



MASTER COURSE OUTLINE

A. CPRO 1920 Cisco Networking III

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 this course, students have a thorough understanding of VLAN, wireless, switching and intermediate routing technologies. This course helps prepare students for industry standard certifications. Prerequisites: CPRO 1900 and CPRO 1910.

(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:

- Switching concepts
- Media access control technology
- Network troubleshooting
- Network diagram interpretation
- Cisco switch configuration
- Remote management
- VLAN concepts
- VLAN Trunking Protocol (VTP)
- Rapid Spanning Tree Protocol (RSTP)
- VLAN routing
- Wireless technologies
- Wireless configuration

F. 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.	<ol style="list-style-type: none"> analyze different network security options available using VLAN and wireless technologies. determine the best technology options that meet customer requirements.
<u>CS</u>	evaluate the capabilities, advantages, and disadvantages of virtual local area network and wireless technology and design the correct network topology given a specific set of security and performance requirements.	<ol style="list-style-type: none"> choose the correct security option given specific security requirements and properly configure the network devices to implement these requirements.
<u>CS</u>	design and implement a routed VLAN internetwork using switches and routers.	<ol style="list-style-type: none"> complete advanced VLAN lab assignments by configuring and connecting network devices in accordance with stated objectives.
<u>CS</u>	design and implement a wireless network.	<ol style="list-style-type: none"> configure and connect wireless network devices in accordance with stated objectives.
<u>CS</u>	demonstrate proper troubleshooting methodologies and techniques.	<ol style="list-style-type: none"> resolve a VLAN, router, or switch misconfiguration problem using the command line interface show and debug commands.
<u>CS</u>	communicate with end users by formulating questions and providing answers that are appropriate to the end users' level of technological literacy.	<ol style="list-style-type: none"> guide a classmate through the resolution of a VLAN misconfiguration problem using verbal communication in a simulated helpdesk scenario.

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