SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: INTRODUCTION TO DATA PROCESSING

CODE NO.: EDP100 **SEMESTER:** ONE

PROGRAM: BUSINESS COMMON

AUTHOR: WIL DEBRUYNE/ BOB LAILEY/ DENNIS OCHOSKI

DATE: SEPTEMBER, 1993

PREVIOUS OUTLINE DATED: SEPTEMBER, 1992

New:_____ Revision:_____

APPROVED: _____ 93-07-07
DEAN, SCHOOL OF BUSINESS & HOSPITALITY **DATE**

INTRO TO DATA PROCESSING — COURSE NAME

EDP100 — COURSE CODE

REQUIRED STUDENT RESOURCES:

Texts: 1) Computers: Concepts and Applications for Users with QBasic, 2nd edition, by Robert Nickerson

2) "Maran Graphics' Simplified Computer Guides Package:
- MS DOS 5.0
- WordPerfect 5.1
- Lotus 1-2-3 2.3

Disks: 2, 5 1/4" floppy disks (available in most stores)

SPECIAL NOTES:

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

For the microcomputing section of this course, students are advised to maintain a backup of all files on disk. Loss of an assignment due to a lost or damaged disk is not an acceptable reason for a late or incomplete assignment.

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.

EVALUATION METHODS:

Part 'A':		
Tests (3 @ 13%)		39%
Part 'B':		
Tests	- Micro/DOS	6%
	- WordPerfect	10%
	- QBasic	10%
	- Lotus 1-2-3	10%
Assignments	- Micro/DOS	4%
	- WordPerfect	7%
	- QBasic	7%
	- Lotus 1-2-3	7%
		100%

INTRO TO DATA PROCESSING EDP100

PHILOSOPHY/GOALS:

Microcomputers have become standard equipment in schools and businesses. The users of microcomputers can utilize packaged software or write their own applications using a programming language. Since most end-users are not computer programmers, and the majority of students taking this course will not become computer programmers, the course will emphasize a practical approach to learning both computer hardware and software, and how they function together. The student will learn to use an operating system, a wordprocessor, a spreadsheet, and programming principals, as well as gain an understanding of computer concepts.

COURSE OBJECTIVES:

1. Distinguish among the different hardware and software components of a computer system, and know different commercial and educational uses of computer systems
2. Understand the general functions of an operating system
3. Understand word processing concepts
4. Understand spreadsheet software concepts
5. Understand programming concepts

PART 'A': The following modules pertain specifically to the theoretical concepts discussed in the course.

MODULE 1: This module gives an overview of basic computer concepts (Chapter 1)

Objectives: When this module is completed, the student should be able to:

1) Understand the need for computer literacy
2) Describe the characteristics of a computer and outline some of its capabilities
3) Describe how and where computers are used
4) Describe the terms "user" and "application"

MODULE 2: This module gives an overview of the make-up of computer systems (Chapter 2)

Objectives: When this module is completed, the student should be able to:

1) Identify the hardware components in a basic computer system and describe the functions of each component
2) Differentiate among the different types of computers
3) Explain how a computer executes a program
4) Differentiate between application software and system software

MODULE 3: This module gives a more detailed look at the components of a computer system (Chapters 3,4,5)

Objectives: When this module is completed, the student should be able to:

1) Identify the processing problems a user may face and how these problems may be solved
2) Explain how data is stored in primary storage
3) Discuss the capacity of storage locations
4) Describe the components of the central processing unit (CPU)
5) Discuss program compatibility and CPU design
6) Describe input and output devices associated with microcomputers, minis, and mainframes
7) Describe devices used for data preparation
8) Define the term "ergonomics"
9) Explain why secondary storage is used
10) Identify the media and devices used for both on-line and off-line storage and how data is stored and retrieved
11) Differentiate between sequential access and random access
12) Compare the types of file organization

MODULE 4: This module gives an overview of communications systems (Chapter 6)

Objectives: When this module is completed, the student should be able to:

1) Understand the converging computing/communications setting
2) Describe the data transmission techniques and channels
3) Outline the hardware and software components used to coordinate a communication network
4) Differentiate between local area networks (LANs) and wide area networks (WADNs)

MODULE 5: This module gives an overview of operating systems and other software used in a computer system (Chapters 7-13)

Objectives: When this module is completed, the student should be able to:

1) Outline the role of operating system software and describe some of the tasks performed
2) Describe the components of an operating system and differentiate among the types available
3) Discuss what is meant by the term "word processing"
4) Describe the main functions of word processing software
5) Discuss what is meant by the term "desktop publishing"
6) Describe an electronic spreadsheet and discuss spreadsheet applications
7) Differentiate between file management software and database management software, and describe situations in which data management is used
8) Discuss the forms of graphic output and describe the graphics software available
9) Explain the reasons for the integration of application software and outline the forms of integration used
10) Explain the need for custom-made software and give examples of systems with customized elements
11) Identify and discuss the steps in the structured programming process
12) Outline the features and uses of machine language, assembly language, and high-level (3rd, 4th, 5th generation) languages

MODULE 6: This module explains the basic concepts about information systems (Chapters 14-17)

Objectives: When this module is completed, the student should be able to:

1) Explain what an information system is and differentiate between data and information
2) Identify the components and discuss the functions of an information system
3) Differentiate between batch processing and interactive processing
4) Describe the types of information systems
5) Explain the purpose of a transaction processing system
6) Discuss management information systems, decision support systems, expert systems, office automation systems, and executive support systems
7) Briefly explain the concept of a database and its advantages
8) Outline the phases in the systems development process and discuss some of the tools used in this process

MODULE 7: This module discusses the trends for the future of computers.

