

MACHINE TOOL BUILDER

APPENDIX A

O*NET CODE 51-2031.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

WORK PROCESSES

	Approximate Hours
A. Mechanical Assembly	1,500
1. Sub-assemblies	
a. Power unit (mechanical-hydraulic)	
b. Gear train	
2. Fitting Vari-Drive	
3. Index Head – Mechanical assembly	
4. Lube system	
5. Linear Housing Assembly – Installation	
6. Z-Actuator Assembly	
B. Hydraulics Assembly	1,200
1. Actuator component assemblies – all axes	
2. Cycling valve assembly	
3. Power component units	
4. Servovalve assembly	
5. Feed valve system	
6. Hydraulic (Ericcson) Indexes	
C. Electrical Assembly	1,200
1. Console	
a. Tape reader and winder assembly	
b. Trunk assembly	
c. Panel and chassis assembly	
2. Head Wiring	
3. NEMA Coding	

D. Electronic Assembly	1,000
1. Electronic Circuitry	
a. Digital gating & components	
i. transitions	
ii. decodes	
iii. chip	
iv. semi-conductor	
E. Inspection & Quality Control	900
1. Basic inspection methods – piece part	
2. Assembly functional inspection	
3. Repeatability	
a. Axes	
b. Profile	
4. Axes-Alignment	
a. Laser	
b. Collimator	
F. Machining & Fabrication	2,000
1. Drill Press	
2. Lathe – basic & tape	
3. Mill – basic & tape	
4. Grind	
G. Design Engineering & Service	1,480
1. Drafting skills	
a. Mechanical	
b. Schematics – Electrical & Hydraulic	
2. Tool Design	
3. Programming	
a. Point to point	
b. Continuous path	
4. Cost control	
5. Troubleshooting for service	
a. Mechanical	
b. Electrical	

- c. Hydraulic
- d. Inspection & Quality Control

Approximate Total Hours 9,280

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <https://dol.ny.gov/public-work-and-prevailing-wage> .

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APPENDIX B

RELATED INSTRUCTION

Safety, Health and Workplace Orientation

1. First Aid – 10 hours minimum per year
2. Sexual Harassment Prevention Training – must comply with section 201-g of the Labor Law
3. Introduction to Apprenticeship
4. Communications
5. Human Relations
6. Personal Rights

Trade Science and Related Theory

1. Industrial and Labor Relations
2. Economics

144 Hours of Related Instruction are Required for Each Apprentice for Each Year.

Appendix B topics are approved by New York State Education Department.