



Fabricator – Welder Certificate

PLAR Candidate Guide

Prior Learning Assessment and Recognition (PLAR)

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Prior learning credit options at Saskatchewan Polytechnic

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

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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A. PLAR fees

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

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

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

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.

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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
BESK 101	Benchmark	
COMM 127	Fundamental Communication Skills	Arts & Sciences
EQPT 116	Layout and Template Development	
EQPT 117	Layout and Fitting	
EQPT 118	Metal Working Equipment	
JOBS 101	Shop Management	
MATH 136	Trade Mathematics	Arts & Sciences
METL 107	Metallurgy and Material Designations	
PRNT 104	Print Reading	
PROJ 106	Fabrication Projects	
RIGG 105	Rigging and Electric Overhead Crane Operation	
SFTY 133	Trade Safety	

COURSE CODE	COURSE NAME	Delivered by another department/program
WLDR 142	Shielded Metal Arc Welding (Theory)	
WLDR 143	Shielded Metal Arc Welding (Shop)	
WLDR 144	Oxy-Fuel Processes (Theory)	
WLDR 145	Oxy-Fuel Processes (Shop)	
WLDR 146	Oxy-Fuel and Plasma Arc Cutting	
WLDR 147	Gas Metal Arc Welding (Theory)	
WLDR 148	Gas Metal Arc Welding (Shop)	
WLDR 149	Canadian Welding Bureau Welder Qualification	
WLDR 150	Introduction to Gas Tungsten Arc Welding	
WORK 119	Work Experience	

BESK 101 - Benchwork

You will use hand and power tools to shape and finish metals.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Use hack saws and files.			
2. Use portable drills and taps and dies.			
3. Use portable grinding, sanding, and polishing equipment.			
4. Use layout tools such as combination sets, scribes, tape measures.			
5. Use callipers and micrometers.			

COMM 127 - Fundamental Communication Skills

You will use fundamental employability skills related to obtaining and keeping a job. You will apply skills to work effectively with others and produce job-related documents. You will identify employability and practical skills to prepare effective job search materials and discuss the effect of attitudes and behaviours on a successful job search.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Apply job-related interpersonal communication strategies.			
2. Examine effective digital communication.			
3. Prepare job-related written communication.			
4. Use job search skills.			

EQPT 116 - Layout and Template Development

You will develop skills in layout and template development. You will learn how to use geometric construction to layout two-dimensional figures.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Use geometric construction to perform layout			
2. Layout hole patterns, gussets, and plates			
3. Develop templates for shop use			
4. Layout flanges and bolt circles			

EQPT 117 - Layout and Fitting

You will apply your layout, fitting, and tacking skills in shop projects.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Make a bend set template.			
2. Make sweep templates.			
3. Fabricate matching flanges.			
4. Develop large scale layout on floor.			
5. Determine plum and level using manual and electronic tools.			

EQPT 118 - Metal Working Equipment

You will use metal working and fabrication equipment to cut, bend and form metal.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Operate drill presses.			
2. Operate iron worker.			
3. Operate plate shear.			
4. Operate saws.			
5. Operate pedestal grinders.			
6. Operate press brake.			
7. Operate plate rolls.			
8. Operate profile bending machine.			
9. Describe computer numerical control (CNC) equipment applications and benefits.			

JOBS 101 - Shop Management

You will study quality assurance, lean manufacturing and job planning in this introductory course. This will allow you to fully contribute to today’s competitive industry.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Identify production costs.			
2. Describe the elements and benefits of a quality assurance program.			
3. Describe the benefits and elements of lean manufacturing.			
4. Describe the job planning process.			

MATH 136 - Trade Mathematics

You will study basic mathematical concepts including whole numbers, decimals, fractions, percents, ratio proportion, squares and roots. You will also study the International System of Units in calculations such as finding length, capacity, mass, area and volume.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Use arithmetic.			
2. Use equation fundamentals.			
3. Use metric units.			

METL 107 - Metallurgy and Material Designations

You will learn to describe steel grades and how to identify and describe structural steel, plate, grating, pipe, tube and industrial fasteners.

