

OCCUPATIONAL
TOOLS AND EQUIPMENT LIST

Instrumentation and Control Technician



Government of Newfoundland Labrador
Department of Advanced Education and Skills
Apprenticeship and Trades Certification Division

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Preface

This document is intended as a companion to the December 2011 Plan of Training for the Instrumentation and Control Technician occupation. 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 Entry (E) Advanced (A) Both (B)	Comments
Protective Clothing and Devices			
Gloves	1	B	
Goggles/Safety Glasses	1	B	
Hard Hat	1	B	CSA Approved - Side Impact
Safety Boots	1	B	
Hand Tools			
Allen wrenches: Imperial and Metric	1	B	
Crescent Wrenches - 6"	1	B	
Diagonal Cutters	1	B	
Ignition Wrenches (1/8" – 5/15")	1	B	
Jewelers Screwdrivers (7 in each set)	1	B	
Measuring Tape	1	B	
Multi-head Screwdriver	1	B	
Needle-Nose Pliers	1	B	
Scientific Calculator	1	B	
Wire Crimpers / Strippers	1	B	

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 Entry (E) Advanced (A) Both (B)	Comments
HAND TOOLS				
Allen Wrenches: Imperial and Metric	3 sets	5 per set	B	
Ball Peen Hammer	2	8	B	
Calipers	1	15	B	For demonstration only
Centre Punch	2	8	B	
Crescent Wrenches - 6", 8", 12"	3 x 6" 1x8" 1x12'	5 per 6" 15 per 8" and 12"	B	
Diagonal Cutters	3	5	B	
Drill Bits (Set of 1/32" – 1/2")	3	5 per set	B	
Easy Outs	2 sets	8 per set	B	
Fixed Vice	2	8	B	
Flaring Tools	2	8	B	
Fuse Puller	1	15	B	
Gasket Cutters	1 set	15 per set	B	
Gauge Pointer Puller	3	5	B	
Hack Saw	2	8	B	
Hack Saw Blades	2 pkgs of 10	8 per pkg	B	
Hand Files (Fine, Medium and Course)	3 of each	5 per each	B	
Ignition Wrenches (1/8" – 5/15")	3 sets	5 per set	B	
Jewelers Screwdrivers (7 in each set)	3 sets	5 per set	B	
Locking Pliers - 12"	3	5	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Linesman Pliers – 6"	2	8	B	
L-Square	3	5	B	
Measuring Tape	5	3	B	
Micrometer	1	15	B	For demonstration only
Needle-Nose Pliers	3	5	B	
Nut Drivers (1/8" – 1/2")	3 sets	5 per set	B	
Open-End Wrenches (Combination – 1/4" - 1")	3 sets	5 per set	B	
Packing Puller	2 sets	8 per set	B	
Pipe Wrenches (6" & 10")	2 of each	8 per each	B	
Punches	2 sets	8 per set	B	
Screwdrivers (Philips, Slot and Robinsons)	3 of each	5 per each	B	
Screw Extractors	2 sets	8 per set	B	
Screw Starters (Philips and Slot)	3 sets	5 per set	B	
Sockets (Imperial and Metric, 1/4", 3/8" and 1/2" Drive)	2 sets of each	8 per set	B	
Soft-Face Hammer	2	8	B	
Strap Wrenches	1	15	B	
Taps and Die Set (Imperial and Metric, up to 1/2")	1 each	15 per each	B	
Telescopic Magnet	2	8	B	
Telescopic Mirrors	2	8	B	
Torpedo Level	3	5	B	
Torque Wrench - 1/2" drive	12	15	B	For demonstration only

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Tube Benders - 1/4", 3/8" & 1/2"	8x 1/4" 1x 3/8" and 1/2"	2 per 1/4" 15 per 3/8" and 1/2"	B	
Tube Cutters	5 sets	3 per set	B	
Tubing Reamers	2	8	B	
Tweezers	2	8	B	
Vernier Calipers	1	15	B	For demonstration only
Vice Grips – 6", 8" & 10"	2 of each	8 per each	B	
Wire Brushes	2	8	B	
Wire Crimpers / Strippers	5	3	B	
POWER TOOLS				
Bench Grinder	1	15	B	
Concrete Drill Bits - (3/16" – 3/8")	1 set	15 per set	B	
Hammer Drill - 3/8"	1	15	B	
Jig Saw	1	15	B	
Portable Electric Drill – 3/8"	3	5	B	
Soldering Iron	5	3	B	
TEST EQUIPMENT AND ACCESSORIES				
Current Calibrator	5	3	B	
Deadweight Tester	2	8	B	
Decade Resistance Box	2	8	B	
Dew Point Tester	1	15	B	
Digital Multimeter	5	3	B	
Frequency Counter	1	15	B	

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Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Frequency Generator	1	15	B	
Grounding Mat	1	15	B	
Hand-Held Configurators	5	3	B	
Hand-Held Pyrometer	1	15	B	
Hydrometer	1	15	B	
Magmeter (Portable)	1	15	B	
Manometer and Standards	5	3	B	
Millivoltmeter Calibrator	5	3	B	
Modems (AMS)	8	2	B	
Oscilloscope	1	15	B	
Personal Computer (Shop)	8	2	B	
pH Simulator/Buffers	5 sets	3 per set	B	
Pneumatic Test Stand (with 24V DC power supply)	8	2	B	
Printers	1	15	B	
Regulators	8	2	B	
Signal Generators	1	15	B	For demonstration only
Strobotac	1	15	B	For demonstration only
Temperature Bath	4	4	B	
Test Gases (Oxygen, LEL)	3x1Liter btl of each	5 per each btl	B	
Test Gauges (Pressure Vacuum) 0-280" inwc 0-30" Hg vacuum 0-30 psi	5 of each	3 per each	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
0-60 psi 0-100 psi 0-1000 psi				
Thermometer	5	3	B	
Vacuum Pumps	5	3	B	
Wrist Ground Strap	5	3	B	
RELATED TOOLS AND EQUIPMENT				
Come Along (1 ton)	2	8	B	
Drill Press	1	15	B	
Nylon Slings	2	8	B	
Rope – 100’	1 roll	15	B	
Shackles (1” – 3”)	1 set	15 per set	B	
Step Ladders – 8’	1	15	B	
PROTECTIVE CLOTHING AND DEVICES				
Disposable Coveralls	15	1	B	
Disposable Dust Mask	15	1	B	
Ear Plugs	15	1	B	
Eye Wash Bottle	1	15	B	
Face Shield	2	8	B	
Fire Extinguishers	as required	Per class	B	
First Aid Kit	as required	Per class	B	
Geiger Counter	1	15	B	
Gloves	3	5	B	
Hard Hat (with replaceable liners)	3	5	B	

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Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Safety Glasses	5	3	B	
Splash Goggles	5	3	B	

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