DEPT: Computer Division  COURSE NO: CST 2110

NUMBER OF CREDITS: 3

COURSE TITLE: PC Maintenance and Repair Hardware

CATALOG DESCRIPTION:  
Introduces computer hardware components and explains how they work together to make computers functional. Also includes procedures for disassembling and reassembling different classes of computers, troubleshooting, and repair.

AUDIENCE:  
Computer Support Technology, Networking Specialist students and anyone interested in learning how to troubleshoot, repair and maintain computers.

FULFILLS MN TRANSFER CURRICULUM AREA(S):  
Does not apply.

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:  
None.

LENGTH OF COURSE: 2 lecture hours and 2 lab hours per week for 16 weeks or equivalent online instruction

THIS COURSE IS USUALLY OFFERED:  
Every other year [ ] Fall X [ ] Spring [ ] Summer [ ] undetermined [ ]

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) **ACADEMIC CONTENT:** The student will achieve the first level of knowledge and skill needed for computer support personnel.

2) **THINKING SKILLS:** The student will accurately perform troubleshooting and maintenance skills with an understanding of the operation of the computer devices.

3) **COMMUNICATIONS SKILLS:** The student will demonstrate appropriate communication techniques in each troubleshooting and lab experience by completing documentation and talking with mock customers.

4) **HUMAN DIVERSITY:** The student will gain self-awareness regarding their feelings towards people of different cultures, educational backgrounds, value systems and socioeconomic status.
TOPICS TO BE COVERED: Microprocessors, Random Access Memory (RAM), motherboards and BIOS, expansion bus, power supplies, disk drives and hard drives are covered, as well as troubleshooting techniques.

LIST OF EXPECTED COURSE OUTCOMES:
1. Identify PC components
2. Perform AC/DC voltage measurements
3. Calculate power supply requirements
4. Diagnose computer problems
5. Calculate RAM volume, banks and module types for upgrades
6. Determine expansion card upgrade needs
7. Install and configure master/slave hard drives
8. Assemble and disassemble personal computers

LEARNING/TEACHING TECHNIQUES used in the course are:
X Collaborative Learning
☐ Student Presentations
☐ Creative Projects
X Lecture
X Demonstrations
X Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
X Reading
☐ Oral Presentations
X Textbook Problems
☐ Group Problems
X Other (describe below)

Practical Tests

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.
This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or via your preferred Telecommunications Relay Service.

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