IM112 Manufacturing Technology

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
None	1	1	1	0	2	2

COURSE AIM

Introduce the different methods for processing engineering materials and get acquainted with the basic concepts and necessary information related to manufacturing techniques.

COURSE WEEKLY CONTENTS

1 Introduction to manufacturing
2 Physical and mechanical properties of materials
3 Classification of materials, metals and their alloys
4 Polymers and composites
5 Metal casting
6 Metal casting(cont.), mold and riser design, die casting.
7 Midterm Exam
8 Metal forming(Rolling, Extrusion & Drawing)
9 Metal forming(cont.), sheet metal work
10 Machining operations
11 Tool life and materials
12 12th week assessment
13 Joining operations
14 Shaping of plastics
15 Industry 4.0 and Smart Manufacturing

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	20 Midterm	← 10 MARKS To be freely distributed among possible assessments →					30
8 to 12	← 20 MARKS →						20
13 to 15	← 10 MARKS →						10
16 or 17	40 Final						40
Total	Exams	Assign.	Quizzes	Reports	Present.	Lab.	100

REFERENCES

Textbook T.F. Waters and F.Waters, "Fundamentals of Manufacturing for Engineers", Taylor & Francis, latest edition.

Other Roy A. Lindberg, "Processes and Materials of Manufacturing", Allen and Bacon, latest edition.
E. Paul DeGarmo, et.al, "Materials and Processes in Manufacturing", Prentice Hall, latest edition.