Objectives: When this module is completed, the student should be able to:

1) Discuss the advantages and disadvantages of computers to society
2) Discuss the proliferation of computer crime
3) Identify some of the trends in computers
4) Discuss the employment opportunities in the information technology field
5) Outline the educational opportunities and the professional development requirements needed to remain current in the field of computers

PART 'B': The following modules pertain specifically to the hands-on portion of the course and will be discussed concurrently with the theoretical concepts in Part 'A'.

MODULE 1: Orientation to Microcomputer Lab & Disk Operating System

Objectives: At the completion of this module, the student should be able to:

1) Operate the microcomputer equipment located in the lab or student workroom in order to complete assigned tasks
2) Log on to and log off from a microcomputer system attached to a network
3) Boot a microcomputer system from a diskette or hard drive
4) Explain the major steps that take place when a microcomputer is logged on to a network or booted from a disk
5) Check and/or modify the following features on a microcomputer system - Time, Date, Default Drive, Default Directory
6) Explain the purpose and general capabilities of an operating system
7) Explain the use of the following DOS commands: CHKDSK, CLS, COPY, DATE, DEL, DIR, FORMAT, PRINT, REN, TIME, TYPE, VER, XCOPY
8) Execute the commands listed in objective #7 from the DOS command line
9) Load the DOS shell and execute the commands listed in objective #7 from the shell
10) Identify and describe the use of the various components that make up the DOS shell
11) Explain how the DOS shell display can be customized
12) Create, manage and delete subdirectories on disk using the following DOS commands - MD, CD, RD

MODULE 2: Word Processing Using WordPerfect 5.1

Objectives: At the completion of this module, the student should be able to:

1) Clearly describe the meaning of a number of terms related to word-processing. These terms will be identified in the text or in the lab.

   Examples of such terms are: word processing, word wrap, text, select, typeover, context-sensitive help, etc.

2) Identify and clearly describe a variety of features or capabilities found in most word processing products.

3) Explain the use of all WordPerfect features covered in class and/or assignments.

4) Execute all WordPerfect features covered by utilizing both function keys and pull-down menus.

5) Create, name, save, retrieve, edit, preview, and print basic documents using WordPerfect 5.1.

6) Utilize the insert and typeover modes, the move and copy feature, and the backspace and delete keys to modify the contents of a document.

7) Describe at least six facts that can be determined by examining the Status Line in a WordPerfect document.

8) Explain the use of codes within WordPerfect including the reason why codes are normally not visible.

9) Use the Reveal Codes feature to locate and delete unwanted text or codes.

MODULE 3: Programming Using QBasic

Objectives: When this module is completed, the student should be able to:

1) Access QBasic and identify the different parts of the QBasic screen.

2) Explain how to select commands from the QBasic menu bar.

MODULE 3: (cont'd)

3) Enter a simple program, store it on disk, and load it back into the computer's memory.

4) Edit program statements.

5) Describe the three levels of programming languages.

6) List the four steps used in problem-solving.

7) List the three basic logic structures.

8) Differentiate between numeric and character string constants and give examples of each.

9) Use numeric and character string constants correctly in programs.

10) Explain how variables string constants correctly in programs.

11) List the rules for naming variables.

12) Assign values to variables.

13) Define the term "keyword".

14) Correctly document programs.

15) Perform arithmetic operations using both constants and variables.

16) Evaluate arithmetic expressions according to the order of operations.

17) Display program output on the screen.

18) use the help functions in QBasic.

19) Use the INPUT statement to allow data to be entered during program execution.

20) Use the READ and DATA statements to enter data into programs.

21) Explain the advantages and disadvantages of each of these methods of entering data.

22) Write programs so that the output is formatted in a readable way.

23) Use commas, semicolons, TAB, and SPC, to format output.

24) Explain how the PRINT USING statement works and use it when appropriate.

25) Define the term "control structures".

26) Use block IF statements to create decision structures.

27) Explain the difference between single-alternative and double-alternative decision structures.

28) Explain and use relational operators in expressions.

Module 4: Spreadsheets Using Lotus 1-2-3

Objectives: When this module is completed, the student should be able to:

1) Identify the components of a spreadsheet and discuss spreadsheet applications.

2) Move the cursor around the spreadsheet.

3) Access the Help facility.

4) Exit Lotus 1-2-3.

5) Distinguish between label and value entries.

6) Enter labels and values.

7) Make corrections to cell entries.

8) Understand mathematical operators.

9) Enter formulas.

10) Use the menu system and commands.

11) Save, clear, retrieve, and print spreadsheets.

12) Adjust column widths.

13) Understand and use ranges.

14) Understand and use the SUM and AVG functions.

15) Use the COPY command to copy formulas and functions.