MASTER COURSE OUTLINE

A. CPRO 1910 Cisco Networking II

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. It provides a theoretically-rich, hands-on introduction to networking and the Internet. Upon completion of this course, students have a thorough understanding of routing protocols and concepts. This course helps prepare students for industry standard certifications. Prerequisites: CPRO 1900.
(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:

- Classful and classless addressing
- Network design
- Routing theory
- Path determination
- Packet switching
- Routing tables
- Router operations
- Static routing
- Dynamic routing protocols
- Distance vector routing protocols
- Routing Information Protocol (RIP)
- Enhanced Interior Gateway Routing Protocol (EIGRP)
- Open Shortest Path First Protocol (OSPF)

F. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

GOAL	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
*Critical Thinking	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. analyze different routing technologies and apply knowledge to design, implement, and troubleshoot a routed internetwork.
CS	evaluate the different features, capabilities, advantages, and disadvantages of commonly used routing protocols and determine the best protocol to use for a given networking requirement.	1. complete an assessment designed to evaluate an understanding of network protocols and services provided by the OSI and TCP/IP models.
CS	design, implement, and administer classless subnetting and network addressing.	1. create classless IP subnets given certain IP address network requirements and assign the addresses correctly.
CS	implement static and dynamic routing protocols.	1. configure static and dynamic routing that meets given performance and networking requirements.
CS	build a routed internetwork using routers.	1. employ advanced cabling and network designs to connect network devices in accordance with stated objectives.
CS	backup and restore router operating system and configuration.	1. implement router backup and restore operations that meet stated objectives.
CS	demonstrate proper troubleshooting methodologies and techniques.	1. resolve common errors that occur in small, routed networks using the command line interface show and debug commands.

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**