

بسم الله الرحمن الرحيم

Republic of Iraq
The Ministry Of Higher Education
& Scientific Research



University: Diyala
College: Engineering
Department:
Mechanical Engineering
Dept.
Stage: 4th
Lecturer name: Prof. Dr. Adel K. Mahmoud

Qualification: Ph.D. Eng.

Place of work: University of Diyala

Flow up of implementation celli pass play

Course Instructor	Prof. Dr. Eng. Adel K. Mahmoud				
E-mail	Adel_alkayali@yahoo.com				
Title	Engineering Materials				
Course Coordinator	Annually				
Course Objective	The course aims to present of the principles of Engineering Materials and its important in applications of Mechanical Engineering Industries.				
Course Description	Mechanical Properties, Corrosion Science and Surface Engineering Protection, Low Carbon Steel, Alloy Steel, Heat resisting Steel, Tool Steel, High Speed Steel, Aluminum and Aluminum Alloys, Copper and Copper Alloys, Ni-Alloys, Ti-Alloys, Supper Alloys, Ceramics Engineering, Polymers Materials, Composite Materials, Nanomaterials and Non-Destructive Testing.				
Textbook	Foundations of Materials Science and Engineering, by William F. Smith				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%		10%		60%
General Notes					

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Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment	Notes
1	1-10-2016	Introduction to Mechanical Properties		
2	8-10-2016	Tensile properties for Eng. Materials		
3	15-10-2016	Compressive Test Properties		
4	22-10-2016	Hardness Testing		
5	29-10-2016	Fatigue Test		
6	6-11-2016	Creep Test		
7	13-11-2016	Corrosion and Cathodic Protection		
8	20-11-2016	Types of Corrosion		
9	27-11-2016	Methods of Estimation of Corrosion Rate		
11	3-12-2016	Cathodic & Anodic Protection		
11	10-12-2016	Carbon Steel and Low alloy Steels		
12	17-12-2016	High Temperature and Oxidation Resistant Steels.		
13	24-12-2016	Stainless Steel Alloys		
14	31-12-2016	Tool Steels		
15	7-1-2017	High Speed Steels		
16	14-1-2017	Copper metal		

Half – year break

17	21-1-2017	Copper Alloys		
18	28-1-2017	Aluminum metal		
19	19-2-2017	Aluminum Alloys		
21	26-2-2017	Nickel Alloy		
21	5-3-2017	Ceramic Materials		
22	12-3-2017	Insulating Materials		
23	19-3-2017	Polymer Materials		
24	26-3-2017	Types of Polymer Materials		
25	3-4-2017	Composite Materials		
26	10-4-2017	Types of Composite Materials		
27	17-4-2017	Nanomaterials& Nanotechnology		
28	24-4-2017	Types of Nanomaterials and Its Industrials Applications		
29	1-5-2017	Engineering Inspections		
31	8-5-2017	Non-Destructive Testing		

INSTRUCTOR Signature:

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