PLASTIC INJECTION MOLDING TECHNOLOGY, AS

Program code: PMTC-AS

Location: Middlesex

Program Description

The Plastic Injection Molding Technology A.S. degree program introduces various molding techniques and types of mold injection components. Throughout this hands-on program, students become familiar with the injection molding process, covering both the underlying design principles and laboratory applications. The degree program features lectures and assigned reading designed to introduce students to the concepts and specifications of injection molding. Students are exposed to the procedures associated with practical analyses of injection molding. This skill set can be applied to careers in injection molding.

Classroom lectures and assigned readings apply knowledge in a laboratory setting. Each lab introduces students to practical setup procedures, start-up, operation, and shutdown of injection molding machinery. The operation of actual machinery and use of practical molding techniques optimize students' experience within this degree program.

OSHA 10 Certification and Lean Certification are embedded within the program; students obtain certification in those areas.

Learning Outcomes

Graduates will be able to:

1. Identify the operational techniques used for various types of injections molding components.
2. Demonstrate setup, operation, and shutdown requirements associated with injection molding machinery.
3. Identify and document detailed mold specifications.
4. Identify specifications for mold feeding systems.
5. Identify and analyze parameters associated with materials used in injections molding processes
6. Conduct flow analysis for injection molding systems.
7. Identify and document the undercut process and removal specifications.
8. Identify and document the specifications for plastic components and their designs.
9. Inspect and document defects in plastic parts.

Degree Requirements

Code	Title	Credits
General Education Courses		
ENG 1010	Composition	3
MATH 1002	Math for Science and Technology (or higher)	3
Elective ARHX - Arts & Humanities Course		3-4
Elective SCKX - Scientific Knowledge Course or Elective SCRX - Scientific Reasoning Course		3-4
Elective SBSX - Social / Behavioral Science Course or Elective HISX - Historical Knowledge Course		3
Elective ORAX - Oral Communication Course or Elective WRIX - Written Communication II Course		3
CCS 1001	College and Career Success	3
Program Courses		
MFG 1479	Career Awareness for Manufacturing	1
MFG 1414	Quality and Lean Principles	3
MFG 1420	Metrology	3
MFG 1453	Benchwork	2
MFG 1467	Conventional Process Machining Lab	4
or MFG 1477	Machine Technology Fundamentals	
MFG 2439	Geometric Dimension and Tolerancing (G, D, and T)	3
MFG 2444	CNC I	3
EGR 1120	Engineering Drawing Specs	3
CAD 2200	Parametric Design (SolidWorks)	3
MFG 1501	Introduction to Injection Molding Technology	3
MFG 1502	Injection Molding Design Lab	4
MFG 1503	Injection Plastic Materials Lab	4
MFG 1504	Inject Mold Machine Setters	3
Total Credits		**60-62**

- Plastic Injection Molding Technology Certificate