MASTER SYLLABUS

COURSE NO., HOURS, AND TITLE: EST 315-3 Network Installation and Administration

COURSE DESCRIPTION:

This course takes a lab/lecture approach which leads the student through a series of activities involved in the installation of a local area network (LAN) capable of sharing information and a variety of electronic input/output devices. The student will be introduced to various LAN designs, communication protocols, network certification requirements, as well as the procedures for selecting, installing, and managing a LAN. Lecture and lab. Prerequisite: EST 310 for ITEC minors or EST 224 for IST and EST majors.

PREREQUISITE TO: None

COURSE OBJECTIVES:

Upon successful completion of the course, the student should be able to:

1. Review standard terminology to describe various network topologies, carrier technologies and hardware and software components used in LANs, including the characteristics of such devices and software.

2. Install and manage a LAN efficiently.

3. Identify the main software protocols used in the management of mainframe to mainframe, mainframe to PC, and PC to PC data communications.

4. Analyze an existing LAN and make recommendations in regard to hardware and software, in order to meet a client's needs to expand or improve the system.

TOPICAL OUTLINE:

	Topics	**Percentages**
I.	Introduction to Local Area Networks	15%

A. Terminology and standards associated with computer networks
B. Advantages and disadvantages of various network operating systems and hardware configurations
C. Basic LAN design
D. The Open System Interconnection (OSI) model

II. Installation and Management of LANs 50%

A. Installing LAN hardware and software
B. Loading and configuring application software on a network
C. Connecting and configuring peripheral devices for network operation
D. Network management issues
E. Common faults affecting the performance of a LAN
F. Network Security
G. Data backup and recovery

III. Protocols and Software Considerations 15%

A. Communication protocols and their relationships to standards

B. Configuring a LAN workstation to support multiple common protocols
C. Configuring TCP/IP addresses for an intranet

IV. Specification and Selection of Local Area Networks 15%

A. Documenting existing systems
B. Methods of collecting information of system
C. Translating human and system needs into technical specifications
D. Request for proposals (RFPs) - Selecting and pricing hardware and/or software
E. Estimating network support costs

V. Network Certification Requirements 5%

TEXTBOOKS:

Required:

Hudson, C. (2000). *CCNA Guide to CISCO Networking Fundamentals.* Cambridge, MA: Course Technology.