

Related Technical Instruction
Pittsburgh Chapter – National Tooling and Machining Association

MACHINIST

O*NET/SOC CODE: 51-4041.00 RAPIDS CODE: 0296

For Machinists, Mold Makers, Tool and Die Makers, Carbide Performers, Press Technicians and Grinders, Tool and Die Designers, CNC Programmers, CNC Operators and CNC Machinists.

First Year Apprentices

Mathematics (General Math)	36 Hours
Blueprint Reading	36 Hours
Technology of Machine Tools	<u>72 Hours</u>
• Classroom Instruction (58 Hours)	
• Hands-on Instruction (14 Hours)	

Total 144 Hours

** Optional Assignments (3 Projects or 2 NIMS Credentials)**

Second Year Apprentices

Mathematics (Algebra)	36 Hours
Blueprint Reading/Mechanical Drawing (Intro. To Geometric Dimensioning & Tolerancing)	36 Hours
Technology of Machine Tools	<u>72 Hours</u>
• Classroom Instruction (44 Hours)	
• Hands-on Instruction (28 Hours)	

Total 144 Hours

** Optional Assignments (3 Projects or 2 NIMS Credentials)**

Third Year Apprentices

Mathematics (Trigonometry & Geometry)	40 Hours
Technology of Machine Tools (Metallurgy, CNC, & Job Planning)	72 Hours
Overview of Geometric Dimensioning and Tolerancing	<u>32 Hours</u>

Total 144 Hours

** Optional Assignments (2 Projects or 2 NIMS Credentials)**

Fourth Year Apprentices

Jigs & Fixtures / Basic Die Design	72 Hours
CNC Programming	48 Hours
Integrated Systems Technology	
• Welding/Brazing	8 Hours
• Hydraulics/Pneumatic	8 Hours
• Programmable Logical Controllers	<u>8 Hours</u>

Total 144 Hours

** Optional Assignments (2 NIMS Credentials) **