Network Services Technician

Overview

- One-year certificate

- September entry date

- Exchange District Campus (formerly Princess Street Campus), Winnipeg

- Credit transfer opportunities:

  - High school credits

- International applicants please visit Academic Program, Dates and Fees for a listing of programs for international students, current availability and online application instructions

Description

The Network and Services Technician program is for individuals who wish to enter the Information Technology profession. No Information Technology pre-knowledge is required.

The Network and Services Technician program is an 8-month program that provides the student with a general knowledge base that can be applied in both the SOHO networking environment as well as targeting a junior position in a larger corporate IT department. The focus is to provide the graduate with a broad based basic competency in a number of key areas.

The successful graduate has a basic to intermediate understanding of a number of IT areas.

These include:

- Client Operating Systems: MS Windows, Linux

- Server Operating Systems: MS Windows, Linux

- Network Equipment Infrastructure: Cisco CCNA training

- Network Cable Plant Infrastructure: BICSI inspired instruction

- Wireless Communication: Cisco AP's

- VoIP: Cisco Communication Manager Express

- PC Hardware Support: A+ Hardware and Software

Admission Requirements

Your Academic History

If your academic history includes any of the following, please visit My Education for important information: post-secondary studies at an institution other than Red River College Polytechnic; Modified (M), English as an Additional Language (E), or GED high school courses; or home schooling; international secondary (high school) studies.

The college requires transcripts verifying your complete academic history including any public or private high school, college, university, or technical institute you have attended.

Please check the Program Overview page, to see if this program is for Manitoba residents only.

Submission of required documentation indicating proof of completion of admission requirements is due within 15 days of applying unless otherwise noted in the program's admission requirements.

However, if you apply within 6 weeks of the program start date, admission requirements are due within 5 days of applying.

Regular Admission Requirements

1. Grade 12
   - Submit proof of graduation from or enrolment in Grade 12, including one credit in each of the following courses:

     - Grade 12 English (40S)

     - Grade 12 Math (40S)

   - If you provide proof of enrolment at time of application, your official final grades indicating successful completion must be submitted by July 15 for fall enrolment or by the deadline specified in your admission letter

   - If you are required to complete an English language assessment, do not submit your transcripts until requested to do so. See English Language Requirements (ELRs) for more information.
     and

2. English Language Requirements (ELRs)
   - Answer this question to determine if you meet this program's ELRs:
     Have I successfully completed 3 years of full-time high school (secondary) education in Canada, the United States, or an ELR exempt country where English was the language of instruction?

     - If YES, you meet English language requirements. Apply and then submit your transcripts* for review
       or

     - If NO, submit proof of meeting an ELRs option. If you choose the English language assessment option, review this program's approved assessments and required levels.
       or

     - If you completed all of your education in Canada, the United States, or an ELR exempt country in English but you did not graduate high school, submit your transcripts* for review.

   - * If your transcripts are from the USA or an ELR exempt country, we will assess an International Credentials Assessment Fee to be paid before your transcripts will be reviewed.

Mature Student Admission Requirements
If you are 19 years of age or older and have been out of high school for a minimum of one year at time of application, and you do not meet the regular admission requirements, you may apply under the Mature Student admission requirements.

1. Academic Requirement
    - High school graduation is not required, but you must have successfully completed or be enrolled in one credit in each of the following courses:
        - Grade 12 English (40S)
        - Grade 12 Math (40S)
    - If you provide proof of enrolment at time of application, your official final grades indicating successful completion must be submitted by July 15 for fall enrolment or by the deadline specified in your admission letter
    - If you are required to complete an English language assessment, do not submit your transcripts until requested to do so. See English Language Requirements (ELRs) for more information.
    and
2. Meet Regular Admission Requirement 2

English Language Assessments

⚠ The College reserves the right to modify this information without notice or prejudice.
🕤 ASSESSMENT RESULTS MUST BE DATED NO MORE THAN TWO YEARS PRIOR TO YOUR APPLICATION DATE!

