



Electrician Publishing Notes 2023-24

Electrician Content Development Project

The Alberta government is releasing a new Electrician Apprenticeship Program Curriculum Guide for implementation for the upcoming 2024/25 academic year. This new Curriculum Guide will be released in a two-phase implementation plan:

- Phase One
 - implementation of the new Period 1 and Period 2 Curriculum Guide
 - scheduled for implementation on August 1, 2024

- Phase Two
 - implementation of the new Period 3 and Period 4 Curriculum Guide
 - scheduled for implementation on August 1, 2025

As the ILMs are intended to follow the learning outcomes and objectives within the Alberta Apprenticeship Program Curriculum Guides, ILM is publishing new Period 1 and Period 2 ILMs for the 2024/25 academic year. The outcomes, learning objectives and related content in the newly updated ILMs for Period 1 and Period 2 are now aligned to this new version of the Alberta curriculum guide. The updated module numbers and names are listed in the attached **Module Updates List**.

Safety Modules:

Due to changes resulting from the new Skilled Trades and Apprenticeship Education Act [Tradesecrets - Learn More about the STAE Act \(alberta.ca\)](https://www.alberta.ca/tradesecrets), the content within Alberta's Industry Network and Apprenticeship Training Program modules is no longer valid and the modules have been discontinued.

When the provincial apprenticeship system changes are final, these products will be revived and updated accordingly.

Please note that the content of 030101a, b, and c modules has not been updated yet (May 2025 tentative ETA); however those three modules are still included as part of the Alberta government's latest curriculum guide, along with the new content modules now being released in this May 2024 publishing cycle.

For simplicity, these three modules have had their version number updated from Version 24 to 1st Edition to match all the new content modules, despite no content changes being made to those modules yet.



The new ILMs for Electrician Period 3 and Period 4 are still in development and will be published in May 2025 to coincide with Phase Two of the new Curriculum Guide implementation plan. There are no changes being published for these modules at this time.

For a more detailed summary and comparison of content changes within Period 1 and Period 2 from the previous curriculum guide to the new curriculum guide, please see the [Electrician Period 1 and Period 2 Curriculum Comparison](#).

Additionally, the new 2024 Edition of the Canadian Electrical Code (CE Code) was recently published. **Within Alberta, the new CE Code adoption timeline is 12 months from the publication of the new code. This means that the new CE Code will come into effect in April 2025.** ILM is also currently working to update ILMs in all four Periods to align with the newest CE Code and will be publishing ILMs with the code updates for May 2025.

As part of our commitment to continuous improvement, we encourage you to utilize the ILM Comments page to provide feedback on the new Electrician Period 1 and Period 2 modules. For more information on the ILM Comments and QA Maintenance process, please visit our website:

- ILM Maintenance: <https://www.ilmlearning.ca/ilm-maintenance>
- Comments: <https://www.ilmlearning.ca/comments>

Previous Electrician Module Versions

As we know it takes time for Programs across Canada to adjust to new ILM content, we will continue to make the previous Electrician Period 1 and Period 2 module versions available until May 2025. The intent of maintaining both the previous and the new versions is to allow Programs time and space to make the necessary curriculum transitions based on the newly published ILMs. If Programs are not ready, or prepared, to adopt the new ILMs, they will still be able to order the previous versions.

Due to the release of the new Period 1 and Period 2 modules, the previous versions have been renumbered to distinguish them from the new Period 1 and Period 2 modules. The content of these modules has not changed—we have only updated the module numbers to include “_2014”, as per the following table.



