

CURRICULUM B.Eng. INDUSTRIAL ENGINEERING AND MANAGEMENT

myStudies, 180 ECTS Credits

Month	Model 1: Programme Start October			Model 2: Programme Start January			Model 3: Programme Start April			Model 4: Programme Start July		
	Courses			Courses			Courses			Courses		
Oct												
Nov	Fundamentals of Physics	Introduction to Robotics	Management Accounting									
Dec												
Jan												
Feb	Technical Drawing	Collaborative Work	International Marketing	Technical Drawing	Collaborative Work	International Marketing						
Mar												
Apr	Mathematics II	Business 101	Managerial Economics	Mathematics II	Business 101	Managerial Economics	Mathematics II	Business 101	Managerial Economics			
May												
Jun	Lecture-Free Period											
Jul	Introduction to Academic Work	Introduction to the Internet of Things	Production Engineering Industry 4.0	Introduction to Academic Work	Introduction to the Internet of Things	Production Engineering Industry 4.0	Introduction to Academic Work	Introduction to the Internet of Things	Production Engineering Industry 4.0	Introduction to Academic Work	Introduction to the Internet of Things	Production Engineering Industry 4.0
Aug												
Sep	Lecture-Free Period											
Oct	Entrepreneurship and Innovation	Supply Chain Management I	Intercultural and Ethical Decision-Making	Fundamentals of Physics	Introduction to Robotics	Management Accounting	Fundamentals of Physics	Introduction to Robotics	Management Accounting	Fundamentals of Physics	Introduction to Robotics	Management Accounting
Nov												
Dec												
Jan	Electrical Engineering	Project: Design Thinking	Sensor Technology	Electrical Engineering	Project: Design Thinking	Sensor Technology	Technical Drawing	Collaborative Work	International Marketing	Technical Drawing	Collaborative Work	International Marketing
Feb												
Mar	Mechatronic Systems	Automation Technology	Data Analytics and Big Data	Mechatronic Systems	Automation Technology	Data Analytics and Big Data	Mechatronic Systems	Automation Technology	Data Analytics and Big Data	Mathematics II	Business 101	Managerial Economics
Apr												
May	Lecture-Free Period											
Jun	Corporate Finance and Investment	Principles of Management	Corporate Finance and Investment	Principles of Management	Corporate Finance and Investment	Principles of Management	Corporate Finance and Investment	Principles of Management	Corporate Finance and Investment	Principles of Management	Corporate Finance and Investment	Principles of Management
Jul												
Aug	Lecture-Free Period											
Sep	Digital Business Models	Agile Project Management	Project: Smart Product Solutions	Entrepreneurship and Innovation	Supply Chain Management I	Intercultural and Ethical Decision-Making	Entrepreneurship and Innovation	Supply Chain Management I	Intercultural and Ethical Decision-Making	Entrepreneurship and Innovation	Supply Chain Management I	Intercultural and Ethical Decision-Making
Oct												
Nov	Seminar: Human-Robot Interaction	Elective A Course a	Elective A Course b	Seminar: Human-Robot Interaction	Elective A Course a	Elective A Course b	Electrical Engineering	Project: Design Thinking	Sensor Technology	Electrical Engineering	Project: Design Thinking	Sensor Technology
Dec												
Jan												
Feb												
Mar												
Apr												
May	Elective B (10 ECTS)	Product Development in Industry 4.0		Elective B (10 ECTS)	Product Development in Industry 4.0		Elective B (10 ECTS)	Product Development in Industry 4.0		Mechatronic Systems	Automation Technology	Data Analytics and Big Data
Jun												
Jul	Elective C Course c	Elective C Course d	Bachelor Thesis	Elective C Course c	Elective C Course d	Bachelor Thesis	Elective C Course c	Elective C Course d	Bachelor Thesis	Elective C Course c	Elective C Course d	Bachelor Thesis
Aug												
Sep	Lecture-Free Period											
Oct				Digital Business Models	Agile Project Management	Project: Smart Product Solutions	Digital Business Models	Agile Project Management	Project: Smart Product Solutions	Digital Business Models	Agile Project Management	Project: Smart Product Solutions
Nov												
Dec												
Jan												
Feb												
Mar							Seminar: Human-Robot Interaction	Elective A Course a	Elective A Course b	Seminar: Human-Robot Interaction	Elective A Course a	Elective A Course b
Apr												
May										Elective B (10 ECTS)		Product Development in Industry 4.0



Here you see the order in which you study your courses in presence depending on your personal study start in October, January, April or July. Each semester consists of two blocks. In each block, you attend classes on campus for usually three courses to deepen the content in direct exchange with your fellow students and lecturers.

You have lecture-free periods in both June and September, which you can spend reviewing and preparing for exams. Attending the courses on campus is mandatory and will be verified due to Visa regulations (not valid for DAChI students!).

Each block concludes with a two-week exam preparation phase. You can defer those exams to a later date that you do not want to take during this period. This way, your exam phases are always spread evenly over the year. Exceptions to this are courses that count as admission requirements for other courses.

Attention: Attendance times may vary slightly depending on public holidays and the federal state holidays the campus is located in.

If you are studying Model 2, 3 or 4 you will have to start your Bachelor Thesis before completing your final courses.

Note: You can already start with your thesis earlier than the designated block, once you have met the minimum amount of credit points required to enter.

