

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: **INTRODUCTION TO COMPUTER APPLICATIONS**

Code No.: **CET110** Semester: **First (1)** or for some programs **Second (2)**

Program: **School of Engineering Technology Programs**

Author: **Professor Peter Savich**

Date: **December 1995**

Previous Outline Dated: **August 1995**

APPROVED:

P. Savich 96-01-04
Dean Date

Total Credits: 3

PREREQUISITE(S): None

LENGTH OF COURSE: 16 weeks

TOTAL CREDIT HOURS: 48

Course Name:
Introduction to Computer Applications

Course No.:
CET 110

COURSE OUTLINE

I. COURSE DESCRIPTION:

This course is designed to provide the student, the necessary skills related to **application software for the PC environment** (at the introductory post-secondary level). This course will require the student to “use a variety of computer hardware and software and other technological tools appropriate and necessary to the performance of tasks” (Ministry of Education and Training CSAC Generic Skills Learning Outcomes (May 1995). Sault College uses the operating systems: Windows ver 3.1 operating system and the MS DOS ver 6.2 operating system. Two particular applications software packages: word processing and spreadsheet analysis will be studied in-depth. Sault College uses the licensed application software packages: WordPerfect 6.0 and 6.1 for Windows (word processing package); and Quattro Pro ver 6 for windows (spreadsheet package).

II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

(Generic Skills Learning Outcomes placement on the course outline will be determined and communicated at a later date)

A. Learning Outcomes:

1. Describe the general concepts encompassing the following generic application software packages: word processing and spreadsheets.
2. Demonstrate proficiency in using up-to date operating systems for microcomputers. Sault College uses the Windows (ver 3.1) operating system and the MS DOS ver 6.2 operating systems.
3. Produce multi-page documents containing **text, tables** and **graphics** using an up-to-date word processing/spreadsheet package (recommended package is WordPerfect 6.0 or 6.1 for Windows).
4. Produce multi-slide graph slide shows utilizing a spreadsheet package (recommended package is Quattro Pro ver 6 for Windows) and integrate the spreadsheet files containing worksheets and graphics with word processing software to produce charts, tables, and graphs.

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B. Learning Outcomes with Elements of Performance:

Upon successful completion of this course the student will demonstrate the ability to:

1. Describe the general concepts encompassing the following generic application software packages: word processing and spreadsheets.

Elements of the performance:

- present a brief history of the most popular word processing and spreadsheet programs.
- explain why software programs are dependent on the operating systems and hardware constraints.
- decide which word processing and spreadsheet package the student wishes to gain proficiency in using.

This will constitute approximately 1% of the course grade

2. Demonstrate proficiency in using up-to date operating systems for microcomputers. Sault College uses the MS DOS ver 6.2 operating systems and the Windows (ver 3.1) operating system.

Elements of the performance for MS DOS operating system:

- format a 3.5" floppy disk using the Sault College main menu- utilities sub-menu
- exit Sault College main menu and go to MS DOS
- change drives
- install DOSKEY and use the arrow keys to efficiently enter DOS commands
- create, change, and remove sub-directories using the MD, CD, and RD commands
- edit files producing *.txt file extension files using the EDIT command
- copy files from one sub-directory to another sub-directory using the COPY command
- list files using the DIR and TREE commands
- rename files in a sub-directory using the RENAME command
- delete files using the DEL command
- print or type contents of a ASCII text file (*.txt) to the printer or screen (monitor) using the PRINT and TYPE commands
- use the online help MS DOS command HELP
- return to Sault College main menu using the MENU batch file/command

Course Name:**Course No.:****Introduction to Computer Applications****CET 110****Elements of the performance for the Windows Operating system:**

- load the Windows operating system from the Sault College main menu choices
- activate the main icon in Windows and go into file manager
- use the pull down menus and icon selection choices that will result in files being copied, edited, renamed, deleted, and moved. Use the icons and pull down menus to create, rename, and remove sub-directories.
- switch tasks in Windows environments
- use the online help for Windows using the pull down menu HELP

The MS DOS and WINDOWS operating system module will constitute 33% of the course's grade.

