



AL IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
COLLEGE OF ENGINEERING
Department of Mechanical Engineering

Course Information

Course Code and Name:	ME 419 Special Topics in Materials Engineering
Credit Hours:	3 (3 Lecture + 1 Tutorial)
Prerequisites:	ME 211 Material Science and Engineering

Course Description

Topics relevant to specialization of Materials Engineering and Processing to strengthen student's knowledge in this field. This course covers many topics such as Types and Applications of Materials; Synthesis, Fabrication, and Processing of Materials; Composites; Thermal and Magnetic Properties of Materials; Corrosion and Degradation of Materials; Biomaterials; Nanomaterials and Nanotechnology; and Economic, Environmental, and Societal Issues in Materials Engineering.

Textbook

Title	Fundamentals of Materials Science and Engineering: An Integrated Approach		
Authors	William D. Callister, Jr. & David G. Rethwisch		
Publisher	John Wiley & Sons, Inc	Year and Edition	2012, Fourth Edition

Course Contents

Types and Applications of Materials
Synthesis, Fabrication, and Processing of Materials
Composites
Thermal Properties of Materials
Magnetic Properties
Corrosion and Degradation of Materials
Nanotechnology and Nanomaterials
Biomaterials
Economic, Environmental, and Societal Issues in Materials Engineering

Academic Coordinator	Signature
Prof. Dr. Sabbah Ataya	<i>S. Ataya</i>



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