Elective A-	Elective B-	Elective C-
Applied Robotics a) Embedded Systems b) Project: Applied Robotics with Robotic Platforms Applied Sales a) Applied Sales I b) Applied Sales II Autonomous Driving a) Self-Driving Vehicles b) Seminar: Current Topics and Trends in Self-Driving Technology Control Engineering a) Signals and Systems b) Control Systems Engineering* Cognitive Robotics a) Digital Signal Processing b) Introduction to Computer Vision Microcontroller a) Digital and Information Technology b) Project: Microcontrollers and Logical Circuits	Object-oriented Programming a) Object-oriented Programming with Java b) Data Structures and Java Class Library Service Robotics a) Mobile Robotics b) Soft Robotics Smart Devices a) Smart Devices I b) Smart Devices II Smart Factory a) Smart Factory I b) Smart Factory II Smart Mobility a) Smart Mobility I b) Smart Mobility II Smart Services a) Smart Services I b) Smart Services II Internship	Practice Project: Industrial Engineering 4.0 Project: Hackathon Internship Applied Robotics c) Embedded Systems d) Project: Applied Robotics with Robotic Platforms Applied Sales c) Applied Sales I d) Applied Sales II Autonomous Driving c) Self-Driving Vehicles d) Seminar: Current Topics and Trends in Self-Driving Technology Control Engineering c) Signals and Systems d) Control Systems Engineering* Cognitive Robotics c) Digital Signal Processing d) Introduction to Computer Vision Microcontroller c) Digital and Information Technology d) Project: Microcontrollers and Logical Circuits Object-oriented Programming c) Object-oriented Programming with Java d) Data Structures and Java Class Library

Course Information	Course Code	Course	ECTS Credits	Type of Exam
Fundamentals of Physics	DLBWINP01_01_E	Fundamentals of Physics	5	Exam
Introduction to Robotics	DLBROIR01_E	Introduction to Robotics	5	Exam/Written Assessment; Written Assignment
Management Accounting	DLBMA01_E	Management Accounting	5	Exam/Written Assessment; Written Assignment
Technical Drawing	DLBROTD01_E	Technical Drawing	5	Exam
Collaborative Work	DLBSCCW01	Collaborative Work	5	Oral Assignment
International Marketing	DLBSEIM01	International Marketing	5	Exam
Mathematics II	DLBSCM01	Mathematics II	5	Exam
Business 101	DLBBAB01_E	Business 101	5	Exam/Written Assessment; Written Assignment
Managerial Economics	DLBBIHE01_E	Managerial Economics	5	Exam
Introduction to Academic Work	DLBSCSAW01	Introduction to Academic Work	5	Basic Workbook
Introduction to the Internet of Things	DLBINGET01_E	Introduction to the Internet of Things	5	Exam
Production Engineering Industry 4.0	DLBDEAR01	Production Engineering Industry 4.0	5	Exam
Entrepreneurship and Innovation	DLBSEIR01_01_E	Entrepreneurship and Innovation	5	Exam
Supply Chain Management I	DLBDESCM01	Supply Chain Management I	5	Exam
Intercultural and Ethical Decision-Making	DLBSCIM01	Intercultural and Ethical Decision-Making	5	Written Assessment; Case Study
Electrical Engineering	DLBINGET01_01_E	Electrical Engineering	5	Exam
Project: Design Thinking	DLBINGET01_01_E	Project: Design Thinking	5	Written Assessment; Project Report
Sensor Technology	DLBROST01_E	Sensor Technology	5	Exam
Mechatronic Systems	DLBROMSV01_E	Mechatronic Systems	5	Exam
Automation Technology	DLBROEAD01_E	Automation Technology	5	Exam
Data Analytics and Big Data	DLBINGABDD01_E	Data Analytics and Big Data	5	Written Assessment; Case Study
Corporate Finance and Investment	DLBRCF01	Corporate Finance and Investment	5	Written Assessment; Written Assignment
Principles of Management	DLBBAPM01_E	Principles of Management	5	Written Assessment; Case Study
Product Development in Industry 4.0	DLBINPEP01_E	Product Development in Industry 4.0	5	Exam
Digital Business Models	DLBLDDBM01_E	Digital Business Models	5	Exam/Advanced Workbook
Agile Project Management	DLBSCAPM01	Agile Project Management	5	Written Assessment; Project Report
Project: Smart Product Solutions	DLBIEPSP01	Project: Smart Product Solutions	5	Oral Project Report
Seminar: Human-Robot Interaction	DLBROSHRI01_E	Seminar: Human-Robot Interaction	5	Written Assessment; Research Essay
ELECTIVE A-		e.g. Autonomous Driving	10	
ELECTIVE B-		e.g. Practice Project: Industrial Engineering 4.0	10	
ELECTIVE C-		e.g. Control Engineering	10	
Bachelor Thesis		Bachelor Thesis	9	Bachelor Thesis
		Thesis Defense	1	Presentation; Colloquium

Electives: Choose one module from the Elective A, one module from the Elective B and one module from the Elective C. Every elective module can only be chosen once.

* This course comes with admissions requirements. Please consult the module handbook for more information.

Note: Elective modules where the minimum number of participants is not reached will only be offered online (distance learning). However, IU ensures that there are always electives on campus.