Approved English Language Assessments

English Language Assessment	Minimum Scores for Certificates, Diplomas and Advanced Diplomas, and Post Graduate Certificates, Post-graduate Diplomas	Minimum Scores for Bachelor Degrees and Creative Communication
CAEL Online or In-Person	Overall band score of 60	Overall band score of 70 and Writing of 60
IELTS Academic Level	Overall 6.0 and No band below 5.5	Overall 6.5 and No band below 6.0
Password Skills	Overall 6.0 and No band below 5.5	Overall 6.5 and No band below 6.0
LINC Certificate	7	8
Duolingo Language Test	115 and above+ with a min. of 95 in each section	125 and above with a min. of 100 in each section
New English for Academic and Professional Purposes	Successful completion of the program 5 (min 70%)	Successful completion of the program 5 (min 70%)
PTE	54 overall Min 50 in each skill	60 overall Min 55 in each skill band
TOEFL-ibt Academic Level	80 (20L, 20S, 19R, 21W)	90 (22L, 22S, 22R, 24W)
Academic English Program for University and College Entrance Program (AEPUCE)	Successful Completion	Successful Completion
CELBAN	N/A	N/A

Locations, Dates and Fees

Next Estimated Term 1 Start Date (subject to change)

Location	Start Date	
Roblin Centre (Prev. PSC)	Aug 25, 2025	Apply Now

Costs (estimates only; subject to change)

Program/Student Fees	
Year 1	
	$6,151.00

Books and Supplies	
Year 1	
	$1,230.00

Program/Student Fees (International)	
Year 1	
	$19,735.00

Courses and Descriptions

Year 1	

Term 1	Credit Hours
COMM-1156 Report Writing	2
LINX-1006 Linux - Client	6
NETW-1001 Cabling Systems	4
NETW-1010 Network Infrastructure 1	6
NETW-2010 Network Infrastructure 2a	3
NTWK-1008 Windows - Client	5
SAFE-1028 WHMIS	0
SEMR-9209 General Safety Training	0
SYST-1002 A-Plus Hardware and Software	6

Term 2	Credit Hours
DCOM-1006 Fundamentals of Voice Over IP	6
DCOM-1007 Wireless LAN Fundamentals	6
DCOM-1010 Server & Network Infrastructure Principles	4
LINX-1008 Linux - Server	4
NETW-2011 Network Infrastructure 2b	3
NETW-3010 Network Infrastructure 3	

COMM-1156
Report Writing

This course helps students to develop effective communication skills necessary for success in a technical field. It introduces a range of techniques to assist in writing and presenting technical information that is clear, concise, and correct.

DCOM-1006
Fundamentals of Voice Over IP

This course provides a strong foundation in voice applications and telephony infrastructure concepts. After completion of this course, students will be capable of performing baseline installation, and operating and maintenance tasks on Cisco VoIP solutions. The course will teach students basic IP telephony theory, installation, configuration, and maintenance. The course is geared to small- to medium-sized IP telephony solutions using Cisco Unified Communications Manager Express.

Prerequisites:
NETW-2010
NETW-2011 is a corequisite.

DCOM-1007
Wireless LAN Fundamentals

This introductory course to wireless LANs focuses on the theory, design, planning, implementation, operation, and troubleshooting of wireless LANs. It includes a comprehensive overview of technologies, security, and design best practices with particular emphasis on hands-on skills in the following areas: wireless LAN setup and troubleshooting, 802.11 (a, b, and g) technologies, WLAN applications, site surveys and link design, WLAN products, WLAN security, and emerging wireless technologies.

Prerequisites:
NETW-2010

DCOM-1010
Server & Network Infrastructure Principles

This course focuses on managing a network. It has two components: principals of managing servers and principals of managing the network infrastructure. Server principles deal with creating accounts, assigning rights and permissions, controlling the user's environment through group policies, network printing, and security issues. Network infrastructure deals with those services that are required to make a network operate. These include DNS, WINS, DHCP, and remote access.

