

Modulname Modulname	Mechanical Design I BA MERO	BM3
Modulverantwortlicher/ Modulverantwortliche Module responsibility	Prof. Dr.-Ing. Andreas Dietzel (Modulverantwortung)	
Qualifikationsziele Qualification goals	The students are enabled to read and prepare technical drawings. They are able to combine construction elements into simple structures and represent them in drawings including parts lists (freehand drawings). In particular, the students also know the necessity and basics of a complete geometrical product specification (dimensional, geometrical and positional tolerances / surface roughness / etc.). In addition, the participants acquire the ability to design technical components within a 3D CAD software and to derive production drawings.	
Modulinhalte Module contents	Lecture: Basics of technical product documentation with a focus on technical drawing Exercise: Application of all basics covered in the lecture by means of design exercises incl. preparing various technical drawings Lab: • introduction to a commercially available 3D CAD software • creating simple CAD models and drawings with industry-standard, computer-aided tools	
Lehrformen Forms of teaching	Vorlesung (2 SWS) Übung (1 SWS) Laborpraktikum (1 SWS)	
Voraussetzungen für die Teilnahme Requirements for participation	none	
Literatur/multimediale Lehr- und Lernprogramme Further readings/Learning programmes	Lecture notes and standard literature of design engineering are made available via studIP.	
Lehrbriefautor Textbook author	keiner	

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Verwendbarkeit Usability	Mechatronics & Robotics 210 CP B.Eng.	
Arbeitsaufwand/Gesamtworkload Workload/Total workload	Selbststudium 90 h + Präsenzzeit 60 h = 150 Stunden = 5,0 Credit Punkte independent work 90 h + presence 60 h + preparation 45 h = 150 hours = 5,0 credit points	
ECTS und Gewichtung der Note in der Gesamtnote ECTS and weighting in overall grade	5 5/210	1
Leistungsnachweis Performance record	Written exam : 120 min	
Semester Semester	3	
Häufigkeit des Angebots Frequency of the offer	Annually in summer semester	
Dauer Duration	1 Semester	
Art der Lehrveranstaltung Type of course	Compulsory module 3. Semester SoSe 2026	
Besonderes Peculiarity		

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