SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: TELECOMMUNICATIONS AND FUTURISTICS

CODE NO.: EDP 315 **SEMESTER:** 5

PROGRAM: PROGRAMMER/ANALYST

AUTHOR: FRAN DEW

DATE: SEPTEMBER, 1995

PREVIOUS OUTLINE DATED:

New:_____ Revision: X

APPROVED:_____ _____

DEAN, SCHOOL OF BUSINESS & HOSPITALITY **DATE**

TELECOMMUNICATIONS AND FUTURISTICS **EDP 315**

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

ECOMMUNICATIONS AND FUTURISTICS — EDP 315

COURSE NAME — COURSE CODE

IV LEARNING ACTIVITIES

1. Introduction to Data Communications
   Upon successful completion of this unit, the student will be able to
   a describe the basics of data communications networks
   b list and describe broad classes of data communication applications and their requirements

   Reference: text pp 1–34

2. Data Communications Hardware
   Upon successful completion of this unit, the student will be able to
   a describe the basic mandatory hardware required to configure a data communications network
   b describe and discuss operation of equipment such as multiplexers, controllers and encryption devices

   Reference: text pp 80–147

3. Fundamental Communication Concepts
   Upon successful completion of this unit, the student will be able to
   a define and describe the basic technical concepts of data communications
   b describe the flow of data as a message travels from a terminal to a host computer

   Reference: text pp 148–220

4. Network Configurations
   Upon successful completion of this unit, the student will be able to
   a describe the basic building blocks that are connected when networks are developed

   Reference: text pp 221–266

IV LEARNING ACTIVITIES - Cont'd.

5. Communication Services (Circuits)
   Upon successful completion of this unit, the student will be able to
   a define and discuss common carriers, tariffs and deregulation
   b describe the circuits that are available for voice and data networks and their transmission speeds
   c discuss networks packaged for commercial use

   Reference: text pp 267-305

6. Protocols and Software
   Upon successful completion of this unit, the student will be able to
   a define the differences among protocols, software and network architectures
   b trace the flow of a message through a network's various software packages
   c explain the seven layer Open Systems Interconnection

   Reference: text pp 401-456

7. Local Area Networks
   Upon successful completion of this unit, the student will be able to
   a discuss local area networks
   b explain how to install a LAN
   c discuss various components of a LAN, including bridges, routers, gateways
   d describe LAN selection and security

   Reference: text pp 507-569

8. Network Management
   Upon successful completion of this unit, the student will be able to
   a discuss the basic management skills needed to become a successful network manager
   b describe departmental functions, error testing, and other areas of network management

   Reference: text pp 570-605

LECOMMUNICATIONS AND FUTURISTICS — EDP 315

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IV LEARNING ACTIVITIES - Cont'd.

9. Network Security and Control
   Upon successful completion of this unit, the student will be able to
   a explain the need for network security and control
   b discuss mechanisms for ensuring security

   Reference: text pp 606-676

14. Hands On Experience with a telecommunications package
   Upon successful completion of this unit, the student will be able to
   a utilize ONet, Internet and WWW (World Wide Web)
   b describe, and subscribe to, discussion groups
   c download articles on Telecommunications from sites the student has found

   Reference: handouts and e-mail messages

15. Exploration of the future of Data Communications
   Upon successful completion of this unit, the student will be able to
   a analyze trends in telecommunications, and the computer industry by writing summaries of articles on relevant subjects, and writing comments on each of the articles

   Reference: computer magazines in the Library and Software Support
   articles at various sites on the Internet

V EVALUATION METHODS

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

TELECOMMUNICATIONS AND FUTURISTICS — COURSE NAME

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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.