Credit unit(s): 0.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe the milling of iron and steel.			
2. Describe steel processing.			
3. Identify structural shapes.			
4. Identify hollow structural sections.			
5. Identify plate, sheet metal and grating.			
6. Identify pipe fittings.			
7. Identify industrial fasteners.			
8. Discuss properties of metals.			
9. Discuss chemical composition of steels.			
10. Discuss proper storage and handling procedures.			

PRNT 104 - Print Reading

You will learn basic drawing skills and how to interpret a variety of drawings. Drawing interpretation is an essential skill because it is the language of the fabrication industry.

Credit unit(s): 6.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe elements of drawings.			
2. Describe types of prints and print format.			
3. Describe types of joints and welds.			
4. Interpret common welding symbols.			
5. Interpret basic shop drawings (miscellaneous, structural, vessel, piping).			
6. Develop basic shop drawings manually and in CAD.			

PROJ 106 - Fabrication Projects

You will fabricate several projects varying in complexity and material requirements.

Credit unit(s): 6.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Fabricate miscellaneous project.			
2. Fabricate jigs.			
3. Fabricate structural project.			
4. Fabricate a tank or vessel project.			

RIGG 105 - Rigging and Electric Overhead Crane Operation

You will study the types, operation and control of cranes, Occupational Health and Safety aspects, load estimation, and site evaluation. You will study the capacity of cranes, as well as rigging, signalling and maintaining the crane and log books.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
5. Discuss the Occupational Health and Safety Regulations.			
6. Discuss types of cranes.			
7. Apply rigging.			
8. Demonstrate signalling.			
9. Calculate load estimate.			
10. Establish capacity of crane.			
11. Demonstrate effective site evaluation.			
12. Use crane controls.			
13. Operate crane.			
14. Discuss crane maintenance.			
15. Fill out a log book.			
16. Describe use of jacks.			
17. Describe the use of equipment aids.			
18. Identify strengths of ropes and knots			

SFTY 133 - Trade Safety

You will study safety process, regulations, and legislation. In order to develop safe work practices you will study safety concerns on an ongoing basis throughout the program and be evaluated accordingly.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Practice safety in the workplace.			
2. Interpret safety regulations and legislation.			
3. Describe safe use of scaffolds, walkways, and ladders.			
4. Describe lockout procedures.			
5. Describe confined space entry procedures.			
6. Describe fall protection procedures.			
7. Perform risk assessment.			
8. Identify WHMIS symbols and use of material safety data sheets (MSDS).			

WLDR 142 - Shielded Metal Arc Welding (Theory)

You will develop the knowledge required to select, setup, operate and maintain shielded metal arc welding equipment.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe the operation of constant current power supply.			
2. Describe the components and accessories of shielded metal arc welding (SMAW) welding station.			
3. Describe SMAW safety concerns.			
4. Select SMAW carbon steel electrodes.			
5. Describe maintenance and troubleshooting procedures.			
6. Describe SMAW safety concerns.			

WLDR 143 - Shielded Metal Arc Welding (Shop)

You will develop skill in welding light gauge steel in the flat, horizontal, and vertical positions. Fillet welds on heavier material will be practiced in the horizontal, vertical, and overhead positions.

Credit unit(s): 8.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Set up a shielded metal arc welding (SMAW) welding station.			
2. Demonstrate safe SMAW work procedures.			
3. Perform surface build up using E7014 and E7018.			
4. Weld 14 gauge, horizontal, t-joint, fillet weld using E6010/11.			
5. Weld 14 gauge, vertical down, butt joint, square groove using E6010/11.			
6. Weld 14 gauge, vertical down, lap joint, fillet using E6010/11.			
7. Weld ¼" mild steel, three pass, horizontal, t-joint using E7024.			
8. Weld ¼" mild steel, three pass, t-joint, horizontal fillet E7018.			
9. Weld ¼" mild steel, three pass vertical fillet, E7018.			
10. Weld ¼" mild steel, three pass, t-joint, overhead fillet E7018WE.			

WLDR 144 - Oxy-Fuel Processes (Theory)

You will develop the knowledge required to select, set up, operate, and maintain oxy-fuel welding (OFW) and cutting equipment.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe oxy-fuel equipment and accessories.			
2. Describe setup, use and shut down procedures.			
3. Describe oxy-fuel welding (OFW), braze welding, soldering, brazing and oxy-fuel cutting (OFC).			
4. Describe OFW and OFC safety concerns.			

