



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

COURSE OUTLINE

COURSE TITLE: _____
COMPUTER CONCEPTS

CODE NO.: _____ EDP121 SEMESTER: _____ ONE

PROGRAM: _____
BUSINESS

AUTHOR: _____
WIL DEBRUYNE

DATE: _____
SEPTEMBER, 1994

PREVIOUS OUTLINE
DATED: _____

New: _____ X Revision: _____

APPROVED: _____
DEAN, SCHOOL OF BUSINESS &
HOSPITALITY

DATE _____

COMPUTER CONCEPTS

EDP121

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REQUIRED STUDENT RESOURCES:

Texts: Computer Essentials, by Hutchinson and Sawyer

VAX - Basic with Structured Problem Solving, by Weinman and Kurshan

Instructor Notes to be handed out in class. The notes will cover VAX/VMS concepts, E-Mail, and the EDT Editor.

SPECIAL NOTES:

Assignments received after the due date are subject to a grade of zero unless prior permission from instructor is received.

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

EVALUATION:

4 Tests	Test 1 (Concepts)	15%
	Test 2 (Concepts)	15%
	Test 3 (VAX Basics)	20%
	Test 4 (Programming)	30%
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		80%
4 Assignments @ 5%		20%
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		100%

PHILOSOPHY/GOALS:

Most employers do not expect potential employees to be computer experts. However, they do expect them to be prepared to use a computer as a tool to solve business related problems. In a job interview, you will probably be asked: "What do you know about computers?" and "What kind of software/hardware are you familiar with?" Therefore, the more you know about computers the better prepared you will be in your career.

This course will focus on the computer concepts (12 hours), VAX/VMS concepts focusing on E-mail and the EDT editor (10 hours), as well as programming using VAX Basic (12 hours).

MODULE 1: (COMPUTER CONCEPTS)

Objectives:

OVERVIEW OF THE COMPUTER:

- define what it means to be computer literate and computer competent
- describe the four main types of computer systems
- explain what a computer system is by focusing on hardware, software, data/information, procedures, people, and connectivity
- briefly describe the four phases of a computer-based information system: input, processing, output, storage
- name the three main parts of a microcomputer system
- distinguish between batch and on-line processing
- describe how data is organized in a computer system
- briefly describe the five generations of computer development
- discuss the difference between general computer users and several types of computer professionals

HARDWARE:

- describe the functions of the four basic hardware components of a computer system
- identify the most widely used input devices
- name the two main parts of the central processing unit and distinguish between random access memory and read-only memory
- describe the difference between primary and secondary storage and name the common secondary storage devices
- describe the basic forms of softcopy and hardcopy output and the types of hardware used to produce them

APPLICATIONS: SYSTEMS SOFTWARE:

- describe what applications software is and explain why you should try to evaluate your applications software requirements before your hardware and systems software requirements
- categorize the types of applications software
- list and describe three types of systems software
- explain the basic functions of an operating system and utilities
- name the most common operating systems available for microcomputers
- list some points to consider when purchasing microcomputer applications or systems software

COMMUNICATIONS:

- identify the basic characteristics of data transmission
- describe basic communications hardware in general terms
- describe the basic operation and uses of a fax machine
- explain what a communications network is and describe the typical network configurations
- list some of the information services available to personal computer users
- briefly explain what computer viruses are and what can be done about them

FILES AND DATABASES:

- explain what a database is
- describe the difference between file management systems and database management systems
- describe how database management systems software relates to hardware and the user
- identify the advantages and the disadvantages of the three database models and of database management systems in general
- explain the importance of database administration within an organization

MIS AND SYSTEMS DEVELOPMENT:

- describe a basic management information system and explain its role in the organization
- describe the levels of management, the five basic functions of managers, and the types of decisions typically made at each level
- distinguish among transaction processing systems for lower management; management information systems for middle management; and executive information systems, decision support systems, and expert systems for top management
- briefly explain the functions of an information center
- identify the six phases of an information system's development life cycle

SECURITY, PRIVACY, ETHICAL ISSUES:

- discuss the issue of computers and the unethical invasion of privacy through the use of databases and networks
- name some of the things that credit-reporting bureaus are doing to improve report accuracy and protect data
- discuss the major laws passed in the United States to protect citizens' privacy and prevent the misuse of computers
- define computer crime and give some examples of it along with ways to protect computer security
- discuss the major hazards for computer systems
- define software piracy and copyright violation and describe freeware, shareware, and public-domain software

PURCHASING A COMPUTER:

- explain what should be considered before purchasing a microcomputer system
- maintain a microcomputer system on a daily basis so that it can be relied on over time

COMPUTER CONCEPTS

EDP121

- explain some of the health concerns associated with frequent computer use, and describe some of the ergonomic options open to users
- describe some of the options open to the environmentally aware computer user

MODULE 2: (VAX/VMS CONCEPTS)

Objectives:

THE VAX:

- describe the hardware configuration associated with the VAX4300
- use username and password to access their accounts
- understand directory and file structures on the VAX
- understand the syntax of DCL commands
- use DCL commands to manage files
- print ASCII files
- use on-line HELP
- understand file specifications, modes, devices, directories, files
- develop command procedures

THE EDT EDITOR:

- access the EDT editor
- create and save an ASCII file using the editor
- use the function keys to perform a wide range of editing functions
- explore command EDT keypad commands

VAX/VMS MAIL UTILITY:

- send mail messages to other users
- read mail messages from other users
- print mail messages
- forward messages to other users
- manage your mail files
- create and use distribution lists
- edit messages
- extract messages
- manage your folders

MODULE 3: (PROGRAMMING USING VAX BASIC)

- enter a simple program, store it on disk, and load it back into the computer's memory
- edit program statements
- describe the three levels of programming languages
- list the four steps used in problem-solving
- list the three basic logic structures
- differentiate between numeric and character string constants and give examples of each
- use numeric and character string constants correctly in programs
- explain how variables string constants correctly in programs
- list the rules for naming variables
- assign values to variables
- define the term "keyword"
- correct document programs

- perform arithmetic operations using both constants and variables
- evaluate arithmetic expressions according to the order of operations
- display program output on the screen
- use the help function
- use the INPUT statement to allow data to be entered during program execution
- use the READ and DATA statements to enter data into programs
- explain the advantages and disadvantages of each of these methods of entering data
- write programs so that the output is formatted in a readable way
- use commas, semicolons, and TAB, to format output
- explain how the PRINT USING statement works and use it when appropriate
- define the term "control structures"
- use block IF statements to create decision structures
- explain the difference between single-alternative and double-alternative decision structures
- explain and use relational operators in expressions