



# Electrician – Applied Certificate

## PLAR Candidate Guide

Prior Learning Assessment and Recognition (PLAR)

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### Prior learning credit options at Saskatchewan Polytechnic

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See [Get Credit for What you Know](#) for important information about all options to get credit for prior learning at Sask Polytech, including PLAR, transfer credit, Canadian Armed Forces credit, and equivalency credit.

### How to navigate this document

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This document contains links to other document sections or webpages. To return to where you were from another section in this document, press the *ALT* key and *left arrow* key at the same time. To return to this webpage from another webpage, close the other webpage or click back on the browser tab for this document.

### Contents of this guide

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This guide contains the following specific PLAR information and tools for this program

- A. [PLAR fees](#)
- B. [PLAR eligibility and options](#)
- C. [Dates when PLAR assessment is available](#)
- D. [Special directions for this program](#)
- E. [PLAR contact person](#)
- F. [Self-rating course outlines](#)

## A. PLAR fees

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Fees for PLAR challenges are set to cover our costs for consultation, assessment, and related administrative tasks. PLAR fees are non-refundable and non-transferrable.

The PLAR fees policy is subject to change for each new academic year. Please see the **Cost** section on the [PLAR webpage](#) for current fee information.

## B. PLAR eligibility and options

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To be eligible for PLAR for courses in this program, you must first apply for admission and be accepted into the program. You must also consult with the [PLAR contact person](#) and be approved for PLAR assessment.

### Course prerequisites and corequisites

Some courses have one or more other courses that must be completed first (prerequisite) or at the same time (corequisite). See [course outlines](#) in this guide to identify any pre- or co-requisites for each course. Discuss with your [PLAR contact person](#) how to deal with courses with corequisites.

### Block assessment

Some programs may assess a cluster of courses together in one block, which may save you time and effort. Ask the [PLAR contact person](#) whether there are any block assessment options in this program.

## C. Dates when PLAR assessment is available

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PLAR assessment for this program is available from Sept 1 to June 15 in each academic year.

**All PLAR assessments must be completed by June 15 of each academic year.**

## D. Special directions for this program

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1. **Review** the [PLAR process and FAQs](#) and the information in this guide.
2. **Self-rate** your learning for each course using the [Course Outlines](#) in this guide.
3. **Consult** with the [PLAR contact person](#) for PLAR approval. Be prepared to provide your resume, course self-ratings (see [section F](#)), and a partially completed [PLAR application](#). If you are approved for PLAR, the contact person will sign your PLAR application and explain next steps.
4. Apply for admission to the program. See [directions](#) for applying.
5. **Register** for PLAR at [Registration/Enrolment Services](#) once you have signed approval on your [PLAR Application Form](#). The PLAR fee will be added to your student account.
6. **Finalize** an assessment plan with your assigned assessor.
7. **Complete** assessment before your PLAR registration expires.

## E. PLAR contact person

Contact one of the Program Heads below to arrange a consultation **after** you have read this guide and [general PLAR information](#) and rated yourself for each course (see next section). Consultation may be by phone, online, or in person. Be prepared to provide your resume, course self-ratings, and a partially completed [PLAR application](#). If agreement is reached to go ahead with PLAR, the contact person will sign approval on your PLAR application and explain the next steps. Admission to the program is required before you can register for PLAR.

### Jay Vollet, Program Head

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## F. Self-rating course outlines

Clicking on a course code below opens a page where you can rate yourself on the knowledge and skills assessed for PLAR credit. For Arts & Sciences courses, clicking on the course code opens another PLAR guide. The [PLAR contact person](#) for this program will refer you to another person to discuss PLAR for courses delivered by Arts & Sciences or another program/department.

