



STATE OF NEW YORK
DEPARTMENT OF LABOR

APPENDIX A

INDUSTRIAL EQUIPMENT WIRER & ASSEMBLER

D.O.T. CODE 826.361-010

O*NET CODE 93114

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

	<u>Approximate Hours</u>
A. <u>Installation Procedures</u>	2000
1. Planning of work. Material lists, layouts, procedures, timing.	
2. Sizing of wireway, conduits, wires to meet load requirements and code.	
3. Final installation and start-up – off-site work including final connects main isolation, collaborate with other trades and organizations.	
B. <u>Wiring of AC and DC Circuits</u>	1000
Installation of machines, wiring contactors, push buttons, principles of overload device and proper selection. Wiring of PLC's and basic knowledge and understanding operation. Learning to read wiring diagram.	
C. <u>General Wiring</u>	1500
Learn proper handling and installation or power feeding, wiring, fuse panels, breakers, etc. Estimate load requirements, laying out conduit runs. Code requirements. Install general wiring, wiring fixtures, receptacles, etc. Connecting transformers, three-phase, star and delta connections, transformer polarity, knowledge of generally used wiring systems and current relationship. Three-phase and two-phase, single-phase two and three wire, and three-phase four wire. Safety.	
D. <u>Special Circuits AC</u>	500
Learning to read wiring diagrams. Operation of special control circuits, time delays switches, electric breaking. Safety.	

<u>Industrial Equipment Wirer & Assembler – Continued</u>		<u>Approximate Hours</u>
E.	<u>Checking, Testing, Trouble Shooting and Repair</u>	1500
	1. Start-up – to ensure correct wiring and operation.	
	2. Calibration of meters and instruments.	
	3. Rectification of faults.	
	4. Identifying and correction of incorrect operation.	
F.	<u>Care and Use of Tools and Equipment</u>	500
	1. Tools – screwdrivers, cutters, pliers, wrenches, hammers, files, electric hand drill.	
	2. Test Equipment – amp meter, Pro-mac calibrator, multi-tester, etc.	
	3. Machinery – bench grinder, drill press, jigsaw, Ko punch, hand grinder, die grinder.	
	4. Rigging – Proper use of chains, slings, etc. and correct method of lifting.	
G.	<u>Safety Precautions and Devices</u>	500
	1. Mechanical Equipment – crane, fork truck, mill, lathe, etc.	
	2. Hand tools.	
	3. Tag and lockout procedures	
H.	<u>Other</u>	500
	Building Maintenance – lighting, power distribution, machinery and codes.	
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	Total Hours	8000

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
INDUSTRIAL EQUIPMENT WIRER & ASSEMBLER
RELATED INSTRUCTION

Blueprint Reading, Sketching and Drawing

- Elementary Blueprint Reading and Sketching
- Blueprint Reading for Electricians
- Electrical Circuit Diagrams

Mathematics

- Fundamentals of Mathematics
- Mathematics for Electricians

Safety (16 hours)

- Fundamentals (4 hours, 1st year)
- Trade Safety (12 hours, 2nd year)

Industrial & Labor Relations (20 hours)

- History and Background (6 hours, 1st year)
- Current Laws and Practices (14 hours, 2nd year)

Trade Theory

- Tools and Equipment
- Terminology
- Materials
- Stock Room
- Signal Wiring
- Lighting Installations
- Power Wiring
- Rigging
- Appliance Repair
- Troubleshooting

Trade Science

- Fundamentals of AC
- Fundamentals of DC
- Fundamentals of Motors and Generators
- Fundamentals of Transformers

Refrigeration

- Fundamentals of Operation, Construction & Maintenance

Instrumentation

- Basics, process controllers, including temperature and pressure instruments maintenance and calibration

First Aid (6.5 hours every 3 years)

Sexual Harassment Prevention Training (3 hours minimum)

Other Related Courses as Necessary

A minimum of 144 hours of Related Instruction is required for each Apprentice for each year.