CURRICULU	4 B.Eng. Eng	ineering														•
myStudies,	80 ECTS															
	Model 1: Programme Start October			Model 2: Programme Start January				Model 3: Programme Start April				Model 4: Programme Start July				
Month		Courses			Courses Courses Courses											
Oct	Branches,	Mathematics-Linear	Eurodamentals of													INTERNATIONAL
Nov	Methods,	Algebra	Physics													UNIVERSITY OF
Dec	Trends						1									APPLIED SCIENCES
Jan	Introduction to the	Fundamentals of	Mathematics:	Introduction to the			Mathematics:									
Feb	Internet of Things	Chemistry	Analysis	Internet of Things	Fundamenta	als of Physics	Linear Algebra									
Mar									-							
Apr	Introduction to	Signals and Systems	Automation	Introduction to	Mathemati	ics: Analysis	Automation	Fundamentals	of Mathema	tics: Linear	Mathematics:					
May	computer science		recimology	computer science			recimology		~~~	cora	Anatysis					Here you see the order is which you say
Jun			1	I .			Lecture-F	ree Period			Production				Production	study your courses in presence
Jul	Introduction to Academic Work	Production Engineering	Mechanics - Statics	Introduction to Academic Work	Production Engineering Industry 4.0		Mechanics - Statics	Introduction to Academic Wor	introduc	tion to the of Things	Engineering	Fundamentals of Physics	Introduction to the Internet of Things		Engineering	depending on your personal study start
Aug							Lecture-E	ree Period			Industry 4.0	,		8-	Industry 4.0	in october, sandary, April of Suly.
Sep				Engineering:			Lecture	Engineering:				Engineering:				You have lecture-free periods in both June and September, which you can
Neu	Materials Science	Control Systems	Fundamentals of	Branches,	Fundamentals of		Signals and	Branches,	C		Introduction to	Branches,	Mathematics: Linear	Mathematics:	spend reviewing and preparing for	
NUV	for Engineers	for Engineers Engineering*		Applications,	Chemistry		Systems	Applications,	Signais a	nd Systems	Computer Science	Applications,	Algebra		Analysis	exams. Attending the courses on campus is mandatory and will be verified due to
Dec				Trends				Trends	_			Trends				Visa regulations (not valid for DACH
Jan		nsor Technology Electrical Engineering			y Electrical Engineering		Introduction to	Fundamentals	of		Mechanics - Statics	Fundamentals of Chemistry	Introduction to Academic Work	Mechanics - Statics	students).	
Feb	Sensor rechnology			Sensor Lechnology			Programming with Python	Chemistry	Electrical	Engineering						
Mar		- Fu		Fundamentals of		Fundamentals of				+						
Apr	of Systems* and Dynamics* Data-Driven		Systems and Dynamics*		Data-Driven	for Engineers	e Fundament Sim	als of Systems Ilation	Technology	Introduction to Computer Science	Signals and Systems		Technology			
lun	-	-	Engineering	Simulation			Lecture-F	ree Period			-					র্ব
Jul	Introduction to	Statistics Dephability and	Technical	Introduction to	Statistics De	ababilityand	Technical	Introduction to	Statistics D	ahahilih, and	Introduction to	Introduction to	Statistics De	abability and	Introduction to	
Aug	Data Protection	Data Protection Descriptive Statistics Mechanics:		Data Protection and Cyber Security		Mechanics: Elastoritatics	Data Protection and Cyber Security Description		ve Statistics Programming with		Data Protection and Cyber Security Descriptive Statistics		Programming with	Each competer consists of two blocks that		
Sep	and cyber security		Lingtografies	and cyber security			Lecture-F	ree Period			1 yuluu	and cyber security	1		1 yelloli	conclude with a two-week exam
Oct		Electrical						Markenster			Contracted of	e de la constante de			Contracted of	preparation phase. You can also defer those examples a later date that you do
Nov	Electromagnetics	Machines and Elective /	Elective A Course b	Introduction to	Project: Simulation of Systems*		Materials Science for Engineers	Kinematics an	Project: Si	Project: Simulation of		Systems	Mechanics - Kinematics		Data-Driven	not want to take during this period. This
Dec		Technology*		Electromagnetics				Dynamics*	Jys	tenis	Engineering	Simulation	and bynamics"		Engineering	way, your exam phases are always
Jan	Project: Control			Control F	roject: Control						Project: Control					spread evenily over the year.
Feb	Unit Design for a Mechanical	Elective B Course c	Elective B Course d	Systems L Engineering*	Unit Design for a Mechanical System*	Elective A Course a	Elective A Course b	Sensor Technolo	gy Contro Engin	Systems eering*	Unit Design for a Mechanical	Sensor Technology	y Electrical Engineering		Control Systems Engineering*	In each block, you attend classes on campus for usually three courses to
Mar	System*									8	System*					deepen the content in direct exchange
Apr	Seminar: The Big	Elective C	Elective C	Seminar: The Big	Elect	tive B	Elective B	Technical Mechanics:	Elec	tive A	Elective A	Technical Mechanics	Project: Sin	mulation of	Materials Science	with your fellow students and lecturers.
May	Data Society	Course e	Course f	Data Society	Cou	rse c	Course d	Elastostatics	Co	irse a	Course b	Elastostatics	Syst	ems*	for Engineers	
Jun							Lecture-F	ree Period								
Jul		Bachelor Thesis		Electrical Machines and Energy	Elect	tive C	Elective C	Electrical Machin and Energy	Elec	tive B	Elective B	Electrical Machines and Energy	Elec	tive A	Elective A	
Aug			Technology* Course e		Course f	Technology*	Cor	irse c	Course d	Technology*	Course a		Course b	Attention: Attendance times may vary		
Sep		Lecture-Free Period									slightly depending on public holidays					
Oct	Bachelor Thesis					Introduction to	Seminar: The	eminar: The	Elective C	Introduction to S	Seminar: The	Elective R	Elective B	and the federal state holidays the campus is located in.		
Nov					Electromagnetics	Big Data Society	Course e	Course f	Electromagnetics	Big Data Society	Course c	Course d				
Dec									/			Desired Control				-
Jan										Project: Control Unit Design for a Elective C			Elective C			
Feb								Bachelor Thesis				Mechanical Course e			Course f	* This course comes with admissions
Mar	-				_					_		System*				- requirements. Please consult the module
Apr													Bachelo	or Thesis		handbook for more information.
мау																



