SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Outline: INTRODUCTION TO DATA PROCESSING

Code No.: EDP100-5

Program: BUSINESS (COMMON)

Semester: ONE

Date: September 1985

Author: J. Mitchell

New: _____ Revision: X

APPROVED: _____ 85-05-20
Chairperson Date

INTRODUCTION TO DATA PROCESSING

EDP100-5

TIME: 5 periods per week for 1 semester

TEXT: Computer Fundamentals for an Information Age - Shelly & Cashman
Programming in BASIC: The First Steps - Robert G. Bell

AIM: This introductory course will be taken by all students in Semester 1 of the Business Administration program. Some of these students will decide to specialize in Data Processing while others will choose one of the other business options.

This course is intended to provide:

1. A grounding in Data Processing principles and methods which will be a pre-requisite to more advanced courses for those students electing to specialize in Data Processing.

2. An appreciation of Data Processing principles, methods & capabilities for those students who elect to specialize in an area other than Data Processing.

3. Sufficient exposure to Data Processing to enable the student to decide whether his/her interest and/or aptitude lies in this area.

OBJECTIVES:

When this course is completed the student will be able to:

(1) define data processing and discuss its importance in today's society
(2) describe the three basic functions common to all data processing: input, processing, and output
(3) describe the functional units of a computer system: the processor, primary and secondary storage, input devices, and output devices

OBJECTIVES (cont'd)

(4) define the concepts of data and programs
(5) describe the various people involved in a data processing environment: programmer, systems analyst, and user
(6) differentiate between batch input and transaction input
(7) carry out the steps necessary to use the computer as a problem-solving tool
(8) discuss and create flowcharts to show the logic needed to solve a problem
(9) write the BASIC programs necessary to solve a given problem

STUDENT EVALUATION:

The student's final grade will consist of the following componets:

Tests (4 @ 15%)	-	60%
Quizzes (5 @ 20%)	-	20%
Assignments (4 @ 5%)	-	20%
Case Study	-	5%
Class Involvement	-	5%
		100%

ASSIGNMENT DEADLINES: Each assignment must be handed in ON TIME, otherwise they are subject to a 10% deduction per day late.

All assignments must be handed in before end of term, otherwise the student has not fully completed the course and is subject to receiving an "R" grade.

GRADING:
"A" = 85 - 100%
"B" = 70 - 84%
"C" = 55 - 69%
"R" = 0 - 54%

NOTE: A student will be allowed to do a re-write if:

(1) he/she has a passing final grade and wants to better that grade
(2) he/she does not have a passing final grade and this grade is 45% or better, and he/she has not failed more than two of the four tests given

If the student has written the re-write, his/her mark for the tests (i.e. mark out of 60) will now be assigned as follows:

$$[(\text{average of 4 tests} \times .5) + (\text{mark on re-write} \times .5)] \times \frac{60}{100}$$

Material to be Covered:

PART A: The following topics are referenced to Bohl:

TOPIC	DESCRIPTION	REFERENCE
1	Introduction to Computers	Chapter 1
	- what is a computer - what computers can do - data processing defined - the people & equipment in the industry	
2	Evolution of the Computer Industry	Chapter 1
	- historical figures & early devices - 4 generations of computers - programming language developments - new developments and the future	
3	The Processing of Data	Chapter 2
	- input/process/output cycle - the program and data - files, records, fields - the computer system	
4	Computer Input	Chapter 5
	- input media - input data representation - batch & transaction - oriented input - preparation of data - dedicated and specialized input devices	
5	Computer Output	Chapter 6
	- types of output - types of printers - types of reports	

Material to be Covered (cont'd)

TOPIC	DESCRIPTION	REFERENCE
6	The Central Processor	Chapter 8
	- data representation in the computer	
	- components of the CPU	
	- how data is stored and accessed	
	- executing instructions	
7	Storing Data	Chapter 9
	- storage media	
	- data access, retrieval, update	
	- file organization methods	
8	Familiarization with	
	- systems analysis and design	Chapter 15
	- programming languages	Chapter 13
	- operating systems	Chapter 14
	- data communications	Chapter 11

PART B: Programming: using the BASIC language
: to be an on-going learning processing throughout the course, running concurrently with theoretical concepts. Applications and procedures using the "hands-on" method.

TOPIC	DESCRIPTION	REFERENCE
1	Introduction - programming - computing - what you will be using - your workspace	Bell - Chapter 1 Pages 8-12
2	Working with the Computer - signing-on the computer - your password & how to change it - signing-off the computer	Bell - Chapter 2 Lecture notes
3	BASIC Commands - BASIC defined - commands: LIST, RUN, SCRATCH, SEQUENCE, LOAD, SAVE, NEW, OLD, REPLACE	Bell - Chapter 2 Lecture notes
4	Writing a BASIC Program - sequence numbers - adding, deleting, & changing lines - BASIC statements: LET, PRINT, END, READ & DATA	Bell-chapter 2 -chapter 2 -chapter 4 -chapter 3 -chapter 2 -chapter 5,7

PART B (cont'd)

TOPIC	DESCRIPTION	REFERENCE
5	Program Design - program specifications - flowcharting - structured programming - documentation	Bohl-chapte Bell-chapte
6	Control Statements - branching and comparing - the GO TO statement - the IF statement	Bell-chapte