2014 Outline – Period 1 Package

OLD MODULE NUMBER	MODULE TITLE	NEW MODULE NUMBER	VERSION
030101a	Safety Legislation, Regulations and Industry Policy in the Trades	030101a_2014	24.0
030101b	Climbing, Lifting, Rigging and Hoisting	030101b_2014	24.0
030101c	Hazardous Materials and Fire Protection	030101c_2014	24.0
030101e	Electrical Safety	030101e_2014	24.0
030102a	First Period Math Applications	030102a_2014	24.0
030102b	Current, Voltage and Resistance	030102b_2014	24.0
030102c	Series Resistive Circuits	030102c_2014	24.0
030102d	Parallel Resistive Circuits	030102d_2014	25
030102e	Series-Parallel Resistive Circuits	030102e_2014	24.0
030102f	Edison 3-Wire Distribution System	030102f_2014	24.0
030102g	Work, Energy, Power and Efficiency	030102g_2014	24.0
030103a	Methods of Producing emf	030103a_2014	24.0
030103b	Cells and Batteries	030103b_2014	24.0
030103c	Magnetism and Electromagnetism	030103c_2014	24.0
030103d	Generators	030103d_2014	24.0
030104a	Meters	030104a_2014	25
030104b	Conductors	030104b_2014	24.0
030104c	Splicing and Terminating (Low Voltage)	030104c_2014	24.0
030104d	Resistors	030104d_2014	24.0
030104e	Switching Circuits	030104e_2014	24.0
030104f	Relays and Controls	030104f_2014	24.0
030104g	Extra Low Voltage Switching (0 - 30 V)	030104g_2014	24.0
030104h	Alarm Systems and Smoke Alarms	030104h_2014	24.0
030105a	Introduction to Code	030105a_2014	25



2014 Outline – Period 1 Package

OLD MODULE NUMBER	MODULE TITLE	NEW MODULE NUMBER	VERSION
030105b	General Rules - Section 2	030105b_2014	25
030105c	Conductor Material and Sizes - Section 4	030105c_2014	24.0
030105d	Service and Grounding Requirements	030105d_2014	25
030105e	Service Feeders and Branch Circuits - Section 8	030105e_2014	25
030105f	Wiring Methods - Section 12	030105f_2014	24.0
030105g	Installation of Electrical Equipment: Section 26	030105g_2014	24.0
030105h	Installation of Lighting Equipment: Section 30	030105h_2014	24.0
030105i	Class 1 and Class 2 Circuits - Section 16	030105i_2014	24.0
030105j	Orthographic Projection and Diagrams	030105j_2014	24.0
030105k	Drawings	030105k_2014	24.0
030105l	Drawing Interpretation	030105l_2014	24.0



2014 Outline – Period 2 Package

OLD MODULE NUMBER	MODULE TITLE	NEW MODULE NUMBER	VERSION
030201a	Second Period Math Applications	030201a_2014	24.0
030201b	Fundamentals of Alternating Current	030201b_2014	24.0
030201c	Principles of ac Circuits	030201c_2014	24.0
030201d	Inductance and Inductive Reactance	030201d_2014	24.0
030201e	Capacitance and Capacitive Reactance	030201e_2014	24.0
030201f	Power Relationships	030201f_2014	24.0
030202a	Series ac Circuits	030202a_2014	24.0
030202b	Series Resistive-Reactive Circuits	030202b_2014	24.0
030202c	Series Resistor, Inductor, and Capacitor (RLC) Circuits	030202c_2014	24.0
030202d	Introduction to Parallel ac Circuits	030202d_2014	24.0
030202e	Parallel Resistor, Inductor, and Capacitor (RLC) Circuits	030202e_2014	24.0
030202f	Power Factor Correction Single-Phase	030202f_2014	24.0
030203a	Principles of Automatic Heating and Cooling Controls	030203a_2014	24.0
030203b	Temperature Sensing and Control Devices	030203b_2014	24.0
030203c	Basic Gas-Fired, Forced-Air Heating Systems	030203c_2014	24.0
030203d	Efficient Gas-Fired, Forced-Air Heating Systems	030203d_2014	24.0
030203e	Basic Hot Water Heating Systems	030203e_2014	24.0
030203f	Cooling Systems	030203f_2014	24.0
030203g	HVAC Rooftop Units	030203g_2014	24.0
030203h	Heat Trace	030203h_2014	24.0
030204a	Electrical Control Drawings	030204a_2014	24.0
030204b	Relays and Contactors	030204b_2014	24.0
030204c	Timers and Smart Relays	030204c_2014	24.0