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Electives: Choose one module from Electives A, one module from Electives B and one module from Electives C. Every Elective module contains two courses and can only be chosen once.

For this Bachelor, you have the option to follow a **Specialization** track to diver deep into a specific subject area (e.g. Robotics, Mechatronics, etc.). To choose a Specializati make sure to opt for the right combination Electives modules as shown here.

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.

Robotics

Mechatronics

Non-Specialization Electives

Elective A Robot Kinematics and Dynamics a) Mechanics - Kinematics b) Mechanics - Dynamics Cybersecurity Engineering Data-Science Engineering Supply Chain Management and Innova a) Supply Chain Management I b) Entrepreneurship and Innovation Engineering Management b) Entrepreneursnip and innovation
Introduction to Electronics and Electro
a) Introduction to Electronics
b) Introduction to Electronic Circuits Electrical Engineering: Electromobility Electrical Engineering: Digital Electronics Electrical Engineering: Renewable Energies

b) Nechanics - uynamics Mechatronic Systems and Design a) Mechatronic Systems b) Design of Mechatronic Systems Depending Systems, Networks and Network Forensics a) Operating Systems, Computer Networks, and Distri b) Introduction to Network Forensics Punctional Programming with Python and Inferential Statistics a) Object Oriented and Functional Programming in Python b) Statistics - Inferential Statistics Introduction to Electronics and Electronic Cin a) Introduction to Electronics b) Introduction to Electronic Circuits Introduction to Electronics and Electron a) Introduction to Electronics b) Introduction to Electronics b) Introduction to Electronic Circuits

Elective B Simulation and Control of Robots c) Project: Modeling and Simulation of Robots d) Project: Introduction to Robot Control Electrical Drive Technology and Fluid Mechanics c) Electrical Drive Technology d) Fluid Mechanics Pentesting and DevSecOps c) System Pentesting Basics d) DevSecOps and Common Software Weakne Machine Learning - Supervised and Unsupervised Learning c) Machine Learning - Supervised Learning d) Machine Learning - Unsupervised Learning and Feature Agile Project Management and Smart Products c) Agile Project Management d) Project: Smart Product Solutions Electro Mobility c) Electrical Drive Technology d) Battery Technology Digital and Information Technology and F c) Digital and Information Technology d) Programming with C/C++ c) High Voltage Technology d) Energy Industry