Prerequisites:
NTWK-1008

LINX-1006
Linux - Client

This course is intended for entry-level computer support professionals with basic knowledge of computer hardware, software, and operating systems who wish to increase their knowledge and understanding of Linux concepts and skills to prepare for a career in Linux support or administration, or to prepare for the CompTIA® Linux+TM certification, 2009 objectives (Exam Code XK0-003). A typical student in the CompTIA® LinuxTM Certification course should have at least six to 12 months of Linux Experience before challenging the Linux+ exam.

LINX-1008
Linux - Server

The course deals with the configuration of Linux, Ubuntu Server networking. It also covers the use of NETPLAN for dynamic or static IP addressing. Also to map NIC MAC addresses to IP alias names. The course includes file sharing, with Samba and DNS configuration. A DCHP server will be setup and tested. IP tables will be used to

provide firewall control. A web server using Apache 2 will be set up to provide a vehicle to demonstrate the use of an Apache Web Server working with PHP to transfer data back and forth from a MySQL database. The basic concept of a shopping cart will be implemented with PHP. Shells, Scripting and Data Management. Security hardening of server will also be covered.

Prerequisites:
LINX-1006

NETW-1001
Cabling Systems

This course introduces the students to data, video, HVAC and security cabling within an enterprise network. The primary focus is on data cabling. Topics will include cable-pulling techniques, relevant documentation, cabling standards. This course will also familiarize the student with power basics: 3-phase and single phase power company offerings, safety issues, demarcation points, as well as reading and interpreting building blueprints with respect to power cabling requirements. The student will learn about power budgets and cabling standards for the enterprise network. Students will become aware of how fire codes and building codes affect the design and implementation of an enterprise cable plan.

NETW-1010
Network Infrastructure 1

In this course, you will learn both the practical and conceptual skills that build the foundation for understanding computer networks. This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The OSI and TCP layered models are used to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. The student will apply their knowledge and build a simple LAN, implement an IP addressing scheme and then program the LAN devices.

NETW-2010
Network Infrastructure 2a

This course investigates the architecture, components and operation of routers and switches in a small to medium business environment. Students will analyze, configure, verify and troubleshoot networks that employ both IPv4 and IPv6 protocols, DHCP, inter•VLAN routing, Ether-channel and spanning-tree protocols. Students apply their knowledge through practical labs and problem solving sessions.

Prerequisites:
NETW-1010

NETW-2011
Network Infrastructure 2b

This course is a continuation of Network Infrastructure 2A where the student will build more complex networks. Static routing, and IPv6 dynamic addressing techniques are studied in addition to gateway redundancy protocols, mitigation of layer 2 LAN attacks and implementation of a simple wireless LAN. Course material is presented in class through lectures and then put into practice through practical labs and problem-solving sessions.

Prerequisites:
NETW-2010

NETW-3010
Network Infrastructure 3

Network Infrastructure 3 is the final network infrastructure course that will enable the student to configure, troubleshoot and secure a more complex network. This course focuses on dynamic routing concepts with OSPF, network security and traffic filtering using ACLs, NAT, WANs including VPNs and QoS. Cloud and virtualization and automation concepts are also studied Skills are strengthened through problem solving and practical labs.

Prerequisites:
NETW-2011

NTWK-1008
Windows - Client

The purpose of this course is to address the implementation and desktop support needs of customers that are planning to deploy and support Microsoft XP, Windows 7, and Windows 8 in a variety of stand-alone and network operating systems environments. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management and support of Windows XP, Windows 7, and Windows 8. The emphasis will be mainly Windows 7 and Windows 8.

SAFE-1028
WHMIS

The Workplace Hazardous Materials System (WHMIS) is a system for ensuring that important information about hazardous products is communicated where products are used, stored and handled. This course provides Information necessary to understand and interpret information about hazardous products, including pictograms (symbols), labels and Safety Data Sheets.

