

Electrician (ETA) Apprenticeship Mapping

Program Curriculum

A collection of 15 CTS courses has been developed to align with the current Electrician Apprenticeship Course Outline. These courses, when combined, cover the First Period technical training content.

Alberta Apprenticeship Training Profile First Period	CTS Course Alignment to Apprenticeship First Period Topics	Assessment
Topic	CTS Course Number and Name	
SECTION ONE – STANDARD AND SPECIFIC WORKPLACE SAFETY		
Safety Legislation, Regulations and Industry Policy in the Trades	ETA3900: Apprenticeship Safety	
Climbing, Lifting, Rigging and Hoisting		
Hazardous Materials and Fire Protection		
Electrician Apprenticeship Training Program Orientation		
Electrical Safety		
SECTION TWO – CIRCUIT FUNDAMENTALS		
First Period Math Applications	ETA3400: Electrical Principles	
Current, Voltage and Resistance		
Series Resistive Circuits	ETA3405: Electrical Concepts	
Parallel Resistive Circuits		
Series-Parallel Resistive Circuits	ETA3410: Resistive Circuits	
Edison 3-Wire Distribution Systems	ETA3415: Edison 3-Wire Systems	
Work, Energy, Power and Efficiency	ETA3420: Power & Efficiency	
SECTION THREE – EMF SOURCES		
Methods of Producing EMF	ETA3425: Batteries & Magnetism	
Cells and Batteries		
Magnetism and Electromagnetism		
Generators		

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Topic	CTS Course Number and Name	
SECTION FOUR – LAB FUNDAMENTALS		
Meters	ETA3430: Meters & Connections	
Conductors		
Splicing and Terminating (Low Voltage)		
Resistors		
Switching Circuits	ETA3435: Switching Circuits	
Relays and Controls	ETA3440: Relays & Controls	
Extra-low-voltage Switching (0–30 V)	ETA3445: Switches & Alarms	
Alarm Systems and Smoke Alarms		
SECTION FIVE – CANADIAN ELECTRICAL CODE, PART I AND BLUEPRINTS		
Introduction to Code	ETA3450: Introduction to Code	
General Rules (Section 2)		
Conductor Material and Sizes (Section 4)		
Service and Grounding Requirements	ETA3455: Conductors & Grounding	
Service Feeders and Branch Circuits (Section 8)		
Wiring Methods (Section 12)	ETA3460: Wiring & Installation	
Installation of Electrical Equipment (Section 26)		
Installation of Lighting Equipment (Section 30)		
Class 1 and Class 2 Circuits (Section 16)	ETA3465: Diagrams & Drawings	
Orthographic Projection/Diagrams		
Drawings and Blueprints		
Print Reading/Applied Drawings		
CTS COURSES THAT ALLOW STUDENTS ADDITIONAL PRACTICAL TIME		
	ETA3470: ETA Practicum A	
	ETA3475: ETA Practicum B	
	ETA3480: ETA Practicum C	
	ETA3485: ETA Practicum D	