WLDR 145 - Oxy-Fuel Processes (Shop)

You will learn to set up and use oxy-fuel equipment to weld, braze and solder.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

Use a checkmark (✓) to rate yourself as follows for each learning outcome 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.	Competent	Learning	None
1. Demonstrate safe setup, use, and shut down procedures.			
2. Weld gauge metal, flat, butt joint.			
3. Perform brazing, braze welding and soldering			

WLDR 146 - Oxy-Fuel and Plasma Arc Cutting

Using manual and motorized equipment, you will perform oxy-fuel and plasma arc cutting systems in a variety of applications.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Complete 90 degree and bevel cuts using manual oxy-fuel equipment.			
2. Cut structural shapes using oxy-fuel process.			
3. Cut plate using the motorized cutting carriage.			
4. Cut plate using plasma arc cutting.			
5. Observe CNC plasma arc cutting equipment and process.			

WLDR 147 - Gas Metal Arc Welding (Theory)

The gas metal arc welding process utilizes complex equipment and accessories. You will develop and apply a working knowledge of this apparatus. You will also be introduced to metal-cored arc welding and flux-cored arc welding.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe the components and accessories of a gas metal arc welding (GMAW) welding station.			
2. Describe operation of a constant voltage power supply and wire feeder.			
3. Describe maintenance and troubleshooting procedures.			
4. Describe GMAW safety concerns.			
5. Select electrode and shielding gas.			
6. Describe the equipment and consumables of metal-cored arc welding (MCAW) and flux-cored arc (FCAW) welding.			

WLDR 148 - Gas Metal Arc Welding (Shop)

You will focus on skill development in using the gas metal arc welding process in a variety of materials, joints, and weld positions. You will also study the operation of metal-cored arc welding (MCAW) and flux-cored arc welding (FCAW).

Credit unit(s): 8.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Setup a gas metal arc welding (GMAW) weld station.			
2. Demonstrate safe GMAW work procedures.			
3. Perform surface build up in flat position.			
4. Set up weld joints.			
5. Weld 14 gauge, T-joint, vertical down.			
6. Weld 12 gauge, circular lap joint, flat, vertical down and overhead.			
7. Weld 14 gauge, butt joint, vertical down.			
8. Weld 3/8" mild steel, V-groove butt joint in flat position.			
9. Weld 3/8" mild steel, V-groove butt joint in vertical position.			
10. Weld 3/8" mild steel, horizontal, T-joint, 3 pass fillet, spray transfer.			
11. Weld 3/16" mild steel, T-joint, overhead, 3 pass fillet.			
12. Weld structural shapes, horizontal fillet, using metal-cored arc welding (MCAW).			
13. Weld 1/4" mild steel, T-joint, vertical, 3 pass fillet, using flux-cored arc welding (FCAW).			
14. Weld aluminum horizontal T-joint.			

WLDR 149 - Canadian Welding Bureau Welder Qualification

You will complete the Canadian Welding Bureau (CWB) welder qualification tests using the shielded metal arc welding (SMAW), gas metal arc welding (GMAW) and flux-cored arc welding (FCAW) process or the flat groove-fillet (1GF) test.

Credit unit(s): 2.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Describe the role of the Canadian Welding Bureau.			
2. Interpret the qualification descriptors.			
3. Complete the SMAW 1GF test.			
4. Complete the GMAW 1GF test.			
5. Complete the FCAW 1GF test			

WLDR 150 - Introduction to Gas Tungsten Arc Welding

You will develop skill in using the gas tungsten arc welding (GTAW) process on light gauge steel and aluminum material.

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

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Identify the application and advantages of gas tungsten arc welding (GTAW).			
2. Describe GTAW safety concerns.			
3. Set up a GTAW weld station.			
4. Weld stainless steel, corner joint, fillet weld.			
5. Weld aluminum, corner joint, fillet weld			

WORK 119 - Work Experience

Industrial placements provide the learner with on-the-job training and access to potential employment. You will spend one week in industry as a requirement of the program.

Credit unit(s): 0.0
Prerequisites: none
Corequisites: none
Equivalent course(s): none

<p>Use a checkmark (✓) to rate yourself as follows for each learning outcome</p> <p>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.</p>	Competent	Learning	None
1. Demonstrate employability skills needed in the work place.			
2. Apply trade skills in shop activities.			