

MODEL ROUTE

School: School of Engineering Technology & Applied Sciences - AMAT **Program Number:** 4501 (Trade Code: 309A)

Program Title: Apprenticeship - Electrician, Construction Maintenance **Credential:** Certificate Graduate Certificate
 Diploma Advanced Diploma
 Degree None

Delivery Mode: Non Co-Op Co-Op **Duration:** 2 Semesters 3 Levels
 Fast Track 4 Levels 6 Semesters
 8 Semesters 9 Semesters

Intake: **2024F-2025W**

Course Code	Course Title	Co/Pre-Requisite (Course Code)	Lab Hours	Lecture Hours	Total Weekly Hours	Weeks (15)	Total Hours
Level 1 Basic							
APEL 121	Communication and Documentation		0	27			27
APEL 122	Introduction to the Canadian Electrical Code		0	36			36
APEL 123	Trade Practices		0	36			36
APEL 124	Installation and Maintenance Methods		45	9			54
APEL 125	Electrical Fundamentals		27	54			81
APEL 126	Drawings, Specifications and Standards Fundamentals		0	36			36
Total							270
Level 2 Intermediate							
APEL 221	Electrical Systems	APEL 121 - 126	9	63			72
APEL 222	Electronic Fundamentals	APEL 121 - 126	18	18			36
APEL 223	Drawings, Specifications and Standards Intermediate	APEL 121 - 126	0	36			36
APEL 224	Motor Controls and Devices	APEL 121 - 126	27	18			45
APEL 225	Communication and Monitoring Systems	APEL 121 - 126	27	18			45
APEL 226	Canadian Electrical Code II	APEL 121 - 126	0	36			36
Total							270
Level 3 Advanced							
APEL 321	Renewable Energy Generating and Storage Systems	APEL 221 - 226	9	18			27
APEL 322	Electrical Theory and Application	APEL 221 - 226	27	45			72
APEL 323	PLC Fundamentals	APEL 221 - 226	18	9			27
APEL 324	Power Electronics	APEL 221 - 226	18	18			36
APEL 325	Drawings, Specifications and Standards Advanced	APEL 221 - 226	0	36			36
APEL 326	Introduction to Instrumentation	APEL 221 - 226	18	18			36
APEL 327	Canadian Electrical Code III	APEL 221 - 226	0	36			36
Total							270
Level 4 Advanced							
APEL 421	Building Automation Systems (Common Core)	APEL 321 - 327	8	24			32
APEL 422	Professionalism and Ethics (Common Core)	APEL 321 - 327	0	16			16
APEL 423	Power Conditioning (Common Core)	APEL 321 - 327	0	24			24
APEL 424	Advanced Motors and Generators (Common Core)	APEL 321 - 327	16	24			40
APEL 425	High voltage Service and Operation (Common Core)	APEL 321 - 327	0	40			40
APEL 426	Specialty Installations (Construction only)	APEL 321 - 327	0	40			40
APEL 427	Canadian Electrical Code IV (Construction only)	APEL 321 - 327	0	48			48
Total							240