Computer Networking Technician 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

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

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 you must 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. **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.

5. **Finalize** an assessment plan with your assigned assessor.

6. **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
Semester 1		
CNET 113	A+ Cisco IT Essentials 1	
CNET 114	A+ Cisco IT Essentials 2	
CNET 115	CISCO Network Associate 1A	
CNET 116	CISCO Network Associate 1B	
CNET 117	CISCO Network Associate 2A	
CNET 118	CISCO Network Associate 2B	
INDG 100	Introduction to Indigenous Studies	Arts & Sciences
Semester 2		
CNET 119	CISCO Network Associate 3A	
CNET 120	CISCO Network Associate 3B	
CNET 121	Programming with Python 1	
COAP 104	CCNA Cybersecurity Operations	

COURSE CODE	COURSE NAME	Delivered by another department/program
CSRV 103	Windows Server Administration	
TCOM 105	Communications for Technicians	Arts & Sciences
Semester 3		
CNET 112	Managing Modern Desktops	
CNET 122	Programming with Python 2	

CNET 113 - A+ Cisco IT Essentials 1

You will install personal computer hardware using safe lab procedures. You will discuss the procedures used to maintain virtual and physical personal computer systems. You will investigate computer networks and common configurations. You will also review portable devices, printers, and scanners. Your studies will also prepare you to challenge the CompTIA A+ exam.

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:** 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. Describe personal computer systems.			
2. Demonstrate safe lab procedures and tool usage.			
3. Install Computer Hardware.			
4. Describe preventative maintenance and troubleshooting procedures.			
5. Describe networking concepts.			
6. Troubleshoot networks.			
7. Describe the fundamentals of laptops and portable devices.			
8. Troubleshoot printers and scanners.			
9. Discuss virtualization and cloud computing.			

CNET 114 - A+ Cisco IT Essentials 2

You will build on the foundation provided in CNET 113. You will be responsible for installing operating systems like Windows and Linux. You will perform preventative maintenance on operating systems. You will configure operating systems using the Graphical User Interface (GUI) and the Command Line Interface (CLI). You will review network security and discuss ways to keep networks safe. After completion of CNET 113, and CNET 114 you will qualify to write the Cisco exam to obtain a certificate of completion by Cisco. Your studies will also prepare you to challenge the CompTIA A+ exam.

Credit unit(s):	4.0
Prerequisites:	CNET 113
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. Install operating systems.			
2. Configure the Windows operating system.			
3. Perform preventative maintenance procedures for the Windows operating system.			
4. Troubleshoot Windows operating system issues.			
5. Describe Mobile, Linux and macOS operating systems.			
6. Configure operating systems using a Command Line Interface (CLI).			
7. Demonstrate network security.			

Quality Assurance & Learner Pathways, CG Template 2.0

CNET 115 - CISCO Network Associate 1A

You will study the Introduction to Networks (ITN) which focuses on the architecture, structure, functions and components of the Internet and other computer networks. You will develop a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP).

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:** 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. Configure basic switches and end devices.			
2. Describe network protocols and communications.			
3. Describe the physical layer.			
4. Describe number systems.			
5. Describe data link layer.			
6. Describe ethernet switching.			
7. Describe the network layer.			
8. Describe address resolution.			
9. Configure basic router configurations.			

CNET 116 - CISCO Network Associate 1B

You will build on the foundations learned in CISCO Network Associate 1A. You will learn how to subnet IPV4 and IPV6 networks. Learn how to use ICMP and tools to test network connectivity. You will learn about TCP and UDP Protocols. Learn about application layer protocols that support end user services. You will implement security fundamentals on networks. After completion of CISCO Network Associate 1A and CISCO Network Associate 1A, you will qualify to write the Cisco exam to obtain a certificate of completion by Cisco.

Credit unit(s):	4.0
Prerequisites:	CNET 115
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. Describe IPv4 addressing.			
2. Describe IPv6 addressing.			
3. Describe Internet Control Message Protocols (ICMP).			
4. Describe transport layer.			
5. Describe application layer.			
6. Describe network security fundamentals.			
7. Configure a small network.			

CNET 117 - CISCO Network Associate 2A

You will study Cisco Certified Network Associate: Switching, Routing, and Wireless Essentials (SRWE) which focuses on the architecture, components, and operations of routers and switches in small networks.

Credit unit(s):   4.0
Prerequisites: CNET 116
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. Configure switches and routers.			
2. Describe switching concepts.			
3. Configure virtual local area network (VLANs).			
4. Configure inter-VLAN routing.			
5. Describe spanning tree protocol (STP).			
6. Describe EtherChannel.			
7. Configure redundancy on a switched network using STP and EtherChannel.			
8. Configure dynamic host configuration protocol (DHCP) and stateless auto configuration (SLAAC).			
9. Describe first hop redundancy protocol (FHRP).			

CNET 118 - CISCO Network Associate 2B

You will build on the foundations learned in CISCO Network Associate 2A. You will also study wireless local area networks (WLAN) and security concepts. You will configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common network issues. After completion of CISCO Network Associate 2A and CISCO Network Associate 2B, you will qualify to write the Cisco exam to obtain a certificate of completion by Cisco.

Credit unit(s):	4.0
Prerequisites:	CNET 117
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. Describe Local Area Network (LAN) security concepts.			
2. Configure Switch Security.			
3. Describe Wireless Local Area Network (WLAN) concepts.			
4. Configure Wireless Local Area Network (WLAN).			
5. Describe routing concepts.			
6. Configure static IP routing.			
7. Troubleshoot static and default routes.			

