SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 11.0901

SEMESTER: Departmental Syllabus

COURSE TITLE: Home and Small Business Networking

COURSE NUMBER: NETW 0140

CREDIT HOURS: 8

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): none

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION:
Networking for Home and Small Businesses is a course that is designed to introduce students to the basic concepts of setting up a personal computer system, including the operating system, interface cards, and peripheral devices. Students will also learn to plan and install a home or small business network and connect it to the Internet and be able to verify and troubleshoot network and Internet connectivity. Students will learn about sharing resources such as files and printers among multiple computers and recognize and mitigate security threats to a home network. Students will be able to configure and verify common Internet applications and configure basic IP services through a GUI.
METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:
I. Basic Computing
   A. Personal Computers and Applications
   B. Types of Computers
   C. Binary Representation of Data
   D. Computer Components and Peripherals
   E. Computer System Components
   F. Summarizing the Computer

II. Operating Systems
   A. Introduction to Operating Systems
   B. Choosing the Operating System
   C. Installing the Operating System
   D. Maintaining the Operating System
   E. Operating System Patches and Updates
   F. Operating System Licensing Agreements
   G. Summarizing the Operating System.

III. Connecting to the Network
   A. The Network
   B. Introduction to Networking
   C. Principals of Communication
   D. Communicating on a Local Wired Network
   E. Building the Access Layer of an Ethernet Network
   F. Building the Distribution Layer of a Network
   G. Plan and Connect a Local Network
   H. Summarizing Connecting to the Network.

IV. Connecting to the Internet Through an ISP
   A. Chapter Introduction
   B. The Internet and How We Connect to It
   C. Sending Information Across the Internet
   D. Networking Devices in a NOC
   E. Cables and Connectors
   F. Working with Twisted-Pair Cabling
   G. Chapter Summary
V. Network Addressing
A. Chapter Introduction
B. IP Addresses and Subnet Masks
C. Types of IP Addresses
D. How IP Addresses are Obtained
E. Address Management
F. Chapter Summary

VI. Network Services
A. Chapter Introduction
B. Client/Servers and Their Interaction
C. Application Protocols and Services
D. Layered Model and Protocols
E. Chapter Summary

VII. Wireless Technologies
A. Chapter Introduction
B. Wireless Technology
C. Wireless LANs
D. Security Considerations on a Wireless LAN
E. Configuring an Integrated AP and Wireless Client
F. Chapter Summary

VIII. Basic Security
A. Chapter Introduction
B. Networking Threats
C. Methods of Attack
D. Security Policy
E. Using Firewalls
F. Chapter Summary

IX. Troubleshooting Your Network
A. Chapter Introduction
B. Troubleshooting Issues
C. Common Issues
D. Troubleshooting and the Help Desk
E. Chapter Summary
X. Planning and implementing a technical solution for a small business.
   A. Gather relevant information to help devise a technical solution to a problem.
   B. Devise a technical solution for a small office environment.
   C. Prototype a proposed technical solution using Packet Tracer 4.1.
   D. Plan the installation of a technical solution for a small business environment.
   E. Prepare and present a technical report to a diverse group.
   F. Configure a wireless router to support the requirements of a small business environment.

EXPECTED LEARNER OUTCOMES:

A. The student will be able to describe Basic Computing
B. The student will be able to describe Operating Systems
C. The student will be able to describe Connecting to the Network
D. The student will be able to describe Connecting to the Internet Through an ISP
E. The student will be able to describe Network Addressing
F. The student will be able to describe Network Services
G. The student will be able to describe Wireless Technologies
H. The student will be able to describe Basic Security
I. The student will be able to describe Troubleshooting Your Network
J. The student will be able to describe Planning and implementing a technical solution for a small business.

COURSE COMPETENCIES:

The student will be able to describe Basic Computing
1. The student will be able to describe Personal Computers and Applications
2. The student will be able to describe Types of Computers
3. The student will be able to describe Binary Representation of Data
4. The student will be able to describe Computer Components and Peripherals
5. The student will be able to describe Computer System Components
6. The student will be able to summarize Basic Computer

The student will be able to describe Operating Systems
7. The student will be able to describe Introduction to Operating Systems
8. The student will be able to describe Choosing the Operating System
9. The student will be able to describe Installing the Operating System
10. The student will be able to describe Maintaining the Operating System
11. The student will be able to describe Operating System Patches and Updates
12. The student will be able to describe Operating System Licensing Agreements
13. The student will be able to summarize the Operating System.

The student will be able to describe Connecting to the Network
14. The student will be able to describe The Network
15. The student will be able to describe Introduction to Networking
16. The student will be able to describe Principals of Communication
17. The student will be able to describe Communicating on a Local Wired Network
18. The student will be able to describe Building the Access Layer of an Ethernet Network
19. The student will be able to describe Building the Distribution Layer of a Network
20. The student will be able to describe Plan and Connect a Local Network
21. The student will be able to summarize Connecting to the Network.

The student will be able to describe Connecting to the Internet Through an ISP
22. The student will be able to describe Internet Connections
23. The student will be able to describe The Internet and How We Connect to It
24. The student will be able to describe Sending Information Across the Internet
25. The student will be able to describe Networking Devices in a NOC
26. The student will be able to describe Cables and Connectors
27. The student will be able to describe Working with Twisted-Pair Cabling
28. The student will be able to summarize Connecting to the Internet Through an ISP

The student will be able to describe Network Addressing
29. The student will be able to describe Network Addressing
30. The student will be able to describe IP Addresses and Subnet Masks
31. The student will be able to describe Types of IP Addresses
32. The student will be able to describe How IP Addresses are Obtained
33. The student will be able to describe Address Management
34. The student will be able to summarize Network Addressing

The student will be able to describe Network Services
35. The student will be able to describe Network Services
36. The student will be able to describe Client/Servers and Their Interaction
37. The student will be able to describe Application Protocols and Services
38. The student will be able to describe Layered Model and Protocols
39. The student will be able to summarize Network Services

The student will be able to describe Wireless Technologies
The student will be able to describe Wireless Theory

The student will be able to describe Wireless Technology

The student will be able to describe Wireless LANs

The student will be able to describe Security Considerations on a Wireless LAN

The student will be able to describe Configuring an Integrated AP and Wireless Client

The student will be able to summarize Wireless Technologies.

**The student will be able to describe Basic Security**

The student will be able to describe Security

The student will be able to describe Networking Threats

The student will be able to describe Methods of Attack

The student will be able to describe Security Policy

The student will be able to describe Using Firewalls

The student will be able to summarize Basic Security

**The student will be able to describe Troubleshooting Your Network**

The student will be able to describe Network Troubleshooting

The student will be able to describe Troubleshooting Issues

The student will be able to describe Common Issues

The student will be able to describe Troubleshooting and the Help Desk

The student will be able to summarize Network Troubleshooting

**The student will be able to describe Planning and implementing a technical solution for a small business.**

Gather relevant information to help devise a technical solution to a problem.

Devise a technical solution for a small office environment.

Prototype a proposed technical solution using Packet Tracer 4.1.

Plan the installation of a technical solution for a small business environment.

Prepare and present a technical report to a diverse group.

Configure a wireless router to support the requirements of a small business environment.

**ASSESSMENT OF LEARNER OUTCOMES:**
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

**SPECIAL NOTES:**
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at (913) 288-7670 V/TDD.