Electives catalogues:

Electives catalogue for the Flexible and Intelligent Products and Processes strand

The list of modules offered can be updated annually for the subsequent academic year by Faculty Board decision. The updated lists shall be published throughout the university by the Student Center:

https://www.tu-clausthal.de/studieninteressierte/studiengaenge/master-studiengaenge/intelligent-manufacturing

Module or course title	Course number	Course type hrs/week	Credit points	Exam form	Weight ing	Graded ?	Asses. type
Module: Additive Manufacturing using Polymers		4	6		6/∑		
Additive Manufacturing using Polymers	S 7985	4S/lab	6	W/O	1	yes	ME
Module: Applied Computational Engines		4	6		6/∑		
Applied Computational Engines	W 1634	3L + 1T	6	W/O	1	yes	ME
Home assignment for Applied Computational Engines		0	0	HA	0	no	EP
Module: Design for Industry 4.0		4	6		6/∑		
Design for Industry 4.0	S 8183	2L	3	W/O	2/5	yes	MCE
Lab: Design for Industry 4.0	S 8161	2lab	3	PA	3/5	yes	MCE
Module: Laser Sensors		4	6		6/∑		
Laser Sensors	W 8935	4L/T	6	W/O	1	yes	ME
Module: System Identification +		4	6		6/∑		
System Identification +	S 8932	3L + 1T	6	W/O	1	yes	ME

Electives catalogue for the Manufacturing Analytics and Optimization strand

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Module or course title	Course number	Course type hrs/week	Credit points	Exam form	Weighting	Graded?	Asses. type
Data Analysis and Statistical Learning modules		4	6		6/∑		
Data Analysis and Statistical Learning	S 0425	3L + 1T	6	W/O	1	yes	ME
Data Analysis and Statistical Learning home assignment		0	0	HA	0	no	EP
Multi-Scale Simulation modules		4	6		6/∑		
Multi-Scale Simulation	W 8005	3L + 1T	6	W/O	1	yes	ME
Product Data Management in Industry 4.0 modules		4	6		6/∑		
Product Data Management in Industry 4.0	S 8184	1L	1	W/O	1/5	yes	MCE
Product Data Management in Industry 4.0 lab	S 8188	3lab	5	PA	4/5	yes	MCE
Simulation Engineering modules		4	6		6/∑		
Simulation Engineering	W 1269	3L + 1T	6	W/O	6	yes	ME
Simulation Engineering home assignment		0	0	HA	0	no	EP

Electives catalogue for Interdisciplinary and Cross-Culture Collaboration

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Module or course title	Course number	Course type hrs/week	Credit points	Exam form	Weighting	Graded?	Asses. type
Business English I	W/S 9096	2T	2	W/O	1/3	yes	FA
Chinese for Beginners	W 9200	4L	4	W/O	2/3	yes	FA
Intercultural Competence	W/S 9221	2T	2	W/O	1/3	yes	FA
Technical Writing	W/S 9009	2T	2	ThA	1/3	yes	FA
Technical Presentations in English	W/S 9092	2T	2	W/O	1/3	yes	FA
Technical English	W/S 9000	4L	4	W/O	2/3	yes	FA

Key:

1) Types of course

L	=	lecture
T	=	tutorial
lab	=	laboratory class
S	=	seminar
E	=	excursion

2) Forms of examination

W	=	written examination
O	=	oral exam
SC	=	seminar contribution
PrA	=	practical assignment
ThA	=	theory assignment
RA	=	research assignment
PA	=	project assignment
IP	=	industrial placement
HA	=	home assignments
Ex	=	excursions
FT	=	final thesis

3) Types of assessment

ME	=	module examination
MCE	=	module-component examination
FA	=	formative assessment
EP	=	examination prerequisites

4) Other abbreviations

exam	=	examination
ECTS	=	European Credit Transfer System
hrs/wk	=	class hours per week