3. Produce multi-page documents containing **text, tables** and **graphics** using an up-to-date word processing/spreadsheet package (recommended package is WordPerfect 6.0 or 6.1 for Windows).

Elements of the performance for the word processing module:

- using the Sault College main menu enter Windows and select the word processing icon
- open a file, close a file, save a file produced using the word processing package
- edit the text within the file as to: bold, underline, italics, font type, font size
- edit the document as to format: margins, line spacing, centre, flush right, justification (left, right, centre, full), indent, page numbering
- use the editor provided by the word processing package for producing headers and footers
- use the spell check (both main and supplementary), and thesaurus tools provided by the word processing package
- use the table editor to create, edit tables. Join and split cells within the table, modify column widths, insert and delete rows and columns within the table. Move contents of a cell to another cell within the table
- use the equations editor provided within the word processing package to produce formulas for physics and math equations. Save the files as *.eqn file types and insert files of this type into the equation editor. Change the font size for the equations and redisplay. Close the equations editor and return the main editor.
- type text that requires superscript and subscript and normal font selections
- import spreadsheet files into the word processing package. Use import or create link techniques to get all or part of the spreadsheet imported into the document
- insert graphic images into the file. (either graphic documents part of the word processing package or others such as *.bmp, *.gif, *.pic). Move, and re-size the graphic images.
- use the reveal codes feature of the word processing package to help edit or modify or confirm various selections made within the document. Zoom in and out the page size.
- print the document (full or current page) using the print control feature provided by the word processing package

This word processing module will constitute 33% of the course's grade.

4. Produce multi-slide graph slide shows utilizing a spreadsheet package (recommended package is Quattro Pro ver 6 for windows) and integrate the spreadsheet files containing worksheets and graphics with word processing software to produce charts, tables, and graphs.

Elements of the performance for the spreadsheet module:

- using the Sault College main menu enter windows and select the spreadsheet package icon
- open a file, close a file, save a file produced using the spreadsheet package
- navigate the mouse to enter any cell within the worksheet, any active page within the worksheet.
- edit the cell as to format: font type, font size, text colour, alignment (left, centre, right alignment), numeric format (fixed, currency, scientific, etc.), constraints (protected, unprotected), shading, reveal/hide, and column width and row height.
- edit the active page as to: display, zoom factor, name, protection (enabled or disabled)
- use the @sum, @avg, @min, @max functions to calculate the sum, average and determine the minimum, maximum numbers for a selected range of data. Use the icon and pull down menu approaches provided within the spreadsheet package.
- Edit the edit window to alter the formulas providing basic arithmetic operations such as add, multiply, divide, and subtract (+,*,/, -). Use the cut, copy and paste icon or pull down menu feature provided by the spreadsheet package to copy formulas
- produce graphs (single series y - axis and multi-series y - axis). Produce copies of a graph and alter the graphs such that the type (2-d, 3-d, pie, bar, line, XY, combo, etc) is different amongst the copies, the font size and text colour of the titles amongst the copies are also different. Export the graphs as separate files to a disk. Insert the graphs into the worksheet.
- print (or print preview) the current page, part of the page or a graphic inserted within the page of the worksheet
- produce a slide show and run the slide show of the various graphs produced using the spreadsheet package. Edit the slide show by re-arranging, adding, deleting various graphs.
- exit the spreadsheet package and enter a word processing package and import the spreadsheet package's worksheet and the exported graphics files. Add text and produce a word processing document that contains: text, graphics, tables. Save the word processing document.

This spreadsheet module will constitute 33% of the course's grade.

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III. TOPICS TO BE COVERED

Note: These topics sometimes overlap several areas of skill development and are not necessarily intended to be explored in isolated learning units or in order below.