SEMR-9209
General Safety Training

This General Safety Training (GST) teaches basic general safety content to arm students with the core information necessary for them to protect themselves in workplaces on all descriptions. Although some examples may consider Manitoba legislation, this course has been developed by occupational safety and health professionals using generic information that is not provincially specific.

SYST-1002
A-Plus Hardware and Software

This course is designed to provide the knowledge and skills necessary to provide service and technical support for personal computer hardware, software, and peripherals. It follows the objectives of the vender-neutral 'A+ Certification Exams' developed by Comp TIA.

Computer/Laptop Requirements

Online learning is a critical component of course delivery in all Red River College Polytechnic programs. To ensure each student has the tools they need to achieve their academic goals, all Red River College Polytechnic students require, at minimum:

1. Off-campus access to a current computer with a webcam

2. A high-speed internet connection:

- Recommended minimum speed: 10 mbps for download, 3 mbps for upload

- Slower internet connection speeds may result in audio and video issues. Please keep in mind that if others in your home are using the same internet connection at the same time as you are, you may also experience audio and video issues.

The following are computer requirements for online learning, labs and assessments in this program:

- Computer type: Windows PC laptop. Mac (Apple), Chromebook or Smartphone is not acceptable.

- Note that although a Windows PC desktop is acceptable for software capabilities, at times the portability of a laptop may be required.

- Please review the Computer Specifications for this program

- Please note that any anticipated costs are not included in Books and Supplies estimates.

Please refer to https://www.rrc.ca/future-students/computer-requirements/ for further information on Computer Requirements for Students.

Transfer Credit Opportunities

Transferring credits from high school

- Graduates of High School Vocational Education programs may be eligible for advanced credit in this program.

- Graduates of Tech Vocational may be eligible for advanced standing in this program.

- Graduates of Louis Riel School Division - Arts & Technology Centre (formerly St. Boniface Technical Centre) may be eligible for advanced standing credit in this program.

Transferring credits to other Red River College Polytechnic programs

- Elements of this program may be used as credits in the Electrical Engineering Technology programs at Red River College Polytechnic.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a process which documents and compares an individual's prior learning gained from prior education, work and life experiences and personal study to the learning outcomes in College courses/programs. For more information, please visit www.rrc.ca/rpl.

Other Information

The Common Core
The Common Core is an agreement among numerous North American colleges that there are basic skills common to any electronic specialty. Colleges within this agreement recognize the Common Core for credit.

Cisco Networking Academy
The Cisco Networking Academy program teaches students to design, build and maintain computer networks. The Academy curriculum covers a broad range of topics, from basic networking skills to more complex concepts such as programming routers and troubleshooting networks.

Semesters 1 through 4 of the Academy program, equivalent to 280 hours of instruction, provide students with a basic foundation in networking. Students who successfully complete this portion of the program are eligible to earn Cisco Certified Network Associate (CCNATM) certification. The first four semesters are available at the secondary and post-secondary levels. The Academy program combines instructor-led, online learning with hands-on laboratory exercises where students apply what they learn in class while working on actual networks.

Employment Potential

Jobs are available in any industrial area where electronic devices require installation, maintenance and servicing.

Graduates have found employment in automated factories as installers and maintenance staff, in medical electronics and computer services and with public utilities. Computer literacy, as well as current course material assures graduates of a broader range of employment possibilities.

Academic Advising Service
Our academic advising service can provide information about our full-time programs, explain program admission requirements, and help you select the right program to meet your career and academic goals. We can also connect you with helpful people, resources, and supports.

- For more information visit academic advising.

- If you are an Indigenous student, you can contact an Indigenous Admissions Advisor.

- If you are an international student, you can contact International Education.

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Red River College Polytechnic endeavours to provide the most current version of all program and course information on this website. Please be advised that classes may be scheduled between 8:00 a.m. and 10:00 p.m. The College reserves the right to modify or cancel any course, program, process, or procedure without notice or prejudice. Fees may change without notice.