DEPARTMENT OF MECHATRONIC ENGINEERING
COURSE SYLLABUS

Course Details								
Code				**Academic Year**			**Semester**	
MEC091				1			1	
Title				**T**	**A**	**L**	**ECTS**	
Introduction to Engineering				2			2	
Language	German							
Level	**Undergraduate**	✓	**Graduate**		**Postgraduate**			
Department / Program	Mechatronic Engineering							
Forms of Teaching and Learning	Frontal							
Course Type	**Compulsory**	✓	**Elective**					
Objectives	Introduction to basics and knowledge of Mechanical Engineering Disciplines							
Content	• Foundations of scientific documentation • General Mechatronic Engineering • Design and Functionality of Simple Devices • Manufacturing Processes • Molds and Prototypes Machine elements • Production of screw connections • Automotive technology • Design / operation of vehicle transmissions • Automation technology • Construction and programming of simple robots • Calculation / Simulation • Modeling and calculation of simple systems							
Prerequisites	None							
Coordinator								
Lecturer(s)								
Assistant(s)								
Work Placement								

Recommended or Required Reading	
Books / Lecture Notes	Lecture notes in electronic format
Other Sources	

Additional Course Material	
Documents	Lecture notes in electronic format
Assignments	
Exams	

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Course Composition		
Mathematics und Basic Sciences	20	%
Engineering	60	%
Engineering Design	20	%
Social Sciences		%
Educational Sciences		%
Natural Sciences		%
Health Sciences		%
Expert Knowledge		%

Assessment		
Activity	**Count**	**Percentage (%)**
Midterm Exam	1	20
Quiz	1	20
Assignments		
Attendance		
Recitations		
Projects	1	20
Final Exam	1	40
	Total	**100**

ECTS Points and Work Load			
Activity	**Count**	**Duration**	**Work Load (Hours)**
Lectures	14	2	28
Self-Study	14	2	28
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	2	2
Recitations			
Laboratory			
Projects	1	5	5
Final Exam	1	1	1
		Total Work Load	**64**
		ECTS Points (Total Work Load / Hours)	**2**

Learning Outcomes	
1	Classification of the content of the various modules of the Bachelor's degree in Mechatronic Engineering
2	Basic manufacturing processes and selected design principles

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3	Understanding of simple technical relationships
4	
5	
6	
7	
8	
9	
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11	
12	
Weekly Content	
1	Introduction- Engineering-Economy-Science
2	Study in TGU
3	Contents of Courses Mech. Eng
4	Overview of different engineering disciplines such as design, calculation, and testing
5	Basic manufacturing processes and selected design principles
6	Guest Lecture Production
7	Construction of various machines, their components and the materials used
8	Introduction to computer-aided design and production
9	Working with standards
10	Scientific documentation
11	Guest Lecture Robot in production
12	Construction / functioning of vehicle transmissions
13	Aerodynamics
14	Project presentations
15	

Contribution of Learning Outcomes to Program Objectives (1-5)

	P1	P2	P3	P4	P5	P6	P7
1	3						
2	5						
3	3						
4							
5							
6							

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7							
8							
9							
10							
11							
12							

Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High
https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=196	
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