

ITEM 120-2802-R0903 ATTACHMENT

**Plumbing Technology-Courses
Preliminary List of Supplies, Tools, Equipment Needed
September 2, 2003**

PLMB 100	Introduction to the Plumbing Trades: 5-Small power drills 3-Small power grinders 3-Slings 2-Right angle drills 3-Reciprocating Sawsalls	\$ 2,000.00
PLMB 120	Introduction to Piping Systems: 3-chop saws Plastic pipe and fittings DWV 1½ , 2, 3, inch Cement and cleaner 5-Propane bottles and torches 3-Soil pipe cutters 6-No-hub wrenches No-hub soil pipe and fittings: 1½, 2, 3, inch 1-Pipe machine complete 1-Pipe vise Pipe dope Black pipe and fittings: ½, ¾, 1 inch PEX pipe and fittings: ½, ¾ inch	\$20,104.00
PLMB 125	Introduction to Plumbing Fixtures: 2-Kitchen sinks w/trim 2-Laundry sinks w/trim 2-Wall hung lavatory sinks w/trim 2-Built-in lavatory sinks w/trim 2-Bathtub/shower units w/trim 2-Showers w/trim 2-Toilets w/trim 2-Flush valve toilets w/trim 2-Urinals w/trim 2-Garbage disposals 1 Dishwasher 2-Mop sinks w/trim 2-Water heaters complete	\$ 7,530.00
PLMB 200	Pipe Fitting Tools/Motorized Equipment: 2-Pipe stands 12-Pipe wrenches various sizes 6-Pipe levels 6-Flaring tools	\$ 5,000.00
PLMB 210	Advanced Blueprint reading/Plumbers: Drawing tools and equipment	\$ 1,000.00

MSU-Northern Plumbing Technology Course Supply/Cost List
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PLMB 230	Hangers/Supports/Testing Piping/Equipment: 50-Pipe hangers, various sizes 100-Pipe hanger rod 100-Unistrut hanger supports Miscellaneous hangers and equipment Testing equipment	\$ 4,000.00
PLMB 250	Special Piping: Copper pipe and fittings, various sizes Solder Silver solder Iron pipe Grooved pipe fittings Grooved pipe attachment	\$ 6,000.00
PLMB 260	Intro/Control Circuit Troubleshooting: 12-Termostats 6-24 volt transformers 6-24 volt zone valves 6-Tsting equipment	\$ 4,000.00
PLMB 270	Hydronic Heating and Cooling Systems: 1-Gas boiler 1-Oil boiler 6-Seam traps 6-Blancing valves	\$ 8,000.00
PLMB 280	Energy Management: Testing equipment Balancing test equipment	\$ 2,000.00
PLMB 285	System Startup and Shutdown: Test and balance equipment Glycol system equipment	\$ 3,000.00
	TOTAL	\$ 62,634.00