



MASTER COURSE OUTLINE

A. CPRO 1068 Linux Network Security

B. COURSE DESCRIPTION:

This course provides the skills and knowledge necessary to implement Linux server security. It is designed for individuals or information technology (IT) professionals who desire to move beyond the basics of Linux installation and administration into a broader study of the many security issues surrounding this operating system. Prerequisites: CPRO 1065.
(3 Cr – 3 lect, 0 lab)

C. *Core Theme: Critical Thinking

D. RIVERLAND INSTITUTIONAL LEARNING OUTCOMES:

This course addresses the following Riverland Institutional Learning Outcome(s):

- ILO 1: critical thinking (*Core Theme Goal 2*)
- ILO 2: awareness of the larger global community (*Core Theme Goal 7 or 8*)
- ILO 3: ethical, engaged citizenship (*Core Theme Goal 9 or Goal 10*)
- ILO 4: communication and collaboration (*Discipline Goal 1 and by any learning outcome(s) involving communication or collaboration*)

E. MAJOR CONTENT AREAS:

- History of Linux security
- Linux server architecture
- Linux server installation
- Linux network services
- Linux access control
- Linux user and group management
- Linux cryptography
- Linux security management
- Linux security tools
- Security, ethics, and privacy

F. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

<u>GOAL</u>	<u>OBJECTIVES</u>	<u>OUTCOMES</u>
** <u>Critical</u>	Students will be able to imagine and seek out a variety of possible	The student will successfully 1. identify and analyze a given set

<u>Thinking</u>	goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.	of Linux network security requirements. 2. develop a security policy appropriate to the given set of requirements.
<u>CS</u>	install, configure, and manage Linux server operating systems.	1. demonstrate an understanding of Linux network security. 2. create and implement a comprehensive security policy that meets those requirements.
<u>CS</u>	implement and manage Linux network file security and server access control.	1. complete laboratory assignments that require the implementation and securing of Linux network file services.
<u>CS</u>	identify and analyze the available Linux security tools and determine the best options to use to monitor network security.	1. determine the correct Linux security tools for a given network security scenario.
<u>CS</u>	communicate with end users by formulating questions and providing answers that are appropriate to the end users' level of technological literacy.	1. guide a classmate through the resolution of a Linux server access problem using verbal communication in a simulated helpdesk scenario.
<u>CS</u>	demonstrate proper troubleshooting methodologies and techniques.	1. resolve a Linux network security misconfiguration lab scenario using the command (CMD) line and graphical user interface (GUI) to monitor and troubleshoot the problem.

G. SPECIAL INFORMATION:

This course may require use of the Internet, the submission of electronically prepared documents and the use of a course management software program. Students who have a disability and need accommodations should contact Accessibility Services at the beginning of the semester. This information will be made available in alternative format, such as Braille, large print, or current media, upon request.

H. COURSE CODING INFORMATION:

Course Code T/Class Maximum 30; Letter Grade

Revision date: 12/08/10; 11/05/24

AASC Approval date: 12/21/10; 11/19/24

*These five MnTC Goals have been identified as Riverland Community College Core Themes. Every course in the Riverland Community College curriculum shall meet outcomes from one of these themes.

**These five MnTC Goals have been identified as Riverland Community College Disciplines. Riverland's MnTC courses also shall meet outcomes from a Discipline Area.

NOTE: The Minnesota Transfer Curriculum “10 Goal Areas of Emphasis” are reflected in the five required discipline areas and five core themes noted in the Riverland Community College program of study guide and/or college catalog.

*Riverland Community College Core Themes	MnTC Goal Number
Critical Thinking (CT)	2
Human Diversity (HD)	7A, 7B, 7A/B
Global Perspective (GP)	8
Ethical and Civic Responsibility (EC)	9
People and the Environment (PE)	10

**Riverland Community College Discipline Areas	MnTC Goal Number
Communication (CM)	1
Natural Sciences (NS)	3
Mathematics/Logical Reasoning (MA)	4
History and the Social & Behavioral Sciences (SS)	5
Humanities and Fine Arts (HU)	6

Riverland