

LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

SPECIAL NOTE:

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):

Please check with the LCC bookstore <http://www.labette.edu/bookstore> for the required texts for this class.

COURSE NUMBER: COMP 180

COURSE TITLE: INTRODUCTION TO NETWORKING

SEMESTER CREDIT HOURS: 3

DEPARTMENT: Computer Science

DIVISION: General Education

PREREQUISITE: None

COURSE DESCRIPTION:

The main goal of this course is to provide you with a comprehensive understanding of networking technologies, concepts and terminology. You will learn about the equipment and technologies used in LANs and WANs. You will learn about the network topologies used today and design a network using these topologies. A variety of network equipment will be discussed, including hubs, routers, switches, and NICs. LAN architectures are covered including Ethernet, token ring, and FDDI. Also, you will learn about wide area networking technologies and remote access technologies such as X.25, ISDN, frame relay, ATM, DSL, SMDS, and SONET networks. Wireless networking and handheld computing is also discussed. All major LAN and WAN protocols will be discussed including TCP/IP and the newer IPv6. In addition you will learn about the OSI layered communications model. Aside from learning the technologies involved in networking, you will get to understand the daily tasks involved with managing and troubleshooting a network. You will have a variety of hands-on and case project assignments that reinforce the concepts you read in each chapter.

COURSE OUTCOMES AND COMPETENCIES:

Students who successfully complete this course will be able to:

1. Design and develop a network complete with diagrams, media and topologies.

- Explain the technology terms used in networking.
- Explain the concepts of network design.
- Explain the different types of media used in Networking.

2. Explain the different types of NIC, OSI layers and network protocols

- Explain the different types of (NIC) “Network Interface Card”.
- Demonstrate the ability to install NIC drivers.
- Discuss the standards and specifications, including OSI model and IEEE 802.
- Explain the different types of protocols used in networking.

3. Discuss how different network architectures operate in a network environment

- Define and explain the differences of Ethernet, Token Ring, FDDI as well as broadband technologies.
- Design, develop and install a simple network.
- Discuss integrating multiple operating systems in a complex networking environment

4. Develop, design and administrate a network environment

- Create users on the network.
- Explain how to setup remote access to networks Including Virtual Private Networks (VPN)
- Be able to develop and design a Wide Area Network (WAN).

5. Solve network problems and how to prevent network downtime, loss of data and security breaches.

- To solve network problems with current resources.
- Understanding and using Internet resources.