



STATE OF NEW YORK  
DEPARTMENT OF LABOR

APPENDIX A

ELECTRONICS-MECHANIC (CNC SYSTEMS MAINTENANCE)

D.O.T. CODE 829.261-018

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 training or classroom instruction.

WORK PROCESSES

	<u>Approximate Hours</u>
1. <u>Familiarization with CNC Machines</u>	500
Preliminary familiarization with the operations of, and adjustments to, various CNC machines including: controls, equipment and parts. Safety Practices.	
2. <u>Basic Maintenance</u>	750
Basic maintenance of machines and equipment including: oiling, greasing, pressure readings and basic preventive maintenance. Performance of minor repairs and installations on Electrical Services, Hydraulic, and Pneumatic Circuits.	
3. <u>Basic Machine Shop Operations</u>	750
Operation of mills, drill presses, lathes, grinders, saws. Operation of welding equipment. Familiarization with various machine controls, alarm messages, maintenance manuals and test equipment.	
4. <u>Basic CNC Machine Maintenance</u>	2,500
Troubleshooting, repair, adjustments, and prevention maintenance on the various CNC Machines. Familiarization with care and use of all tools.	

<u>Electronics-Mechanic (CNC Systems Maintenance) – continued</u>		<u>Approximate Hours</u>
5.	<u>Intermediate CNC Machine Maintenance</u>  Intermediate troubleshooting, repair, adjustments, and preventive maintenance. Familiarization with problems in, and repairs to, specific equipment in the areas of: electronic control, calibration, electrical controls, and mechanical assemblies.	2,000
6.	<u>Advanced Electronic and Mechanical Troubleshooting</u>  Diagnosis of complex problems and repairs, to components level, using machine-coded CNC programs to simulate machine functions and electronic schematics, mechanical drawings, machine manuals, diagrams and other test equipment on CNC types of machines, equipment, and controls.	1,500
Total hours		8,000

*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 <http://www.labor.state.ny.us/workerprotection/publicwork/PDFs/Article8FAQS.pdf>.*

APPENDIX B

ELECTRONICS-MECHANIC (CNC SYSTEMS MAINTENANCE)

RELATED INSTRUCTION

Safety (16 hours)

Fundamentals (4 hours first year)

Trade Safety (12 hours second year)

Blueprint Reading

Basic Blueprint Reading

Advanced Blueprint Reading

Mathematics

Algebra

Trigonometry

Trade Theory

Industrial Electricity

Industrial Electronics

Hydraulics

Pneumatics

CNC Controls

Trade Technology

Manufacturer's Electronic Control Course

First Aid (minimum 6.5 hours every 3 years)

Sexual Harassment Prevention Training – 3 hours minimum

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