COURSE CODE	COURSE NAME	Delivered by another department/program
<a href="#">BT 100</a>	Introductory Electrical Theory and Practices	
<a href="#">BT 141</a>	Resistive Circuit Analysis	
<a href="#">BWC 121</a>	Conductors and Branch Circuits	
<a href="#">BWC 122</a>	Extra Low Voltage, Magnetism and Meters	
<a href="#">JOBS 125</a>	Essential Job Skills	<a href="#">Arts &amp; Sciences</a>
<a href="#">PLS 122</a>	Single Dwelling Plans, Lighting and Services	
<a href="#">SFTY 130</a>	Safety and Personal Protective Equipment	
<a href="#">TOOL 149</a>	Tools and Fasteners	
<a href="#">WM 131</a>	Writing Methods (Cables)	
<a href="#">WM 132</a>	Writing Methods (Raceways)	
<a href="#">INDG 100</a>	Introduction to Indigenous Studies	<a href="#">Art &amp; Sciences</a>

## BT 100 - Introductory Electrical Theory and Practices

You will study the electrician trade, electrical theory and electrical terminology through classroom and lab experiences. Your studies will help you become familiar with basic electrical circuits and components used in electrical equipment. You will terminate conductors and install typical lighting and receptacle circuits.

**Credit unit(s):** 4.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Describe the Electrician trade in Saskatchewan.			
2.	Describe the application of the Canadian Electrical Code.			
3.	Describe basic principles of electricity.			
4.	Describe basic electrical circuit concepts.			
5.	Describe common electrical devices.			
6.	Perform wire terminations.			
7.	Perform the installation of a cord connector and an attachment cap on flexible cord.			
8.	Construct basic electrical circuits.			

### BT 141 - Resistive Circuit Analysis

You will prove Ohm's Law, Watt's Law, and Kirchoff's Laws through classroom and laboratory experiences. You will apply these laws to solve series, parallel, combination, and three-wire circuit problems. You will become familiar with the terminology, operation, and connection of cells and batteries.

**Credit unit(s):** 4.0  
**Prerequisites:** BT 100  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
<b>Competent:</b>	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1. Analyze series circuits.				
2. Analyze parallel circuits.				
3. Analyze combination circuits.				
4. Analyze three-wire circuits.				
5. Perform cell and battery connections.				
6. Describe heat control switches.				

## BWC 121 - Conductors and Branch Circuits

You will be introduced to different conductor and insulation materials. You will be able to calculate conductor cross-sectional area, conductor resistance, line drop, and line loss. You will be able to determine conductor ampacity, overcurrent device rating, and bonding conductor size for appliance, receptacle, and lighting branch circuits. You will be able to design an electrical layout for a single dwelling and complete an estimate for the installation.

**Credit unit(s):** 4.0  
**Prerequisites:** BT 100  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
<b>Competent:</b>	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1.	Describe common conductors.			
2.	Calculate conductor resistance and ampacity.			
3.	Select overcurrent devices.			
4.	Select bonding conductors.			
5.	Determine branch circuit requirements.			
6.	Examine applications of conductors and branch circuits.			
7.	Examine the branch circuit layout of a typical single dwelling electrical system.			
8.	Examine appliance branch circuits.			
9.	Examine special protection circuits.			
10.	Examine kitchen counter outlets.			
11.	Design an electrical layout for a single dwelling.			
12.	Estimate the electrical materials required for a single dwelling.			

## BWC 122 - Extra Low Voltage, Magnetism and Meters

You will focus on the inter-relationship of magnetism and electricity. You will use meters to measure electrical properties (such as volts, amps, resistance, power, and energy). You will install basic signal systems and typical residential remote control relay systems using industry installation standards and trade standards of workmanship.

**Credit unit(s):** 4.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
<b>Competent:</b>	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1.	Describe the principles of electromagnetism.			
2.	Describe the operating principles of meters.			
3.	Use meters for voltage measurement.			
4.	Use meters for current measurement.			
5.	Use meters for resistance measurement.			
6.	Use meters for power and energy measurement.			
7.	Perform the installation of basic signal systems.			
8.	Perform the installation of remote-control relay systems.			

## **JOBS 125 - Essential Job Skills**

You will develop essential job skills by preparing job search documents and practicing effective interpersonal communication skills for the workplace.

**Credit unit(s):** 1.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** COMM 106, COMM 127, HUMR 102, TCOM 102, TCOM 105

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1. Discuss effective workplace interpersonal communications.				
2. Prepare job search documents.				



## PLS 122 - Single Dwelling Plans, Lighting and Services

Your studies will focus on electrical drawings and the installation requirements for single dwelling services. You will learn how to read and interpret construction drawings and apply lighting theory to determine lighting requirements for installations. You will also learn how to calculate the minimum size of service equipment. You will install a typical 100 amp overhead and underground single dwelling service.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** BT 100, BWC 121  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Describe common construction drawings			
2.	Describe electrical drawings, symbols, and schedules.			
3.	Determine lighting requirements.			
4.	Determine single dwelling service requirements.			
5.	Perform the installation of single dwelling services.			

