

Engineering Program

Specialization	Production and Computer Aided Manufacturing Technology
Course Number	• 20202262
Course Title	Mold Technology Workshop
Credit Hours	(1)
Theoretical Hours	(0)
Practical Hours	(3)

Brief Course Description:

Manufacturing of Shearing and Bending molds. Determination of mold alloys and allowances. Molding processes; sand, investment and ceramic molding. Core design. Using of CAD software in molds design and CAM in mold manufacturing.

Course Objectives:

At the end of this course student will be able to:

1. Use different skills for design and manufacturing different molds types
2. Use different materials in dies manufacturing
3. Use CAD software to design different shapes of dies

Detailed Course Description:

Number	Title	Content	Time
	Distinguish between different molds types		
	Determine molds specifications		
	The importance of allowance and clearance in molds design		
	Determination of machines, materials and tools used in molds manufacturing		
	Design a mold by using CAD software		
	Manufacturing of sheet shearing die		
	Manufacturing of sheet bending die		
	Exercise of sand molding		
	Exercise of investment molding		
	Exercise of core design		

Evaluation Strategies:

Evaluation		Percentage	Date
Exams	Midterm	20%	
	Final Exam	50%	
Projects and Assignments and reports		30%	

Teaching Methodology:

- Lecturing
- Technical videos watching
- Workshop practicing
- Visits to casting and mold design plants

Text Books & References:

Text Books:

- Dies manufacturing Manuals, Prince Al-Hussain Bin Abdallah II Military and Technical college, 1996
- Principles of metal casting, Richard W. Heine, Mc Graw Hill.