

OCCUPATIONAL TOOLS AND EQUIPMENT LIST

Instrumentation and Control Technician



Government of Newfoundland Labrador
Department of Education and Early Childhood Development
Apprenticeship and Trades Certification Division

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Preface

This document is intended as a companion to the December 2024 Plan of Training for the Instrumentation and Control Technician trade. It identifies the necessary tools and equipment required by apprentices and training institutions for the completion of apprenticeships.

Acknowledgements

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We offer you a sincere thank you.

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Note:

The numbers suggested in the following Tools and Equipment List represents the required minimum. Please verify this list with your selected training institution.

**Tools and Equipment List
Instrumentation and Control Technician**

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT			
Item	Units for Individual Students	Required for Level 1 & PE (E) Advanced (A) Both (B)	Comments
PROTECTIVE CLOTHING AND DEVICES			
Gloves	1	B	Dexterous and cut resistant
Safety Glasses	1	B	CSA approved – Class 1
Hard Hat (with replaceable liners)	1	B	CSA approved - Type 2, Class E
Safety Boots	1	B	CSA Approved – Z195-02
Vest – High Visibility	1	B	Type 2
SUPPLIES			
Scientific Calculator	1	B	Non-programmable
Headphones	1 set	B	USB wired

Note: If identifying sets, please include specific information.

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units Per 15 Students	Maximum Students per Unit	Required for Level 1 & PE (E) Advanced (A) Both (B)	Comments
PERSONAL PROTECTIVE EQUIPMENT AND DEVICES				
Disposable Dust Mask	1 box	--	B	N95
Ear Plugs	1 box	--	B	disposable
Eye Wash Station	--	--	B	As required by OHS regulations
First Aid Station (including a First Aid Kit)	--	--	B	As required by OHS regulations
Fire Blanket	--	--	B	As required by OHS regulations
Fire Extinguisher	--	--	B	As required by OHS regulations
Gloves	3	5	B	Dexterous and cut resistant
Hard Hat (with replaceable liners)	3	5	B	Type 2, Class E CSA approved
Safety Glasses	3	5	B	CSA approved
Vest – High Visibility	1	15	B	Type 2
HAND TOOLS				
Wrenches:				
• Hex key (Imperial and Metric)	2 sets each	8 per set		
• Crescent – 6 in.	3	5		
• Crescent – 8 in.	1	15		
• Crescent – 12 in.	1	15		
• Strap	1	15		
• Torque – 3/8 in.	2	8		
• Open-ended sets (SAE)	3 sets	5 per set		
• Pipe – 6 in.	1	15		
• Pipe – 10 in.	1	15		
Calipers:			B	

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<ul style="list-style-type: none"> Vernier Micrometer 	4 1	4 15		
Centre Punch	2	8	B	
Diagonal Wire Cutters	8	2	B	
Drill Bits: <ul style="list-style-type: none"> 1/32 in. – 1/2 in. 3/16 in. – 3/8 in. 	2 sets 1 set	8 per set 15 per set	B	
Bench Vice	4	4	B	
Flaring Tools	2	8	A	
Fuse Puller	1	15	B	
Saw: <ul style="list-style-type: none"> Hack Saw 	4	4	B	
Hack Saw Blades	2 pkgs of 10	8 per pkg	B	
Hand File set (Fine, Medium, Course)	2 of each set	8 per set	B	
Pliers: <ul style="list-style-type: none"> Locking – 6 in. Locking – 8 in. Locking – 10 in. Locking – 12 in. Linesman Needle nose 	1 1 1 1 1 8	15 15 15 15 15 2	B	
L-Square	4	4	B	
Measuring Tape	5	3	B	
Nut Driver set	1 set	15 per set	B	
Packing Puller	4	4	B	
Punches	2 sets	8 per set	B	
Screwdrivers: <ul style="list-style-type: none"> Philips (1, 2, 3) 	3 of each	5 per each	B	

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<ul style="list-style-type: none"> Slot/Flat (1, 2, 3) Robertson (1, 2, 3) Terminal Block 	3 of each 3 of each 8	5 per each 5 per each 2		
Screw Extractors	1 set	15 per set	B	Demonstration only
Screw Starters: <ul style="list-style-type: none"> Philips Slot/ Flat 	1 of each set	15 per set	B	
Sockets Combo set (1/4 in., 3/8 in., 1/2 in.)	2 sets	8 per set	B	
Hammer: <ul style="list-style-type: none"> Claw Mallet 	2 1	8 15	B	
Taps and Die Combo Set (up to 1/2 in.)	2 sets	8 per set	B	
Level: <ul style="list-style-type: none"> Torpedo Spirit 	3 1	5 15	B	
Tube Benders: <ul style="list-style-type: none"> 1/4 in. 3/8 in. 1/2 in. 	8 1 1	2 15 15	B	
Tube Cutters	5 sets	3 per set	B	
Tube Reamers	4	4	B	
Wire Brushes	2	8	B	
Wire Strippers: <ul style="list-style-type: none"> Self-adjusting Basic 	4 4	4 4	B	
Crimpers: <ul style="list-style-type: none"> Ethernet / RJ45 Ferrule Wire 	4 2 8	4 2 8	B	

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Item	Units Per 15 Students	Maximum Students per Unit	Required for Level 1 & PE (E) Advanced (A) Both (B)	Comments
Utility Knife	3	5	B	
POWER TOOLS				
Bench Grinder	1	15	B	
Jig Saw	4	4	B	
Portable Drill (AC/DC)	3	5	B	
Soldering Iron	5	3	B	
Drill Press	1	15	B	
Air Compressor	1	15	B	
Line Dryer	1	15	B	
TEST EQUIPMENT AND ACCESSORIES				
Deadweight Tester	1	15	B	
Meters:				
• Benchtop DMM	8	2	B	
• Handheld DMM	8	2		
• Process meter	4	4		
Frequency Generator	4	4	B	
Grounding Mat	1	15	B	Demonstration only
Grounding Wrist Strap	1	15	B	
Field Communicator	4	4	B	
Hydrometer	1	15	A	
Manometer	4	4	B	
Oscilloscope	8	2	B	
pH Analyzer components:				
• Controller	1 setup	15 per setup	B	
• Probe				
• Buffer solutions (4, 7, 10)				

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Regulators	8	2	B	
Temperature Bath	4	4	B	
Thermometer	1	15	B	
Calibrator: <ul style="list-style-type: none"> Pressure Temperature 	4 of each	4 per each	B	
DC Power Supply <ul style="list-style-type: none"> Benchtop (0-24 V) 	8	2	B	
COMPUTER RELATED				
HART Modems	8	2	B	
Personal Computer	15	1	B	For the shop
Printer	1	15	B	
Industrial Software (and licensing)	8	2	B	
Wireless Gateway	1	15	B	
Server	1	15	B	
GENERAL TOOLS AND EQUIPMENT				
Portable Hydraulic Lift	1	15	B	
Nylon Sling	2	8	B	
Rope – 100 ft.	1 roll	15	B	
Shackles: <ul style="list-style-type: none"> 1 in. 3 in. 	2 of each	8 per set	B	
Ladder: <ul style="list-style-type: none"> Step – 8 ft. Extension – 12 ft. 	1 of each	15 per each	B	

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