



**JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY
INDUSTRIAL ENGINEERING DEPARTMENT**

Course Number and Name	IE 364 Manufacturing Processes I
Course Description	This course introduces the students to introducing students the topic of Production Process and its various aspects and teach students to the fundamentals of a broad range of ferrous and nonferrous engineering materials. It includes to the basic concepts and the various aspects of the various industrial manufacturing processes such as casting, rolling, forging, extrusion and drawing.
Credits and contact hours	3 Credit hours; 3 hours of lectures
Pre- or Co-requisites	IE361 Engineering Materials
Required/ Elective	Required

Text Book(s)	Serope Kapakjian and Steven Schmid (2006). Manufacturing Engineering and Technology, 5th edition. Prentice Hall.
References	Degarmo, Black and Koser, (1988), <i>Material and Processes in manufacturing</i> -Trans. of the ASME -Materials and Manufacturing Processes

Course Objectives	<ul style="list-style-type: none"> • Understand and appreciate the topic of production process and its various aspects. • Identify the different types of ferrous alloys and nonferrous metals and alloys, their properties and applications • Analyze the metal casting, rolling, forging, extrusion and drawing manufacturing processes in terms of: processing
Measured Outcomes	3g and 3i

Topics	Chapters in Text	Evaluation	
General Introduction	Part I: General Introduction	Class Work	5
Ferrous Metals and Alloys: Production, General Properties and Applications	Chapter 5	Project and presentation	10
Nonferrous Metals and Alloys: Production, General Properties, and Applications	Chapter 6	First Exam	25
Meta1-Casting Processes	Chapter 11	Second Exam	20
Rolling of Metals	Chapter 13	Final Exam	40
Forging of Metals	Chapter 14		
Extrusion and Drawing of Metals	Chapter 15		