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:** 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. Describe Indigenous nations of Saskatchewan.			
2. Explain how colonization has impacted Indigenous peoples.			
3. Discuss current issues and possible solutions.			

CNET 119 - CISCO Network Associate 3A

You will study Cisco Certified Network Associate: Enterprise Networking, Security, and Automation (ENSA) which focuses on the architecture, components, operations, and security for large, complex networks, including wide area network (WAN) technologies.

Credit unit(s):   4.0
Prerequisites: CNET 118
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. Describe single-area OSPFv2 concepts.			
2. Use single-area OSPFv2.			
3. Describe network security concepts.			
4. Describe access control lists (ACL).			
5. Manage access control lists (ACL for IPv4).			
6. Manage Network Address Translation (NAT) for IPv4 networks.			
7. Describe wide area networks (WAN).			
8. Describe Virtual Private Network (VPN) and IPsec.			

CNET 120 - CISCO Network Associate 3B

You will build on the foundations in CISCO Network Associate 3A. The course emphasizes network security concepts and introduces network virtualization and automation. You will configure, troubleshoot, and secure enterprise network devices and study the application programming interfaces (API) and configuration management tools that enable network automation. After completion of CISCO Network Associate 3A and CISCO Network Associate 3A, you will qualify to write the Cisco exam to obtain a certificate of completion by Cisco.

Credit unit(s):   4.0
Prerequisites: CNET 119
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. Describe quality of service (QoS).			
2. Configure network management.			
3. Describe network designs.			
4. Troubleshooting network.			
5. Describe network virtualization.			
6. Describe network automation.			

CNET 121 - Programming with Python 1

You will study the basics of programming with Python and general computer programming concepts and techniques. You will acquire theoretical knowledge and practical skills related to conditional execution, loops, Python programming language, syntax, semantics, and the runtime environment.

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. Describe Python and computer programming.			
2. Configure data types, variables, basic input-output operations, and operators.			
3. Configure Boolean values, conditional execution, loops, lists and list processing, logical and bitwise operations.			
4. Configure functions, tuples, dictionaries, and data processing.			

COAP 104 - CCNA Cybersecurity Operations

You will become familiar with general Windows security concepts. You will identify the different methods of attack on the network, best methods of communication, infrastructure, cryptography and planning (hardware and software). You will learn how to use risk identification management as a preplanning tool for future growth and configuration. After completing COAP 104, you will receive a Cisco certificate of completion.

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:** 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. Describe general security concepts.			
2. Describe communication security.			
3. Describe infrastructure security.			
4. Describe cryptography methods and planning.			
5. Demonstrate operational/organizational security plan.			

COOS 101 - LINUX+

Your studies will focus on describing, installing, configuring and administering Linux operating system workstations and servers. You will use troubleshooting practices to diagnose hardware and software problems and maintain the Linux network system. The course will help you prepare to write the CompTIA Linux+ exam.

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:** 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. Describe Linux requirements.			
2. Demonstrate installation process of Linux.			
3. Demonstrate installing software.			
4. Demonstrate basic services.			
5. Demonstrate hardware and access rights.			
6. Demonstrate users, groups and file system.			
7. Demonstrate commands and expressions.			
8. Demonstrate system maintenance.			
9. Demonstrate troubleshooting practices.			
10. Demonstrate configuring system.			
11. Analyze diagnostic procedures.			

CSRV 103 - Windows Server Administration

You will focus on Windows Server administration best practices and tools for managing Windows Servers. You will learn to navigate the Windows Server Admin Centre to perform various administration tasks and manage network infrastructure services.

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:** 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. Describe Windows Server administration principles and tools.			
2. Configure Windows Server Domain Controllers.			
3. Configure infrastructure services in Windows Server.			
4. Configure file servers and storage management in Windows Server.			
5. Configure Hyper-V virtualization and containers in Windows Server.			
6. Configure high availability in Windows Server.			
7. Configure disaster recovery in Windows Server.			
8. Configure Windows Server security.			
9. Configure Remote Desktop Services (RDS).			
10. Configure Remote Access Server (RAS).			
11. Describe performance monitoring in Windows Server.			
12. Describe upgrade and migration in Windows Server.			

TCOM 105 - Communications for Technicians

You will learn and practice written, oral and interpersonal communication for the workplace. You will apply these skills as team members and in short presentations. You will also develop effective job search strategies.

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. Explain the communications model.			
2. Apply job-related communication strategies.			
3. Produce job-related written communication.			
4. Practice teamwork and presentation skills.			
5. Practice job search skills.			

CNET 112 - Managing Modern Desktops

You will manage desktops, devices, cloud services and compliance. You will learn how to enable more flexibility in how users work, while keeping organizational data safe. This course will help you as a Desktop Administrator, learn about these technologies and how to use them. You will use cloud technologies that incorporate new methods and approaches to common challenges with deployment and management.

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:** 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. Describe modern management.			
2. Describe application management.			
3. Manage device enrollment.			
4. Create configuring profiles.			
5. Manage device authentication and compliance.			
6. Manage security.			
7. Manage Windows 10.			
8. Design a modern management solution.			

CNET 122 - Programming with Python 2

You will build on the foundations learned in Programming with Python 1. You will become familiar with the object-oriented approach to programming. You will use the skills and knowledge that you develop in real-world programming tasks and situations. Upon completion of Programming with Python 1 and Programming with Python 2, you are prepared to take the PCAP - Certified Associate in Python Programming certification exam.

Credit unit(s):	3.0
Prerequisites:	CNET 121
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. Configure modules, packages, and PIP.			
2. Configure strings, string and list methods and exceptions.			
3. Configure object-oriented programming.			
4. Configure generators, iterators, closures and file processing.			