



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Material Technology							
Course Code		ADY221		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		It is aimed to adopt the principles of these derste student material technologies.							
Course Content		Composite Materials / Atomic Structure / Crystal Defects, Alloys, Steels and Standard Representations, Heat Treatments, Annealing / Hardening, Surface Hardening, Elastic Deformation, Plastic Deformation, Material Defects, Classification of Materials, Classification of Materials and Materials Used in Technical Areas, Metallic Materials / Ceramic Materials / Polymer Materials , Material Testing, Hardness Testing Methods.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Smith, who w.çevir: Kınkoğlu, N. " Materials Science and Engineering ", 2001.
2	Yüksel, M., Meran, C., Introduction to Material Science, Materials Science Series-Volume 2, MMO Publication, Publication No: MMO / 545, October 2010, Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Material Identification and Classification
2	Theoretical	Materials Used in Technical Area
3	Theoretical	Metallic Materials / Ceramic Materials / Polymer Materials
4	Theoretical	Composite Materials / Atomic Structure / Crystal Defects
5	Theoretical	Alloys, Steels and Standard Impressions
6	Theoretical	Heat treatments applied to metal, receiving water
7	Theoretical	Phase Laws and Diagrams
8	Intermediate Exam	Midterm
9	Theoretical	Fe-C Equilibrium Diagram and Phase Properties
10	Theoretical	Elastic Deformation
11	Theoretical	Plastic Deformation
12	Theoretical	Material Testing, Destructive and Nondestructive Methods
13	Theoretical	Material Testing, Destructive and Nondestructive Methods
14	Theoretical	Corrosion Behavior and Protection Methods of Metals
15	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Midterm Examination	1	13	1	14
Final Examination	1	18	1	19
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	General classification of material technology
2	Learning of operations in material technology
3	Applications in material technology
4	Mechanical, physical, chemical and thermal properties of materials
5	Material group to be used, reason for preference

Programme Outcomes (*Emergency and Disaster Management*)

1	Improving the ability to cope with life-threatening emergencies
2	The awareness of the necessity of lifelong learning and the ability to do so
3	To be able to use basic science (Mathematics, Chemistry, Physiology, Anatomy etc.) in the field of Emergency Aid and Disaster Management
4	Ability to analyze and interpret hazards and risks
5	Sensitivity to global and local disasters
6	Effective communication skills and foreign language knowledge
7	Skills and creativity in interdisciplinary teams
8	Providing physical and mental stability
9	To be able to organize, search and rescue search and rescue operations
10	To reach sufficient education level to understand the effects of disasters in universal and social dimensions
11	To recognize the cooperation between actors and their actors in Emergency Aid and Disaster Management
12	Emergency Aid and Disaster Management vocational, ethical and social responsibility awareness
13	Ability to assume an educational role in Emergency Aid and Disaster Management
14	To be able to use technology effectively in the field of Emergency Aid and Disaster Management
15	Emergency Aid, Search-Rescue and Disaster Management as a whole and manage emergency situations and responsibility awareness

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	1	5	1		
P2	1	1	1		
P3	1	1	1	4	5
P4	2	2	1	1	
P5	1	1	1		
P6	1	1	1	1	
P7	1	1	1		1
P8	2	2	4	2	
P9	1	2	2		
P10	1	1	1		5
P11	1	1	1		
P12	1	1	1		
P13	1	1	1		
P14	5	5	5	3	5
P15	1	5	5	3	

