SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: INTRODUCTION TO COMPUTER SCIENCE

Code No.: CET 105

Program: COMPUTER ENGINEERING TECHNOLOGY

Semester: ONE

Date: FALL 1989

Author: F. TURCO

New: _ Revision: X

Approved: _____ Date: 89/09/28

Chairperson

C E T 1 0 5

C O U R S E O U T L I N E

LENGTH OF COURSE: 5 PERIODS PER WEEK FOR 1 SEMESTER

TEXT: "COMPUTERS TODAY 3RD EDITION" - BY DONALD SANDERS

"USING COMPUTER APPLICATIONS SOFTWARE FOR THE IBM PC"
BY LON INGALSBE

OBJECTIVES

GENERAL:

The objective of this course are to:

1. Introduce the student to the general concepts of the computer field.

2. Develop the student's computer vocabulary.

3. Familiarize the student with the hardware and software that is used in the CET program.

4. Familiarize the student with the overall goals of the CET program, and the means of implementing them.

ASSESSMENT:

The final mark in the course will be arrived at as follows:

Tests and quizzes	65%
Assignments and labs	25%
Participation and Attendance	10%

Grades will be determined as follows:

A+	90 % to 100 %
A	80 % to 89 %
B	70 % to 79 %
C	55 % to 69 %
R	0 % to 54 %

SPECIFIC OBJECTIVES

THEORY

The theory of the course will follow Sanders. Periodically, usually at the end of a block, tests will be held. Prior to tests, specific requirements for that particular test will be detailed.

BLOCK 1: BACKGROUND

At the end of this block the student shall be able to:

1. Describe the general organization of a computer system and its characteristics.
2. Describe the historical development of the computer.
3. Discuss typical applications of the computer.
4. Describe the stages of development of software systems.
5. Discuss the impact of computers on individuals and organizations.

BLOCK 2: HARDWARE

At the end of this block the student will be able to:

1. Describe the organization of a CPU and it's general operation.
2. Discuss main memory concepts, and it's development.
3. Discuss data entry devices and techniques.
4. Discuss secondary storage and output devices and techniques.
5. Discuss the various levels of computer systems in use today.

BLOCK 3: SYSTEMS AND SOFTWARE

At the end of this block the student will be able to:

1. Discuss data communications techniques and applications.
2. Discuss the applications of word processing.
3. Discuss systems development techniques.
4. Discuss the characteristics of operating systems.
5. Discuss the types and uses of DBMS software.
6. Discuss MIS concepts.
7. Compare a variety of computer languages.

BLOCK 4: THE SOCIAL IMPACT OF THE COMPUTER

At the end of this block the student shall be able to:

1. Discuss the concept of artificial intelligence.
2. Discuss the good and bad effects that computer technology may have on people and organizations.
3. Discuss future trends in computer technology.

LAB WORK:

The lab work in this course is intended to support the theory. The concepts are the central focus, with the development of rigorous skills left to the future specialized courses. The labs will cover:

1. COMPUTER FAMILIARIZATION:

   A PC based computer illustration package will be used to familiarize the student with the special functions and keys on the keypad.

2. KEYBOARDING SKILLS:

   A PC or Vax based interactive keyboarding system will be used to develop keyboarding skills.

3. OPERATING SYSTEMS:

   The student will learn and use MSDOS commands. He/She will learn to work effectively in a DOS environment.

4. WORDPROCESSING:

   Wordprocessing will be done on the PC using WORDPERFECT.

5. HARDWARE:

   The student will be introduced to CET Hardware.

LAB SPECIFIC OBJECTIVES

BLOCK 1 COMPUTER FAMILIARIZATION:

In this block, students will be given a software package called PC INSTRUCTOR to help become accustomed to the keyboard and the special function keys. This package can be obtained from the software development support group and must be returned by the end of the semester.

BLOCK 2 KEYBOARDING SKILLS:

In this block, students will practice their keyboarding skills. The software package is called TYPEQUICK and is available at the campus book store for a nominal fee. The objective is not to create super typists but rather to eliminate loss of software development time in the future due to poor typing habits. (ie. two finger typing, etc.)

BLOCK 3 MS-DOS

In this block, students will learn to use all MS-DOS commands appropriately, and will learn to work efficiently in a DOS environment. This block will be based primarily on a set of DOS COURSE NOTES. The commands and concepts to be learned will be grouped under the following headings:

1. Introduction to MS-DOS and the IBM PC.
2. File Handling and Disk Management
3. Utilizing Filters and Pipes
4. Managing Tree-structured Directory Systems
5. Managing Devices
6. Batch Files
7. Backup and Restore

BLOCK 4: WORDPERFECT Word Processing

This block will teach the use of WORDPERFECT word processing software in the creation, editing and printing of documents.

All of the major features and many of the secondary features will be studied and tested. A final list of features will be listed for testing purposes. The following is a tentative list:

1. Cursor control
2. Cut, copy, move and delete word, sentence, page, block
3. Text attributes: bold, underline
4. Case conversion
5. Saving, retrieving and viewing files
6. Column text (newspaper style documents)
7. Deleting text
8. Printer control and formatting
9. Page numbering
10. Headers and footers
11. Defining keystroke MACROS to implement user-defined functions
12. Margin control and Indenting
13. Line drawing
14. Searching for(or replacing) text or control codes in a document
15. Sorting and merging
16. Using the Spelling checker
17. Using the Thesaurus
18. Creating a Table of Contents
19. Using Windows
20. Page size and format
21. Math mode

GRADING SCHEME

1. TESTS

Written tests will be conducted as deemed necessary; generally at the end of each block of work. They will be announced about one week in advance. Practical on-line tests will be conducted in which time to complete the assigned problems will be a factor in the evaluation. Quizzes may be conducted without advance warning.

2. ASSIGNMENTS

Assignments not completed by the assigned due-date will be penalized by 5% per day late. All assignments must be completed satisfactorily to complete the course.

3. GRADING SCHEME

A+	90	-	100%	Outstanding achievement
A	80	-	89%	Excellent achievement
B	70	-	79%	Average Achievement
C	55	-	69%	Satisfactory Achievement

I — Incomplete: Course work not complete at Mid-term. Only used at mid-term.

R — Repeat

X — A temporary grade that is limited to instances where special circumstances have prevented the student from completing objectives by the end of the semester. An X grade must be authorized by the Chairperson. It reverts to an R if not upgraded in an agreed-upon time, less than 120 days.

4. UPGRADING OF INCOMPLETE

When a student's course work is incomplete or final grade is below 55%, there is the possibility of upgrading to a pass when the student's performance warrants it. Attendance and assignment completion will have a bearing on whether upgrading will be allowed. A failing grade on all tests will remove the option of any upgrading and an R grade will result. The highest grade on re-written tests or assignments will be 56%.

Where a student's overall performance has been consistently unsatisfactory, an R grade may be assigned without the option of make-up work.

The method of upgrading is at the discretion of the teacher and may consist of one or more of the following options: assigned make-up work, re-doing assignments, re-writing of tests, or writing a comprehensive supplemental examination.