Elective C Embedded Systems and Programming with C/C++ e) Embedded Systems f) Programming with C/C++ f) Programming with C/C++ Embedded Systems and Prog e) Embedded Systems f) Programming with C/C++ Cryptoqraphy and IT-Law e) Cryptoqraphy f) IT Law ing with C/C++ Databases and Explorative Data Analysis and Vi e) Database Modeling and Database Systems f) Explorative Data Analysis and Visualization Smart Services e) Smart Services I f) Smart Services II Ty Smart Services II
Autonomous Driving
e) Self-Driving Vehicles
f) Servinar: Current Topics and Trends in Self-Driving Technology Embedded Systems, Microcontrollers and Logical Circuits e) Embedded Systems f) Project: Microcontrollers and Logical Circuits Renewable Energies e) Power Plant Technology f) Regenerative Energy Mastering Prompts e) Artificial intelligence f) Project: Al Excellence with Creative Prompting Techniq Career Development e) Personal Career Plan f) Personal Elevator Pitch

Course Information				
lodule	Course Code	Course	ECTS	Type of Exam
ingineering: Branches, Methods, Applications, Trends	DLBENGEBMAT01	Engineering: Branches, Methods, Applications, Trends	5	Exam/ Written Assessment: Written Assignment
Aathematics: Linear Algebra	DLBDSMFLA01	Mathematics: Linear Algebra	5	Exam
undamentals of Physics	DLBWINGP01-01_E	Fundamentals of Physics	5	Exam
ntroduction to the Internet of Things	DLBINGEIT01_E	Introduction to the Internet of Things	5	Exam
undamentals of Chemistry	DLBMETGC01_E	Fundamentals of Chemistry	5	Exam
Aathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
ntroduction to Computer Science	DLBCSICS01	Introduction to Computer Science	5	Exam
ignals and Systems	DLBROSS01_E	Signals and Systems	5	Exam
lutomation Technology	DLBROEIRA02_E	Automation Technology	5	Exam
ntroduction to Academic Work	DLBCSIAW01	Introduction to Academic Work	5	Basic Workbook (passed / not passed)
Production Engineering Industry 4.0	DLBDSEAR01	Production Engineering Industry 4.0	5	Exam
Aechanics - Statics	DLBROMS01_E	Mechanics - Statics	5	Exam
Control Systems Engineering*	DLBROCSE01_E	Control Systems Engineering*	5	Exam
Aaterials Science for Engineers	DLBMETGWK01_E	Materials Science for Engineers	5	Exam
undamentals of Systems Simulation	DLBENGFSS01	Fundamentals of Systems Simulation	5	Exam
iensor Technology	DLBROST01_E	Sensor Technology	5	Exam
Electrical Engineering	DLBINGET01-01_E	Electrical Engineering	5	Exam
ntroduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam
undamentals of Data-Driven Engineering	DLBENGFDDE01	Fundamentals of Data-Driven Engineering	5	Written Assessment: Case Study
Aechanics - Kinematics and Dynamics*	DLBROMKD01_E	Mechanics - Kinematics and Dynamics*	5	Exam
Project: Simulation of Systems*	DLBENGPSS01	Project: Simulation of Systems*	5	Written Assessment: Project Report
ntroduction to Data Protection and Cyber Security	DLBCSIDPITS01	Introduction to Data Protection and Cyber Security	5	Exam
itatistics: Probability and Descriptive Statistics	DLBDSSPDS01-01	Statistics: Probability and Descriptive Statistics	5	Exam
echnical Mechanics: Elastostatics	DLBBIWTM01_E	Technical Mechanics: Elastostatics	5	Exam
ntroduction to Electromagnetics*	DLBENGEEE01	Introduction to Electromagnetics*	5	Exam
Electrical Machines and Energy Technology*	DLBAETEME01_E	Electrical Machines and Energy Technology*	5	Exam
Project: Control Unit Design for a Mechanical System*	DLBENGEESD01	Project: Control Unit Design for a Mechanical System*	5	Written Assessment: Project Report
ieminar: The Big Data Society	DLBENGSTBDS01	Seminar: The Big Data Society	5	Written Assessment: Research Essay
LECTIVE A-			10	
LECTIVE B-			10	
ELECTIVE C-			10	
Bachelor Thesis		Bachelor Thesis	9	Bachelor Thesis
		Thesis Defense	1	Presentation: Colloquium