

DEPARTMENT OF MECHATRONICS ENGINEERING
COURSE SYLLABUS

Course Details					
Code				Academic Year	Semester
WIN406				3 or 4	Spring
Title	T	A	L	ECTS	
Industrial Information Technology and Virtual Product Development	2	1	1	6	
Language	German				
Level	Undergraduate	X	Graduate		Postgraduate
Department / Program	Industrial Engineering				
Forms of Teaching and Learning	Lecture				
Course Type	Compulsory		Elective	X	
Objectives	<p>Students should gain an overview of basic information technology solutions and methods in the industrial environment that are required for the development of mechatronic products and systems and be able to use them in a goal-oriented manner. The consideration of methods for the cooperate-wide integration of information technology systems along the value chain is another learning objective.</p>				
Content	<ul style="list-style-type: none"> - Methodical design - Information technology support of product development processes - Cooperation in development processes - Interaction of the system landscape in product development processes - Requirements management - Geometry processing - Product Data Management (PDM/PLM) - Computer Aided Design (CAD) - Computer Aided Engineering (CAE) 				
Prerequisites	-				
Coordinator	Batin Latif Aylak				
Lecturer(s)	Dr.-Ing. Kai LINDOW, Dr.-Ing. Latif Batin AYLAK				
Assistant(s)	-				
Work Placement	-				
Recommended or Required Reading					

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Books / Lecture Notes	Teaching materials are provided in the lessons.		
Other Sources	-		
Additional Course Material			
Documents	Reachable via Googleclassroom		
Assignments	-		
Exams	-		
Course Composition			
Mathematics und Basic Sciences	20		%
Engineering	40		%
Engineering Design	20		%
Social Sciences			%
Educational Sciences			%
Natural Sciences			%
Health Sciences			%
Expert Knowledge	20		%
Assessment			
Activity	Count		Percentage (%)
Midterm Exam	1		40
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam	1		60
		Total	100
ECTS Points and Work Load			
Activity	Count	Duration	Work Load (Hours)
Lectures	14	2	28

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Self-Study	14	4	56
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	6	6
Recitations	14	1	14
Laboratory	14	1	14
Projects	14	4	56
Final Exam	1	6	6
Total Work Load			180
ECTS Points (Total Work Load / 28)			6
Learning Outcomes			
1	To have knowledge about basic information technology solutions and methods for industrial environment.		
2	To learn the necessary methods for corporate-wide integration of information technology systems.		
Weekly Content			
1	Introduction		
2	Methodical design		
3	Methodical design		
4	Information technology support of product development processes		
5	Cooperation in development processes		
6	Interaction of the system landscape in product development processes		
7	General Overview		
8	Midterm Exams		
9	Requirements management		
10	Geometry processing		
11	Product Data Management (PDM/PLM)		
12	Computer Aided Design (CAD)		
13	Computer Aided Engineering (CAE)		
14	Project Presentation		
15	General Overview		

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Contribution of Learning Outcomes to Program Objectives (1-5)							
	P1	P2	P3	P4	P5	P6	P7
1	5	5	5	5	5	5	5
2	5	5	5	5	5	5	5
3							
4							
5							
Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High						
Compiled by:	Batin Latif Aylak						
Date of Compilation:	01.11.2021						