

COURSE NAME: CST102 Introduction to UNIX/Linux

Credit Value: 4
Total Course Hours: 56
Prerequisite Course(s): None
Corequisite Course(s): None

COURSE DESCRIPTION

Unix and Linux represent the operating system technology underlying many of the services of the Internet. This subject introduces students to Unix, and Linux. Students will learn the core utilities to work productively in a Linux environment. Students will do this work using the shell, at the same time learn to configure their login accounts, manipulate data stored in files, effectively use Linux commands and utilities, and write simple shell scripts.

PLAR INFORMATION

This course is eligible for Prior Learning Assessment and Recognition. Students are advised to discuss options with their program coordinator.

COURSE LEARNING OUTCOMES

Upon completion of this course, the student will have reliably demonstrated the ability to:

- 1.0 Manage files and directories through executing commands in Linux
- 2.0 Edit text files using common text editors in order to configure the system and edit/write shell scripts.
- 3.0 Write shell scripts to solve programming problems, including customizing user environments to improve working efficiency
- 4.0 Describe the directory layout of a typical Linux system in order to maintain and secure Unix directories and files.
- 5.0 Use Linux pipes and file redirection to manipulate data.
- 6.0 Form simple regular expressions to define patterns.

GENERAL EDUCATION

This is not a General Education course.

PROGRAM OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved program learning outcomes (PLO):

Computer Programmer Analyst - Advanced Diploma

1. Identify, analyze, design, develop, implement, verify and document the requirements for a computing

environment.

3. Analyze, design, implement and maintain secure computing environments.
4. Analyze, develop and maintain robust computing system solutions through validation testing and industry best practices.
8. Adhere to ethical, social media, legal, regulatory and economic requirements and/or principles in the development and management of the computing solutions and systems.
9. Investigate emerging trends to respond to technical challenges.
11. Design, develop, document, implement, maintain and test software systems by using industry standard software development methodologies based on defined specifications and existing technologies/frameworks.

Computer Systems Networking-Technology Advanced Diploma

1. Identify, analyze, design, develop, implement, verify and document the requirements for a computing environment.
2. Diagnose, troubleshoot, document and monitor technical problems using appropriate methodologies and tools.
3. Analyze, design, implement and maintain secure computing environments.
4. Analyze, develop and maintain robust computing system solutions through validation testing and industry best practices.
10. Integrate multiple software and hardware components using appropriate systems, methodologies, and connection protocols.
11. Analyze, plan, design, develop, test, and implement computing devices and networked systems (software or hardware) in accordance with appropriate functional requirements and standards.
12. Apply principles of digital and analog circuits to design, implement, and troubleshoot computing devices, including embedded components and systems.

Computer Systems Technician - Networking

1. Identify, analyze, develop, implement, verify and document the requirements for a computing environment.
2. Contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools.
3. Implement and maintain secure computing environments.
4. Implement robust computing system solutions through validation testing that aligns with industry best practices.
10. Install, configure, troubleshoot, maintain, upgrade and decommission computing system infrastructures.
11. Automate routine tasks using scripting tools and programming languages.
12. Install and monitor a database management system in response to specified requirements.

ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

1. Communicate clearly, concisely, and correctly in the written, spoken, and visual form that fulfils the purpose and meets the needs of the audience.
2. Respond to written, spoken, or visual messages in a manner that ensures effective communication
3. Execute mathematical operations accurately
4. Apply a systematic approach to solve problems
5. Use a variety of thinking skills to anticipate and solve problems
6. Locate, select, organize, and document information using appropriate technology and information systems.
7. Analyse, evaluate, and apply relevant information from a variety of sources.
10. Manage the use of time and other resources to complete projects.

11. Take responsibility for one's own actions, decisions, and consequences.

EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

COURSE EVALUATION

Labs, Quizzes, Assignments 35%
 Test 35%
 Final Exam 30%
 TOTAL 100%

PROGRAM SPECIFIC GRADING

Per College Grading System

GRADING SYSTEM

A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA
								FS- Failure Supplemental
								FR- Repeat course, excluded from GPA

*For a complete chart of grades and descriptions, please see the Grading Policy.

LEARNING RESOURCES

Other Resources:

TEXTBOOK

None

REFERENCE MATERIAL

Practical Guide to Linux Commands, Editors and Shell Programming by M. Sobell; (3rd edition) ISBN 0-133-08504- X or (2nd edition) ISBN 0-131-47823-0

A Practical Guide to Linux by M. Sobell; Addison-Wesley, ISBN: 0-201-89549-8

REQUIRED SUPPLIES

250GB (minimum) SSD with USB 3.0 enclosure

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology

and the nature of the resource.

LEARNING ACTIVITIES

Lecture, in-class exercises, hands-on activity

DELIVERY MODE

This course may be delivered, in whole or in part, in a number of modalities, including in class, online, hybrid, in a synchronous or asynchronous manner or a combination thereof, as per accreditation and/or regulatory standards where appropriate.

ACADEMIC POLICIES

Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website:
<https://www.canadorecollege.ca/about/policies>.

COLLEGE POLICIES

- Protecting human rights in support of a respectful college community

For college policies please see: <http://www.canadorecollege.ca/about-us/college-policies>.

STUDENT SUCCESS SERVICES - Your Success Matters!

Student Success Services provides student-focused services to facilitate students' success in their studies. Staff provide support by reducing and/or removing educational-related barriers through individualized accommodations and supports to students with disabilities.

Please visit our webpage to learn more: <https://www.canadorecollege.ca/support/student-success-services> or look for our events on social media.

To connect with Student Success Services email studentsuccessnow@canadorecollege.ca or call 705.474.7600 ext 5205.

FIRST PEOPLES' CENTRE:

A culturally safe environment offering CONFIDENTIAL student focused services, drop in or make an appointment to access:

- One on one counselling
- Elder in residence program
- Peer tutoring
- Peer mentorship
- Lunch & learn workshops on study skills, self-care, life skills
- Learning Resource Centre

Drop by our offices at C254 College Drive, E101 Commerce Court or call 705 474 7600 Ext. 5961 College Drive / 5647 Commerce Court.

<https://www.canadorecollege.ca/experience/indigenous-student-experience>

WAIVER OF RESPONSIBILITY

Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

HISTORICAL COURSE OUTLINES

Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.