

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma in Plastic Engineering

Semester: 3

Subject Code

Subject Name DESIGN FUNDAMENTALS OF MOULDS

Sr. No.	Course content
1.	ELEMENTS OF HAND INJECTION MOULD AND MACHINE INJECTION MOULD : <ul style="list-style-type: none">1.1 Part drawing.1.2 Parting line.1.3 Core, Cavity-integer & inserts.1.4 Runner & gate.1.5 Ejection.1.6 Back plates.1.7 Dowels1.8 Sockets headed screws1.9 Sprue, runner & gate1.10 Locating Ring plate1.11 Knowk out rod1.12 Guide pin and guide bush1.13 Cooling channels1.14 Ejector assembly1.15 Detailed drawing of mould component1.16 Assembly drawing of mould
2.	PARTING SURFACE : <ul style="list-style-type: none">2.1 Flat Parting Surface2.2 Non-Flat Parting Surface<ul style="list-style-type: none">• Stepped Parting Surface• Profiled Parting Surface• Angled Parting Surface• Compled Edge Forms
3.	GENERAL MOULD CONSTRUCTION : <ul style="list-style-type: none">3.1 Integer core-cavity , inserts, local inserts3.2 Types of Bolster plates3.3 Details of guide bush & guide pillar.
4.	FEED SYSTEM : <ul style="list-style-type: none">4.1 Sprue4.2 Gate, types of gates, location of gates4.3 Runner sections, Runner layout, balancing of runner system

5.	EJECTION SYSTEM : 5.1 Ejector assembly 5.2 Ejector assembly return systems 5.3 Ejector elements 5.4 Types of ejectors
6.	COOLING SYSTEM : 6.1 Integer cavity plate cooling 6.2 Integer core plate cooling 6.3 U-circuit, rectangular circuit & Z-circuit 6.4 Deep cavity cooling system 6.5 Long core cooling system 6.6 Insert cooling system 6.7 Helical core cooling, pipe cooling, baffle cooling

Reference Books:

Sr. No.	Name of Reference	Author
1.	Injection mould design	R.G.W. Pye.
2.	Fundamentals of injection mould design	A.B.Glenvil L & Denton
3.	Plastics mould Engineering handbook	Prible & Drebois
4.	How to make injection mould	Henser publication