### SFTY 130 - Safety and Personal Protective Equipment

You will be introduced to the Occupational Health and Safety requirements for the electrician trade. You will learn about personal protective equipment that is required when working in the electrical trade. You will learn about arc flash hazards. You will learn how to utilize ladders and scaffolds safely. You will be introduced to basic rigging equipment, calculations, and operations. You will learn about Occupational Health and Safety requirements for rigging operations and equipment.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
<b>Competent:</b>	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1.	Describe the Saskatchewan Employment Act and the Occupational Health & Safety (OH&S) regulations in the electrical industry.			
2.	Describe workplace safety procedures.			
3.	Describe safety training options for the electrical industry.			
4.	Describe personal protective equipment.			
5.	Describe procedures for working with electricity safely.			
6.	Describe safe use of ladders and scaffolds.			
7.	Describe rigging equipment.			
8.	Describe applicable OH & S safety regulations and legislation in rigging applications.			
9.	Describe a safe hoisting and pulling operation.			

## TOOL 149 - Tools and Fasteners

You will learn how to use hand and power tools common to the electrician trade. You will learn how to safely operate and maintain powder actuated tools. You will learn about common fasteners used for wood, metal, masonry, and other materials.

**Credit unit(s):** 3.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Identify electrical hand tools.			
2.	Describe the proper use of common hand tools in the electrical industry.			
3.	Use portable and stationary power tools.			
4.	Use extension cords.			
5.	Describe powder actuated tools.			
6.	Use powder actuated tools.			
7.	Select common fasteners.			
8.	Perform the installation of common fasteners.			

### WM 131 - Wiring Methods (Cables)

You will be introduced to installation requirements for electrical circuits using various types of cables. You will become familiar with the minimum Canadian Electrical Code requirements and practice installing typical circuits using various types of cables.

**Credit unit(s):** 4.0  
**Prerequisites:** BT 100, SFTY 130  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Perform the installation of non-metallic sheathed cable.			
2.	Perform the installation of an armoured cable.			
3.	Describe aluminum sheathed cable.			
4.	Describe mineral insulated cable.			
5.	Design and draw single dwelling electrical power and control circuit diagrams.			
6.	Describe electrical installation in steel studs.			
7.	Describe installation requirements for data cabling.			
8.	Perform data cabling termination.			

### WM 132 - Wiring Methods (Raceways)

You will be introduced to installation requirements for electrical circuits using various types of raceways. You will become familiar with the minimum Canadian Electrical Code requirements and practice installing typical circuits using various types of raceways. You will learn how to bend electrical metallic tubing, PVC conduit, and how to install cable tray.

**Credit unit(s):** 3.0  
**Prerequisites:** BT 100, SFTY 130  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
Competent:	I can apply this outcome without direction or supervision.			
Learning:	I am still learning skills and knowledge to apply this outcome.			
None:	I have no knowledge or experience related to this outcome.			
1.	Describe raceways.			
2.	Describe rigid and flexible conduit.			
3.	Describe electrical metallic tubing.			
4.	Describe rigid PVC conduit.			
5.	Describe surface raceways.			
6.	Use knock out tools.			
7.	Describe the installation of conductors into raceways.			
8.	Describe electrical non-metallic tubing (ENT).			
9.	Describe cable tray.			

## INDG 100 – Introduction to Indigenous Studies

You will receive an introduction to the Indigenous cultural groups within Saskatchewan. You will learn about the colonization of Indigenous peoples by the Canadian state. Your studies will help you discuss current issues and explore possible solutions.

**Credit unit(s):** 1.0  
**Prerequisites:** none  
**Corequisites:** none  
**Equivalent course(s):** none

Use a checkmark (✓) to rate yourself as follows for each learning outcome		Competent	Learning	None
<b>Competent:</b>	I can apply this outcome without direction or supervision.			
<b>Learning:</b>	I am still learning skills and knowledge to apply this outcome.			
<b>None:</b>	I have no knowledge or experience related to this outcome.			
1. Describe Indigenous nations of Saskatchewan.				
2. Explain how colonization has impacted Indigenous peoples.				
3. Discuss current issues and possible solutions.				