



Course Syllabus

EDTC 5030 02

Sebastian Mahfood mahfood@kenrick.edu

Mary Beckmann ponotoc2@yahoo.com

Topics in Classroom Technologies

Maintaining Computer Systems

2 credit hours

WH 221 -Thursday, August 26 – October 14, 2004

Course Description:

This course will take the student from computer set up through software installations and hardware upgrades. It will assist students to maintain well running computer systems without the need of technical support. Students will disassemble a computer using common tools and through a hands-on approach examine various components to determine the basics of how a computer works.

Learning Outcomes:

- Students will discuss, identify, and examine basic tools necessary for opening computer cases and working on the internal parts of a computer
- Students will examine basic safety precautions for working on computers
- Students will identify internal computer components including the motherboard, coprocessors, cables, basic cards, and examine how each are attached
- Students will discuss and analyze basic computer problems associated with internal components such as no sound, graphics not displaying properly, or no network connection and software installations and analyze how to troubleshoot for common problems
- Students will examine system tools for repair and for computer maintenance such as defrag
- Students will analyze and discuss anti-virus programs, virus removal tools, and how to avoid viruses
- Students will analyze and differentiate when problems may be software related or hardware related

SCHEDULE OF REQUIRED READINGS, ASSIGNMENTS, DISCUSSIONS:

In class projects involve discussions of computer components, how to troubleshoot and maintain a computer. This will be accomplished by examining the inside of a computer, removing and examining specific components relative to textbook readings and discussions.

MODULE ONE:

Syllabus, Schedule handouts
Personal introductions
PC vs. Macintosh
Introduction to basic tools
Introduction to the book
Start, programs

Discuss common computer problems – sound, video, Internet, slow PCs
Removing computer covers
Discuss disks, CDs, DVDs, CDRs, and CDRWs
Intro to viruses – how to avoid – various types – how they spread

MODULE TWO:

Regedit
Msconfig
Discuss preventive maintenance – memory resources, defrag, disk check, disk cleanup
Error messages
Examine System Tools
Backing up
How to complete system restore and set restore points
Viruses – intermediate – what do they do how to remove from an infected PC – where they hide
Remove the computer cover and discuss cards and slots – two basic kinds
Discuss internal computer parts, ports, and processors

MODULE THREE:

Discuss keyboard, mouse, and monitor problems
Discuss hot swapping, Ps2 and USB, and ISA (16 bit) and PCI slots
NOTE: "(Peripheral Component Interconnect) The most common I/O bus in use today. It provides a shared data path between the CPU and peripheral controllers in all kinds of computers from laptops to mainframes. Designed by Intel, Compaq and Digital, it first appeared in PCs in 1993 and co-existed with the ISA bus for many years. Today, most PCs have only PCI slots and one AGP slot for a display adapter." From GuruNet
Shutdown and start up problems
Beeps and what they mean and where to go for interpretation of beeps
Discuss memory chips

MODULE FOUR:

Remove a sound card and cable and discuss
Search on the Internet for what sound cards do and what problems exist
Research for methods to identify computer components and terms on the Internet
Discuss sound card drivers, how to identify manufacturers, how to download drivers
Discuss installing drivers
Discuss right click and explore, control panel, and device manager

MODULE FIVE:

Remove a video card and discuss
Search on the Internet for what video cards do and what problems exist
Discuss video card drivers, how to identify manufacturers, how to download drivers
Discuss installing drivers

MODULE SIX:

Remove a network or modem card and discuss
Search on the Internet for what network cards do and what problems exist
Discuss network card drivers, how to identify manufacturers, how to download drivers
Discuss installing drivers

MODULE SEVEN:

Examine CD-ROM, DVD, and CDRW problems
Discuss various downloads including Adobe Acrobat Reader, RealOne Player, Microsoft Media Player, Quicktime Player, WildTangent

Discuss differences between each and what they do
Troubleshooting scenarios – what would you do it... when...

MODULE EIGHT:

Discuss Operating Systems and problems unique to each
Discuss how, why, and when to use emergency boot disks
Discuss what you should do first and when to attempt repairs and when not to
Discuss what information to have ready before calling tech support
Discuss problems associated with tech support

The Missouri Show-Me Standards are addressed within the content of this course. Identification of specific standards are included within course assignments. Integration of Missouri Assessment Program (MAP) standards and grade levels will be integrated into this course when appropriate.

RESOURCES:

Text(s):

Troubleshooting Your PC for Dummies, For Dummies Publisher, 1st edition, ISBN 0764516698
Online links from the Internet will be provided during class

EVALUATION:

95-100 = A (95 to 100 points)
90-94 = A- (90 to 94 points)
86-89 = B+ (86 to 89 points)
83-85 = B (83 to 85 points)
80-82 = B- (80 to 82 points)
76-79 = C+ (76 to 79 points)
73-75 = C (73 to 75 points)
70-72 = C- (70 to 72 points)

- Mid-Term (group presentation) 25% (25 points)
- Quiz on identification of components and tools 10% (10 points)
- Final (group presentation) 30% (30 points)
- Curriculum project 20% (25 points)
(500-word paper on scenario troubleshooting)
- Class Participation / Attendance 15% (10 points)

FINAL PROJECTS:

Final projects will be completed in class and involve a small group presentation as well as an individual 500-word paper on a specific troubleshooting scenario. Papers will be returned to students upon request. Students should provide a self-addressed stamped envelope (appropriate size and postage) to the instructor so project/paper can be returned.

NOTE: Papers will not be available for pick up from the School of Education Office.

This syllabus is subject to change at the discretion of the instructor. Regular class attendance is required. The instructor reserves the right to lower the final grade by a letter grade for unexcused absences.