data Science and Deep Learning	Introduction to Cognitive Robotics
	Python for Software Engineering	AI Specialist
	IT Security	Autonomous Driving
	Mobile Software Engineering	Data Science and Deep Learning
	Foreign Language Italian	Python for Software Engineering
	Foreign Language French	IT Security
	German Language	Mobile Software Engineering
	Foreign Language Spanish	Foreign Language Italian
	Foreign Language Turkish	Foreign Language French
		German Language
		Foreign Language Spanish
		Foreign Language Turkish

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