

MASTER COURSE OUTLINE

A. CPRO 2100 Cisco Network Security

B. COURSE DESCRIPTION:

This course provides the knowledge and skills needed to succeed in networking careers such as network technicians, network administrators, and network engineers. Upon completion of Cisco Network Security, students have a thorough understanding of the design, planning, implementation, operation, and troubleshooting of Cisco Network Security devices. This course prepares students for the Implementing Cisco IOS® Network Security (IINS) certification exam. Prerequisites: CPRO 1900 and CPRO 1930.
(3 Cr – 3 lect, 0 lab)

C. **Core Theme: Critical Thinking

D. MAJOR CONTENT AREAS:

- History of network security
- Network security threats
- Network security policy
- Network security implementation
- Network security monitoring
- Cisco network security devices
- Network security tools
- Access control
- Intrusion prevention
- Cryptography
- Virtual private networking

E. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

<u>GOAL</u>	<u>OBJECTIVES</u> Students will be able to	<u>OUTCOMES</u> The student will successfully
** <u>Critical Thinking</u>	imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.	1. identify and analyze a given set of network security requirements and develop a security policy appropriate to the given set of requirements.
<u>CS</u>	identify and analyze network security threats and determine the appropriate mitigation strategies.	1. demonstrate an understanding of enterprise security and how to create and implement a

		comprehensive security policy that meets those requirements.
<u>CS</u>	implement security policy using Cisco security devices.	1. configure firewalls, routers, switches, and computers that meet specific network security requirements.
<u>CS</u>	demonstrate an understanding of cryptography.	1. configure encryption, hashes, and digital signature on Cisco network security devices to implement confidentiality, integrity, and non-repudiation that meets specific network security requirements.
<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 denial of user access caused by a network security device misconfiguration problem using verbal communication in a simulated helpdesk scenario.
<u>CS</u>	demonstrate proper troubleshooting methodologies and techniques.	1. resolve a network security device misconfiguration lab scenario using the Cisco command-line (CLI) and security device manager (SDM) to monitor and troubleshoot the problem.

F. 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 the instructor or the Student Success Center 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.

G. COURSE CODING INFORMATION:

Course Code T/Class Maximum 30; Letter Grade

Revision date: 12/08/10

AASC Approval date: 12/21/10

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

*These five MnTC Goals have been identified as Riverland Community College Disciplines.

** These five MnTC Goals have been identified as Riverland Community College Core Themes.

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.