

PLASTICS MANUFACTURING (CERT)

CERTIFICATE OF ACHIEVEMENT

The Plastic Manufacturing Technology Program provides the diverse student body in the surrounding regional community with advanced education in plastic manufacturing technology and serves as a bridge between students who seek job skills, industry certifications or a Certificate of Achievement for employment. The Program provides a high quality of instruction to achieve its objectives. The Certificate of Achievement in Plastics Manufacturing allows the student to learn specific techniques related to composite and plastic manufacturing. It also prepares the student to inspect the raw material and the produced parts by having a clear understanding of dimensioning, tolerancing, and designing of plastic parts in the engineering design technology department. Some of the jobs available for holders of this certificate are plastics manufacturing technician, injection molding machine operator, injection molding setup technician, manufacturing associate, associate plastics manufacturing engineer, junior manufacturing engineer and similar positions.

Program Student Learning Outcomes

- Student demonstrate safe work habits around plastics machinery.
- Students communicate clear technical instructions.
- Students differentiate between the various types of plastic.
- Students employ shop drawings to produce plastic parts to drawing specifications.
- Students identify the specific applications of plastic resin systems.
- Students recognize the process for manufacturing various plastic parts.
- Students use percentages to mix resins, fillers, and colors.
- Students utilize ratios and fractions to mix materials.

Program Requirements

Code Number	Course Title	Units
Required Courses		
ENGT 111	Plastics Technology	3.0
ENGT 116	Blueprint Reading and Production	4.0
ENGT 117	Geometrical Dimensioning and Tolerancing and Model Based Definition	4.0
ENGT 209	Plastics Injection Molding I	3.0
ENGT 103	Introduction to Engineering Design Using Inventor	3.0-4.0
or ENGT 131	Design Fundamentals Including 3D Modeling	
or ENGT 259	Solidworks Introduction	
Total Units		17-18

Recommended Courses

Code Number	Course Title	Units
ENGT 251	Composites Fabrication and Tooling	4.5
ENGT 259	Solidworks Introduction	4.0
ENGT 260	Advanced Modeling Using SolidWorks	4.0
ENGT 263	SolidWorks for Industrial Mold Tools Design	4.0
ENGT 281	Sustainable Toy Design with Solidworks	3.0
MTT 100	Machine Tool Introduction	2.0

MTT 131	Geometric Tolerance Inspection using Verisurf	3.0
MTT 180	Robotics for Computer Numerically Controlled Machines	3.0
NPD 101	Innovation Using Rapid Prototyping	3.0
NPD 103	Tooling and Materials for New Product Development	3.0
ET 101	Principles of Engineering Technology	3.0
ET 103	Industrial Process Control	2.0