

# METRO MANUFACTURING PLANT ELECTRICIAN JATC

MA #1080

## APPROVED ELECTIVE LIST

In Partnership with



*On-line and Hybrid classes are not approved. Classes must be taken in Person only. For full term elective requirements you must select a course that is at least 30+ hours. Must meet prerequisites for classes listed. For prerequisite questions for APR, FMT & ELT please contact Apprenticeship Admin.*

<b>Course #</b>	<b>Title</b>	<b>Approximate Hours</b>	<b>Credits</b>
APR 101	LME: Electrical Theory Fundamentals	33 hours	3
APR 102	LME: DC Motors	33 hours	3
APR 103	LME: AC Motors and Transformers	44 hours	4
APR 104	LME: Luminaires and Equipment	33 hours	3
APR 160	Intro to Industrial Maintenance	44 hours	4
APR 162	Calculations for the Trades	40 hours	4
APR 164	Industrial BluePrints and Schematics for the Trades	30 hours	2
APR 166	Industrial Rigging	33 hours	2
APR 168	Intro to Bearings, Seals and Lubrication	33 hours	2
APR 170	Power Transmission Systems	33 hours	3
APR 172	Introduction to Hydraulics	30 hours	3
APR 202	LME: Electrical Code – Level I	44 hours	4
APR 203	LME: Electrical Code – Level II	44 hours	4
APR 204	LME: Electrical Code – Level III	44 hours	4
APR 227	NEC Review and Exam Preparation	33 hours	3
APR 230	National Electrical Code	33 hours	3
APR 260	Pneumatic System Operations	40 hours	4
APR 264	Mechanical Drive Alignment	33 hours	3
APR 266	Predictive Maintenance Technologies	44 hours	4

APR 268	Industrial Equipment Controls	33 hours	3
APR 272	Machining for Industrial Maintenance	33 hours	3
APR 274	HVAC, Steam and Hot Water Systems	44 hours	4
BCT 104	Construction Math	33 hours	3
BCT 106	Hand/Power Tool Use and Safety	33 hours	3
BCT 150	Mechanical, Electrical and Plumbing	40 hours	4
BCT 213	Commercial Print Reading	33 hours	3
CADD 100	CADD Orientation	30 hours	3
CADD 126	Intro to AutoCAD	40 hours	3
CADD 136	Intermediate AutoCAD	40 hours	3
CEU 3168	Forklift Training Safety and Code Certification	8 hours	0.8 CEU's
ARCH 126	Introduction to AutoCAD	40 hours	3
ARCH 136	Intermediate AutoCAD	40 hours	3
EET 101A	Electronic Lab Skills & Equipment I	30 hours	1
EET 101B	Electronic Lab Skills & Equipment II	30 hours	1
EET 111	Electrical Circuit Analysis I	70 hours	5
EET 112	Electrical Circuit Analysis II	70 hours	5
EET 113	Electrical Power	70 hours	5
EET 121	Digital Systems I	60 hours	4
EET 188	Industrial Safety	20 hours	2
ELT 125	Basic Programmable Controllers (PLC's)	33 hours	2
ELT 126	Intermediate Programmable Controllers (PLC's)	33 hours	2
ELT 204	Adjustable Speed Drives	33 hours	2
ELT 220	OSHA 30 Hour Safety Training	33 hours	3
ELT 225	Advanced Programmable Controllers	33 hours	2
FMT 100	Intro to Facilities Maintenance Systems	33 hours	2

FMT 101	Refrigeration I	33 hours	2
FMT 102	Refrigeration II	33 hours	2
FMT 103	Refrigeration III	33 hours	2
FMT 111	Refrigeration Electrical I	33 hours	2
FMT 112	Refrigeration Electrical II	33 hours	2
FMT 113	Refrigeration Electrical III	33 hours	2
FMT 119	Water Treatment and Distribution	33 hours	2
FMT 122	Intro to Boilers	33 hours	3
FMT 125	Natural Gas Equipment	33 hours	2
FMT 177	Intro to Applied Technologies for the Trades	33 hours	3
FMT 201	Intro to Chillers	33 hours	3
FMT 202	Direct Digital Controls	33 hours	3
FMT 207	Pneumatic Controls	33 hours	2
FMT 210	Basic HVAC/R Installation and Techniques	33 hours	2
FMT 222	Intermediate Boilers	33 hours	3
MCH 100	Machine Tool Basics	20 hours	1
MCH 110B	Blueprint Reading for Machine Manufacturing	60 hours	3
MCH 120	Machine Shop Math	40 hours	2
MCH 245	Metallurgy	50 hours	2.5
MCH 272	Mastercam Level I	100 hours	5
MCH 273	Mastercam Level II	100 hours	5
MTH	Any 3 Credit or More. MTH 60 or above	-	3+
WLD 101	Welding Processes & Applications	40 hours	4
WLD 102	Blueprint Reading	44 hours	4

**7<sup>TH</sup> & 8<sup>TH</sup> PERIOD APPRENTICES ONLY ~ CAMPUS ONLY**

<u>Course #</u>	<u>Title</u>	<u>Approximate Hours</u>	<u>Credits</u>
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CEU 921Z	National Electrical Code Changes	8 hours	0.8 CEU's
CEU 922A	NEC Code Calculations. for Motors & Transformers	8 hours	0.8 CEU's
CEU 3263	Electrical Safety/NFPA 70E	8 hours	0.8 CEU's