

Tool and Die Machinist Apprenticeship Certificate (TOLC)

The program has been approved by the Bureau of Apprenticeship and Training and must be taken in conjunction with an approved apprenticeship training program. This program is designed to prepare a student for employment as a tool and die maker or machinist. The program provides students with the related technical knowledge necessary to supplement on-the-job training supplied by the sponsoring employer. Experience gained from the program will be in the area of drafting and design, manufacturing processes, and tooling elements. Jobs obtained from this certificate will be as a tool and die machinist or tool designer.

Upon successful completion of this program, graduates will be able to:

- use common standards and symbols to make detail and assembly drawings according to accepted industrial practice.
- adapt to the various special areas of drafting, such as drafting of electronic schematics, piping, welding, and structural.
- understand the differences between various common manufacturing materials and possess knowledge of the processes available to transform these materials into finished products.
- work from handbooks, catalogs, and other informational sources to obtain the data necessary for selecting machine components.
- design basic tools, jigs, fixtures, and punch dies.
- use creative thinking and good judgment when considering all the factors involved in the evolution of a mechanical design.
- understand and apply the basic principles of fluid power.

First Semester		Credits
MAT 130	Industrial Mathematics	3
MET 101	Mechanical Print Reading	3
		6
Second Semester		
MET 104	Manufacturing Processes	3
MET 111	Computer-Aided Drafting	4
		7
Third Semester		
MET 115	Computer-Aided Manufacturing	3
MTD 201	Basic Mechanisms	4
		7
Fourth Semester		
MTD 206	Machine Design	4
MTD 208	Tool Design	4
Apprenticeship Component*		3
		11
Credit Total		31

*Students who have satisfactorily completed at least 600 hours of an approved apprenticeship in a tool and die machinist program will be awarded three credits after completing an application and providing appropriate documentation.