

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

V- SEMESTER

Course Title: Plastic Material Processing

(Course Code: 1353401)

Diploma Programme in which this course is offered	Semester in which offered
Mechanical (Manufacturing Technology)	Fifth Semester

Module.	Topics	Hours
Module 1	Introduction to Plastics 1.1 Thermoplastic - Definition, Types, Properties and Application 1.2 Thermo set Plastic - Definition, Types, Properties and Application	3 h
Module 2	Injection Moulds 2.1 Single cavity injection mould - Construction details 2.2 Two cavity injection mould - Construction details	5 h
Module 3	Injection Moulding Machine 3.1 Types of Injection moulding machine 3.2 Introduction to Hydraulic injection moulding machine 3.3 Safety procedures to be followed while operating Injection moulding machine. 3.4 Parts and Functions of Injection side 3.5 Parts and Functions of Clamping side 3.6 Parts and Function of Heating system 3.7 Parts and Function of Cooling system 3.8 Familiarisation of Pneumatic system 3.9 Familiarisation of Hydraulic system 3.10 Mould mounting procedure 3.11 Procedure to be followed before starting operation. 3.12 Machine operation Procedure 3.13 Machine Parameter setting 3.14 Basic Troubleshooting 3.15 Electrical control system 3.16 Micro controller / PLC system	16 h
Module 4	Injection Moulding – Defects and Remedies	3 h
Module 5	Compression and Transfer Moulding	3 h
Module 6	Blow Moulding	2 h