

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Course Details				
Code	Academic Year			Semester
MEC207	2			3
Title	T	A	L	ECTS
Material Technology	3	1	1	6
Language	German			
Level	Undergraduate	X	Graduate	Postgraduate
Department / Program	Materials Science and Technology			
Forms of Teaching and Learning	Face to face			
Course Type	Compulsory		Elective	X
Objectives	Materials science knowledge View of the fundamentals and diverse fields of activity of materials science Structure-property relationships of materials Know and differentiate engineering materials Learn material properties as the basis of material selection Learn mechanical test methods as test methods			
Content	Introduction Structure of the atoms and molecules engineering materials (metals, polymers, ceramics, composites) crystal structures Phase diagrams microstructure Mechanical, electrical, magnetic and optical properties of the materials Mechanical test methods Breakage, fatigue, creep, corrosion			
Prerequisites				
Coordinator				
Lecturer(s)	Asist Prof.Dr. Mehmet İpekoğlu			
Assistant(s)				
Work Placement	No			
Recommended or Required Reading				
Books / Lecture Notes	Bargel, H.-J., G. Schulze, "Werkstoffkunde", Springer, 1999. Bergmann, W.: "Werkstofftechnik Teil I: Grundlagen", 5. Auflage, Carl Hanser, 2003, Bergmann, W.: "Werkstofftechnik Teil II: Anwendung", 3. Auflage, Carl Hanser, 2002. Will be disseminated to the students in digital form			
Other Sources				
Additional Course Material				
Documents				

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Assignments			
Exams			
Course Composition			
Mathematics und Basic Sciences			10%
Engineering			30%
Engineering Design			%
Social Sciences			%
Educational Sciences			%
Natural Sciences			20%
Health Sciences			%
Expert Knowledge			40%
Assessment			
Activity	Count		Percentage (%)
Midterm Exam	1		30
Quiz			
Assignments	1		10
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	5	70
Assignments	5	9	45
Presentation / Seminar Preparation			
Midterm Exam	1	2	2
Recitations	14	1	14
Laboratory			
Projects	1	12	12
Final Exam	1	2	2
		Total Work Load	173
		ECTS Points (Total Work Load / Hours)	6
Learning Outcomes			



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6								
7								
8								
9								
10								
11								
12								
Contribution Level		1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High						
Compiled by:								
Date of Compilation:								