

Masterstudiengang Smart Production Engineering an der RWTH Aachen (International Academy)
PO 2022

Compulsory Courses										
Responsible for Module	Lecturers	Module	CP	L	P/L	Σ SWS	Summer / Winter	Module ID	Σ CP	Σ SWS
Bergs	Bergs	Manufacturing Technology I	5	2	2	4	w	4011458	28	20
Bergs	Bergs	Manufacturing Technology II	6	2	2	4	s	4011447		
Brecher	Brecher	Mechatronics and Control Techniques for Production Plants	6	2	2	4	w	4011451		
Schuh	Schuh	Production Management B	5	2	2	4	s	4011472		
Schmitt	Schmitt	Quality Management	6	2	2	4	w	4011453		
Language Courses		Language Course I *	2	1	1	2	w	4021266	6	6
		Language Course II *	2	1	1	2	s	4021267		
		Linguistic Elective **	2	1	1	2	sw	4024418		
		Internship (Practical Experience)	12			12 weeks		4023100	24	
or		Elective Courses	12							
		Master Thesis	30						30	

* Technical English

** If not proficient/ native speaker

Additive Manufacturing										
Compulsory Courses										
Responsible for Module	Lecturers	Module	CP	L	P/L	Σ SWS	Summer / Winter	Module ID	Σ CP	Σ SWS
Schleifenbaum	Schleifenbaum	Additive Manufacturing:Technologies and Processes	6	2	2	4	w	4017421	29	19
Schleifenbaum	Schleifenbaum	Additive Manufacturing 2	6	2	2	4	s	4020490		
Schleifenbaum	Schleifenbaum	Materials for Additive Manufacturing	5	2	1	3	w	4022684		
Häfner	Häfner / Biermann	Laser Applications	6	2	2	4	w	4022685		
Reisgen	Reisgen	Welding and Joining Technologies	6	2	2	4	s	4011441		
Elective Courses										
Abel	Abel	Linear Control Systems	3	2	2	4	w	4011476	15	*
Schuh	Dannapfel	International Factory Planning	6	2	2	4	s	4011481		
Brecher / Bergs	Brimmers	Gear and Transmission Technology	6	2	2	4	w	4011427		
Schuh	Schuh / Stich	Industrial Logistics	5	2	1	3	s	4011473		
Markert	Markert	Intelligent Monitoring of Engineering Systems	5	2	1	3	s	4021494		
Brettel	Brettel	Management and Engineering Perspectives	5	2	2	4	w	4022679		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013863		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013864		
Corves	Corves	Multibody Dynamics	6	2	2	4	s	4011462		
Bergs	Wirtz	Process Analysis in Manufacturing Technology	5	2	1	3	w	4026065		
Schmitt	Schmitt	Production Metrology	5	2	2	4	s	4011467		
Bergs	Bergs	Simulation Techniques in Manufacturing Technology (STM	6	2	2	4	w	4012413		
Jacobs	Jacobs	Tribology	5	2	2	4	w	4011475		

* The total amount of weekly contact hours (SWS) depends on the modules selected.

Electric Mobility Production										
Compulsory Courses										
Responsible for Module	Lecturers	Module	CP	L	P/L	Σ SWS	Summer / Winter	Module ID	Σ CP	Σ SWS
Bergs	Bergs	Electric Mobility - Battery systems production for a sustaina	3	2	1	3	s	4027153	21	17
Bergs	Bergs	Electric Mobility - Battery Production	3	2	1	3	s	4027152		
Bergs	Bergs	Electric Mobility - Li-Ion Cell Production	3	2	1	3	s	4027154		
Brecher / Bergs	Brimmers	Gear and Transmission Technology	6	2	2	4	w	4011427		
Reisgen	Reisgen	Welding and Joining Technologies	6	2	2	4	s	4011441		
Elective Courses										
Lütticke	Lütticke	Advanced Software Engineering	5	2	2	4	w	4011468	23	*
Abel	Abel	Linear Control Systems	3	2	2	4	w	4011476		
Schuh	Dannapfel	International Factory Planning	6	2	2	4	s	4011481		
Bergs	Grunwald	High Precision Glass Optics Manufacturing	6	2	2	4	w	4017864		
Markert	Markert	Intelligent Monitoring of Engineering Systems	5	2	1	3	s	4021494		
Sauer	Wilstermann	Industrial product development process - battery systems f	5	2	2	4	s	6022858		
Brettel	Brettel	Management and Engineering Perspectives	5	2	2	4	w	4022679		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013863		
Schulz	Schulz	Modelling, Model Reduction and Simulation in Laser Proces	5	2	2	4	s	4013860		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013864		
Corves	Corves	Multibody Dynamics	6	2	2	4	s	4011462		
Häfner	Häfner / Biermann	Laser Applications	6	2	2	4	w	4022685		
De Doncker	De Doncker	Principles of Power Electronics	4	3	1	4	w	6019099		
Bergs	Wirtz	Process Analysis in Manufacturing Technology	5	2	1	3	w	4026065		
Bergs	Bergs	Simulation Techniques in Manufacturing Technology (STM	6	2	2	4	w	4012413		
Jacobs	Jacobs	Tribology	5	2	2	4	w	4011475		

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Smart Factory										
Compulsory Courses										
Responsible for Module	Lecturers	Module	CP	L	P/L	Σ SWS	Summer / Winter	Module ID	Σ CP	Σ SWS
Kowalewski	Kowalewski	Embedded Systems	6	3	3	6	s	1215690	23	18
Schuh	Dannapfel	International Factory Planning	6	2	2	4	s	4011481		
N.N.	Rumpe	Model-based Systems Engineering	6	2	3	5	w	1222882		
Bergs	Wirtz	Process Analysis in Manufacturing Technology	5	2	1	3	w	4026065		
Elective Courses										
Lütticke	Lütticke	Advanced Software Engineering	5	2	2	4	w	4011468	21	*
Abel	Abel	Linear Control Systems	3	2	2	4	w	4011476		
Brecher / Bergs	Brimmers	Gear and Transmission Technology	6	2	2	4	w	4011427		
Bergs	Grunwald	High Precision Glass Optics Manufacturing	6	2	2	4	w	4017864		
Schuh	Schuh / Stich	Industrial Logistics	5	2	1	3	s	4011473		
Sauer	Wilstermann	Industrial product development process - battery systems f	5	2	2	4	s	6022858		
Markert	Markert	Intelligent Monitoring of Engineering Systems	5	2	1	3	s	4021494		
Brettel	Brettel	Management and Engineering Perspectives	5	2	2	4	w	4022679		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013863		
Schulz	Schulz	Modelling, Model Reduction and Simulation in Laser Proces	5	2	2	4	s	4013860		
Schulz	Schulz	Modeling, Model Reduction and Simulation in Laser Proces	5	2	2	4	w/s	4013864		
Corves	Corves	Multibody Dynamics	6	2	2	4	s	4011462		
Schmitt	Schmitt	Production Metrology	5	2	2	4	s	4011467		
Hüsing	Hüsing	Robotic Systems	5	2	2	4	w	4018563		
Bergs	Bergs	Simulation Techniques in Manufacturing Technology (STM	6	2	2	4	w	4012413		
Jacobs	Jacobs	Tribology	5	2	2	4	w	4011475		
Reisgen	Reisgen	Welding and Joining Technologies	6	2	2	4	s	4011441		

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