MASTER COURSE OUTLINE

A. CPRO 1000 Computer Maintenance and Repair (A+)

B. COURSE DESCRIPTION:

This course enables students to develop skills required to become a proficient personal computer (PC) support technician. The course guides students through the installation, maintenance, troubleshooting and upgrading, and repairing of PC's. Other topics included in the course are system boards, floppy drives, essentials devices, hard drive installations and support, troubleshooting fundamentals, power supplies, diagnostic software and building your own PC. This course prepares students for CompTIA A+ certification. Prerequisites: CPRO 1002 or general computer proficiency.
(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:

- Computer development
- History of electronic communication
- Computer components
- Computer repair
- Computer storage
- Operating systems
- Printer technology
- Computer management
- Installation and support
- Troubleshooting techniques
- Customer support methods
- Customer communication and etiquette

F. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

GOAL	OBJECTIVES Students will be able to	OUTCOMES The student will successfully
*Critical Thinking	gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.	1. analyze different operating systems, and individual advantages and disadvantages. 2. determine the most suitable operating system to use for a given set of customer criteria.
CS	analyze input/output (I/O), memory, interrupt request (IRQ), and resource requirements to ensure all components work inside resource scopes.	1. diagnose, troubleshoot, and configure internal computer components resulting in a properly operating computer with no resource conflicts.
CS	identify, install, test, and configure computer hardware components.	1. identify all the field repairable internal components of a classroom lab computer. 2. install and configure the device drivers for those components.
CS	install and configure desktop operating systems.	1. install and configure a desktop operating system on a classroom lab computer.
CS	communicate with clients by formulating questions that are appropriate to technological literacy.	1. demonstrate proper etiquette while helping a classmate solve a computer-related problem in a simulated helpdesk scenario.
CS	identify and prioritize customer requirements and choose the operating system that best supports those requirements considering initial cost plus Total Cost of Ownership (TOC).	1. determine the appropriate computer technologies, platforms, and services that meet customer requirements given a specific set of technological, financial, and business requirements.
CS	demonstrate proper troubleshooting methodologies and techniques.	1. resolve given hardware and software problems on one classroom lab computer.

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. This course requires the purchase of a computer to be used for computer lab scenarios.

H. COURSE CODING INFORMATION:

Course Code T/Class Maximum 30; Letter Grade

Revision date: 08/15/18; 11/05/24
AASC Approval date: 10/23/18; 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**