DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Course Details				
Code	**Academic Year**			**Semester**
MWT306	3			6
Title	**T**	**A**	**L**	**ECTS**
Construction Materials	2	2		6

Language	German					
Level	**Undergraduate**	**X**	**Graduate**		**Postgraduate**	
Department / Program	Department of Material Science and Technology (German)					
Forms of Teaching and Learning	Face to Face					
Course Type	**Compulsory**		**Elective**	**X**		
Objectives	Students will be able to choose a stress-based material selection for constructive applications.They will evaluate specific characteristics of the nominated material classes and know their influence over thermomechanical treatments.					
Content	Overview of the various material and material classes and their characteristics with regard to structural applications					
Prerequisites	-					
Coordinator	-					
Lecturer(s)	Asist Prof.Dr. Çağatay Elibol					
Assistant(s)	-					
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	
Other Sources	

Additional Course Material	
Documents	
Assignments	
Exams	

Course Composition		
Mathematics und Basic Sciences		%
Engineering		%100
Engineering Design		%
Social Sciences		%
Educational Sciences		%

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Natural Sciences		%
Health Sciences		%
Expert Knowledge		%

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	15	2	30
Self-Study	10	10	100
Assignments	2	6	12
Presentation / Seminar Preparation			
Midterm Exam	1	2	2
Recitations	15	1	15
Laboratory	15	2	30
Projects			
Final Exam	1	2	2
		Total Work Load	**191**
		ECTS Points (Total Work Load / Hours)	**6**

Learning Outcomes

1	Being able to select materials for construction applications and to evaluate the specific properties of candidate material classes
2	
3	
4	
5	
6	
7	
8	

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

9	
10	
11	
12	
Weekly Content	
1	Metals: steel, light metals, superalloys and carbides
2	Non-metals: ceramics (oxide and non-oxide), thermal barrier coatings, Carbon Products, Fibers, Composites, High Temperature Resistant Materials
3	General design considerations: Relevant material properties (wear and tear) Corrosion resistance, environmental compatibility
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

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

	P1	P2	P3	P4	P5	P6	P7	P8
1	1		3	2				
2								
3								
4								
5								
6								
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=207

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Compiled by:	Res. Asst. Burak Evren
Date of Compilation:	25.04.2022