

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: TELECOMMUNICATIONS AND FUTURISTICS
CODE NO.: EDP315 SEMESTER: FIVE
PROGRAM: PROGRAMMER/ANALYST
AUTHOR: FRAN DEW
DATE: SEPTEMBER, 1994
PREVIOUS OUTLINE DATED: SEPTEMBER, 1993

New: _____ Revision: _____ X

APPROVED: DEAN, SCHOOL OF BUSINESS & HOSPITALITY DATE

TELECOMMUNICATIONS & FUTURISTICS

EDP315

COURSE NAME

COURSE CODE

Total credit time: 60 hours

Prerequisites:

I PHILOSOPHY/GOALS:

This course provides a clear and comprehensive introduction to data communications systems. The major components, diagrams of how all the elements fit together, description of terminology, and differences among various networks and network carriers are explored. The future of data communications is also explored.

II STUDENT PERFORMANCE OBJECTIVES:

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

1. Describe data communications terminology and various hardware
2. Describe data communications terminology
3. Identify the various methods of data communication, including carriers, communications media and interfaces
4. Discuss and Compare data codes, different transmission modes, and protocols
5. Define Local Area Networks and various network architectures
6. Complete hands on experience with a telecommunications system
7. Explore the future of Data Communications

III TOPICS TO BE COVERED

1. Introduction to Data Communications
2. Data Communications Hardware
3. Fundamental Communication Concepts
4. Network Configurations
5. Communication Services (Circuits)
6. Protocols and Software
7. Local Area Networks
8. Network Management
9. Network Security and Control
10. Hands On Experience with a telecommunications package
11. Exploration of the future of Data Communications

IV LEARNING ACTIVITIES

1. Introduction to Data Communications

Learning Activities

- . describe the basics of data communications networks
- . list and describe broad classes of data communication applications and their requirements

2. Data Communications Hardware

Learning Activities

- . describe the basic mandatory hardware required to configure a data communications network
- . describe and discuss operation of equipment such as multiplexers, controllers and encryption devices

3. Fundamental Communication Concepts

Learning Activities

- . define and describe the basic technical concepts of data communications
- . describe the flow of data as a message travels from a terminal to a host computer

4. Network Configurations

Learning Activities

- . describe the basic building blocks that are connected when networks are developed

5. Communication Services (Circuits)

Learning Activities

- . define and discuss common carriers, tariffs and deregulation
- . describe the circuits that are available for voice and data networks and their transmission speeds
- . discuss networks packaged for commercial use

6. Protocols and Software

Learning Activities

- . define the differences among protocols, software and network architectures
- . trace the flow of a message through a network's various software packages
- . explain the seven layer Open Systems Interconnection

7. Local Area Networks

Learning Activities

- . discuss local area networks
- . explain how to install a LAN
- . discuss various components of a LAN, including bridges, routers, gateways
- . describe LAN selection and security

8. Network Management

Learning Activities

- . discuss the basic management skills needed to become a successful network manager
- . describe departmental functions, error testing, and other areas of network management

9. Network Security and Control

Learning Activities

- . explain the need for network security and control
- . discuss mechanisms for ensuring security

14. Hands On Experience with a telecommunications package

Learning Activities

- . utilize ONet and Internet, performing various functions

15. Exploration of the future of Data Communications

Learning Activities

- write summaries of magazine articles on relevant subjects, and write comments on each of them

V EVALUATION METHODS

Tests (3 @ 25%)	75%	Grading:	A+ 90 and over
Assignments	20%		A 80 and over
Participation	5%		B 70 and over
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	100%		R under 60

VI REQUIRED STUDENT RESOURCES

Text: "Business Data Communications" Fourth Edition
by Jerry Fitzgerald

available in the Campus Shop

VII ADDITIONAL RESOURCE MATERIALS

assorted computer magazines - available in the College
Library and Software Support

VIII SPECIAL NOTES

Assignments received after the due date are subject to a 10%
per day penalty.

Students with special needs, such as physical limitations,
visual impairments, hearing impairments, or learning
~~disabilities, are encouraged to discuss required~~
accommodations, confidentially, with the instructor.

Your instructor reserves the right to modify the course as
is deemed necessary to meet the needs of students.