2014 Outline – Period 2 Package

OLD MODULE NUMBER	MODULE TITLE	NEW MODULE NUMBER	VERSION
030204d	Protection Devices	030204d_2014	24.0
030204e	Motor Starters	030204e_2014	24.0
030204f	Diagram Conversion	030204f_2014	24.0
030204g	Single Motor Control/Pilot Devices and Symbols	030204g_2014	24.0
030204h	Reversing Motor Starters	030204h_2014	24.0
030205a	Service Conductor Ampacity for a Single Dwelling	030205a_2014	25
030205b	Services and Service Equipment for a Single Dwelling	030205b_2014	24.0
030205c	Feeder and Branch Distribution Requirements for a Single Dwelling	030205c_2014	25
030205d	Grounding Requirements for a Single Dwelling	030205d_2014	25
030205e	Service Ampacity for Apartments and Similar Buildings	030205e_2014	25
030205f	Service Protection and Control for Apartments and Similar Buildings	030205f_2014	25
030205g	Capacitor Bank Installations	030205g_2014	25
030205h	Pools, Mobile Homes and Temporary Wiring - Sections 68, 72 and 76	030205h_2014	25
030205i	Diagrams	030205i_2014	24.0
030205j	Specifications	030205j_2014	24.0
030205k	Drawings and Plans	030205k_2014	24.0

A Note of Gratitude

We would like to thank all of the Alberta Electrician programs within the post-secondary institutions across the province, the instructors within these programs, the project team members from industry, as well as the team at Alberta Advanced Education Apprenticeship and Industry Training for their collaboration on this ILM development project. ILM is pleased to work alongside these groups to support updated Electrician Apprenticeship curriculum and programming. Thank you!



Updated Module List

ELE MODULES (23/24) 1st PERIOD

NUMBER	NAME	SECTION	PAGES	EDITION
030101a	Safety Legislation, Regulations, and Industry Policy in the Trades	Industry Policy in the Trades	68	01
030101b	Climbing, Lifting, Rigging and Hoisting	Standard and Specific Workplace Safety	64	01
030101c	Hazardous Materials and Fire Protection	Standard Workplace Safety and Tools	52	01
030101e	Electrical Safety	Standard and Specific Workplace Safety	56	01
030102a	Current, Voltage, and Resistance	Circuit Fundamentals	40	01
030102b	Series Resistive Circuits	Circuit Fundamentals	52	01
030102c	Parallel Resistive Circuits	Circuit Fundamentals	44	01
030102d	Series-Parallel Resistive Circuits	Circuit Fundamentals	56	01
030102e	Edison 3-Wire Distribution Systems	Circuit Fundamentals	56	01
030102f	Work, Energy, Power, and Efficiency	Circuit Fundamentals	44	01
030103a	Methods of Producing emf	emf Sources	32	01
030103b	Cells and Batteries	emf Sources	48	01
030103c	Photovoltaic	emf Sources	28	01
030103d	Generators	emf Sources	56	01
030104a	Measurement Equipment	Lab Fundamentals	48	01
030104b	Conductors	Lab Fundamentals	40	01
030104c	Low Voltage Splicing and Terminating	Lab Fundamentals	40	01
030104d	Resistors	Lab Fundamentals	32	01
030104e	Switching Circuits	Lab Fundamentals	44	01
030104f	Relays and Controls	Lab Fundamentals	28	01
030104g	Extra-Low Voltage Switching	Lab Fundamentals	40	01
030104h	Alarm and Detection Systems	Lab Fundamentals	44	01



ELE MODULES (23/24) 1st PERIOD

NUMBER	NAME	SECTION	PAGES	EDITION
030105a	Using the Canadian Electrical Code	Canadian Electrical Code (CE Code) and Drawings	44	01
030105b	Definitions and General Rules	Canadian Electrical Code (CE Code) and Drawings	24	01
030105c	Conductor Material and Sizes	Canadian Electrical Code (CE Code) and Drawings	48	01
030105d	Service and Grounding Requirements	Canadian Electrical Code (CE Code), Part I and Drawings	44	01
030105e	Service Feeders and Branch Circuits	Canadian Electrical Code (CE Code) and Drawings	36	01
030105f	Wiring Methods	Canadian Electrical Code (CE Code) and Drawings	76	01
030105g	Installation of Electrical Equipment: Section 26	Canadian Electrical Code (CE Code) and Drawings	44	01
030105h	Installation of Lighting Equipment: Section 30	Canadian Electrical Code (CE Code) and Drawings	48	01
030105i	Orthographic Projection and Diagrams	Canadian Electrical Code (CE Code) and Drawings	44	01
030105j	Drawing Fundamentals	Canadian Electrical Code (CE Code) and Drawings	48	01
030105k	Drawing Interpretation	Canadian Electrical Code (CE Code) and Drawings	56	01

