ompulsory	Group	Artificial Intelligence and Machine Learning (AIML) for Connected Systems	6 CP	Master Thesis	30 CP		
ပိ							
	vorks	Wireless Sensor Networks	6 CP	Design Methodology	6 CP	AI in Networking and Security	6 CP
	and Networks		ummer	of Embedded Systems	winter	· ·	summer
	ms an	Wireless and Mobile Networks	6 CP	Network Virtualization	6 CP	Parallel and Distributed Systems	6 CP
SC	Systems		winter	and Automation	winter		summer
lno.	ωl	Signals and Systems	6 CP		6 CP		6 CP
Compulsory Elective Groups Compulsory	opol		0 CP	Control System Theory	0 CP	Modeling and Identification	6 CF
	Automatics and Robots		winter	and Engineering	summer	of Dynamic Systems	winter
	tics	Robot Operating Systems	3 CP		3 CP		3 CP
	oma			Learning Robots		Robot Predictive Maintenance	
	Aut		winter		winter		summer
	. 11		6 CP		6 CP		6 CP
	t t	Data & Process Mining	0 0.	Business Process Management	3 3.	Project Management	
	and I	· ·	ummer		winter	- Processes, Activities and Practices	summer
Processes	Management	Data Managamant and Digital Toron	3 CP		6 CP		
		Data Management and Digital Trans- formation in Industrial Process Automation		Advanced Process Mining			
	ž		winter		summer		

Free Elective Modules can be elected either at partner universities – including the Conservatoire National des Arts et Métiers (CNAM, Paris France) and CNAM Grand Est (Mulhouse, France), Avignon Université (Avignon, France), Universitat Politècnica de Catalunya (Barcelona, Spain), National Technical University of Ukraine (Kyiv, Ukraine), and Universitatea Babeş-Bolyai (Cluj-Napoca, Romania) – or of the programs Sensorsysstemtechnik (Sensor Systems Engineering) and Business Analytics at Ulm Universitatea sity. A minimum of 6 CP must be achieved from modules of the Free Elective Modules Group. A list of applicable modules is available at the examination board.

Modular design choose individual units

Flexible



Individually tailored elective areas

Distribution of credit points (CP)

Compulsory Modules: 36 CP

Compulsory Elective Modules:

- Systems and Networks at least 12 CP
- Automatics and Robots at least 12 CP
- Processes and Data Management at least 12 CP

Free Elective Modules: at least 6 CP

The missing 12 CP can be chosen from the Compulsory Elective Modules and Free Elective Modules.

	Sample schedule						
	Module Groups Modules	Compulsory Modules	Systems and Networks	Automatics and Robots	Processes and Data Management	Free Elective Modules	
semester winter	Artificial Intelligence and Machine Learning (AIML) for Connected Systems	6 CP					
∃	Signals and Systems			6 CP			
mer	Control System Theory and Engineering			6 CP			
summer	Wireless Sensor Networks		6 CP				
	Robot Operating Systems			3 CP			
winter	Learning Robots			3 CP			
ח	Design Methodology of Embedded Systems		6 CP				
ner	Data & Process Mining				6 CP		
summer	Pattern Recognition and Deep Learning					6 CP	
	Business Process Management				6 CP		
winter	Modeling and Identification of Dynamic Systems			6 CP			
summer	Master Thesis	30 CP					
sur	Module Groups (CP)	36 CP	12 CP	24 CP	12 CP	6 CP	
	Modules (CP)			90 CP			

	Module Groups Modules	Compulsory Modules	Systems and Networks	Automatics and Robots	Processes and Data Management	Free Elective Modules	
st semester summer	Data & Process Mining				6 CP		
1st ser sum	Project Management - Processes, Activities and Practices				6 CP		
semester winter	Artificial Intelligence and Machine Learning (AIML) for Connected Systems	6 CP					semester
2 nd S	Signals and Systems			6 CP			me
3 rd semester summer	Control System Theory and Engineering			6 CP			
3 rd sen sum	Wireless Sensor Networks		6 CP				me
er	Robot Operating Systems			3 CP			summer
semester winter	Learning Robots			3 CP			ins
4#	Design Methodology of Embedded Systems		6 CP				Starti
nester mer	AI in Networking and Security		6 CP				Sta
5 th semester summer	Pattern Recognition and Deep Learning					6 CP	
6 th semester winter	Master Thesis	30 CP					
6 th Se	Module Groups (CP)	36 CP	18 CP	18 CP	12 CP	6 CP	
	Modules (CP)			90 CP			

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Start in winter semester