

IM112 Manufacturing Technology

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Lab.	
None	-	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 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	←	1 0	M A R K S		→	30
To be freely distributed among possible assessments							
8 to 12	←		2 0	M A R K S		→	20
13 to 15	←		1 0	M A R K S		→	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.