ELE MODULES (23/24) 2nd PERIOD

NUMBER	NAME	SECTION	PAGES	EDITION
030201a	Fundamentals of Alternating Current	Alternating Current (ac) Circuit Properties	32	01
030201b	Properties of Inductors and Capacitors	Alternating Current (ac) Circuit Properties	40	01
030201c	Inductors and Capacitors in Circuits	Alternating Current (ac) Circuit Properties	48	01
030201d	Principles of ac Circuits	Alternating Current (ac) Circuit Properties	68	01
030201e	Power Relationships	Alternating Current (ac) Circuit Properties	40	01



ELE MODULES (23/24) 2nd PERIOD

NUMBER	NAME	SECTION	PAGES	EDITION
030202a	Series ac Circuits	RLC Circuits	44	01
030202b	Series RLC Circuits	RLC Circuits	88	01
030202c	Parallel ac Circuits	RLC Circuits	44	01
030202d	Parallel RLC Circuits	RLC Circuits	56	01
030202e	Single-Phase Motors	RLC Circuits	36	01
030202f	Single-Phase Power Factor Correction	RLC Circuits	32	01
030203a	Heating and Cooling Systems	Heating and Cooling Systems	48	01
030203b	Forced-Air Heating Systems	Heating and Cooling Systems	72	01
030203c	Cooling Systems	Heating and Cooling Systems	40	01
030203d	HVAC Rooftop Units	Heating and Cooling Systems	36	01
030203e	Hot Water Heating Systems	Heating and Cooling Systems	44	01
030203f	Heat Trace	Heating and Cooling Systems	28	01
030204a	Relays and Contactors	Magnetic Controls and Switching Circuits	52	01
030204b	Timers and Smart Relays	Magnetic Controls and Switching Circuits	24	01
030204c	Pilot and Overcurrent Devices	Magnetic Controls and Switching Circuits	48	01
030204d	Drawing and Diagram Conversion	Magnetic Controls and Switching Circuits Magnetic Controls and Switching Circuits	40	01
030204e	Motor Starters	Magnetic Controls and Switching Circuits	68	01
030204f	Single Motor Control	Magnetic Controls and Switching Circuits	40	01
030204g	Reversing Motor Starters	Magnetic Controls and Switching Circuits	40	01
030205a	Electric Vehicle Charging	Canadian Electrical Code (CE Code) / Plans and Diagrams	16	01
030205b	Electrical Space Heating and Cooling	Canadian Electrical Code (CE Code) / Plans and Diagrams	24	01



ELE MODULES (23/24) 2nd PERIOD

NUMBER	NAME	SECTION	PAGES	EDITION
030205c	Service Ampacity for Apartments and Similar Buildings	Canadian Electrical Code (CE Code) / Plans and Diagrams	56	01
030205d	Services and Service Equipment for Apartments and Similar Buildings	Canadian Electrical Code (CE Code) / Plans and Diagrams	28	01
030205e	Capacitor Bank Installations	Canadian Electrical Code (CE Code) / Plans and Diagrams	40	01
030205f	Pools, Mobile Home and Temporary Wiring	Canadian Electrical Code (CE Code) / Plans and Diagrams	24	01
030205g	Electrical Installations in Patient Care Areas	Canadian Electrical Code (CE Code) / Plans and Diagrams	32	01
030205h	Class 1 and Class 2 Circuits	Canadian Electrical Code (CE Code) / Plans and Diagrams	24	01
030205i	Specifications	Canadian Electrical Code (CE Code) / Plans and Diagrams	36	01
030205j	Drawings and Plans	Canadian Electrical Code (CE Code) / Plans and Diagrams	48	01