1. Generic application software packages: word processing, spreadsheets,
2. Essential computer concepts
3. Effective file management (files and sub-directories)
4. Word processing document creation
5. Word processing document formatting and editing
6. Word processing and spreadsheet software integration
7. Spreadsheet planning, building, testing and documentation
8. Spreadsheet functions, formulas and absolute references
9. Spreadsheet report formatting and printing
10. Spreadsheet graphs and graph slide presentations

IV. Required Student Resources

1. "Microsoft Windows 3.1 and DOS"
Publishers: Course Technology. ISBN 1-56527-238-2
2. "WordPerfect 6.0 for Windows"
Publishers: Course Technology. ISBN 1-56527-082-7
3. "Quattro Pro 6.0 for Windows"
Publishers: Course Technology. ISBN 1-56527-162-9

The above named books are sold as a package and is available at the College Bookstore.
The **ISBN number is 0-17-605500-2.**

4. At least five (5) 3.5" high density floppy disks.

V. METHOD(S) OF EVALUATION

The concept of "**outcome based learning**" has been incorporated into the evaluation system of this course. This implies that the student must **demonstrate proficiency (be evaluated and pass at least the assignment)** in each of the four defined outcomes in section II in order to obtain credit in this course. The word processing module, the spreadsheet module, and the operating system module combined with the general computer concepts module form the basis for the **self-directed, modularized, outcome based course delivery**. Outcome based education at the post secondary level means the students will be evaluated by faculty for their ability to reliably demonstrate each of the learning outcomes. The evaluation procedure may be the practical, one-on-one with the Professor using a computer, for three of the modules described in section II of the course outline. The test or re-test will be given when the student indicates that he/she is "ready" and the instructor is available. Time permitting, the student may **contract** with the Professor for a specific grade. Some students contract for an A+ while others contract for an A. The course is designed and the college resources limitations restrict the course curriculum to a **time based competency. This means 16 weeks to demonstrate the learning outcomes**. Any student requiring more than 4 months to complete the objectives must contract for an "X" grade (a formal procedure for extending the 4 month semester because of extenuating circumstances) otherwise the failing grade of an "R" is submitted.. No student granted an "X" grade can have as a final grade the "A+" grade.

The student will be provided the evaluation or marking scheme for the three modules: word processing, spreadsheets, and operating systems/general computer concepts at the beginning of the course. Each module has one assignment and one test. The assignment is worth 10% of the final, the test is worth 20%. Upon completion of the assignment, which implies demonstrating on the computer with the Professor present, the student will receive one of three possible marks: A+, A, or R. If the student receives an A+ grading he/she will not have to do the test for the module (an A+ grade will be credited for the module). Assignments must be completed and demonstrated and mark recorded before these tests will be given. In all evaluation situations the testing concept is: open book, using a computer, perform some tasks previously demonstrated in the assignment(s) within a defined time period.. All tests are designed to be completed in less than 1 hour (in the last three years average time for testing was 20 minutes/test). Network failure and high network demand resulting in slow computer responsiveness are factors that increase the duration times for the assignments and tests. As such, the student may elect to suspend the testing procedure if the system is unduly slow or unresponsive.

The individual Professor assigned to teach the CET110 course may elect to provide the student with a written test in addition to the practical test (or in lieu of the practical test). As such all students will write on the announced date.

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The entire class should have completed tests or assignments by certain milestone dates. The tentative dates for completion of the preceding assignments and tests are for the lab periods during the week of:

Test	Tentative Date	Concepts
1	Feb 12 - Feb 19/96	Windows ver 3.1 Operating System MS DOS Operating system General computer concepts
2	Mar 11 - Mar 18/96	Word processing and Spreadsheet
3	Apr 22 - Apr 29/96	Spreadsheet and Word processing

2. Quizzes

The student will be assessed through a series of quizzes. The total weight of these quizzes are not to exceed 10% of the final mark. The student should expect a short informal 2 minute, one or two sentence answer quiz every lecture. To earn credit for the quiz, the student must hand in the quiz question answer on an 8 1/2" x 11" paper indicating your name and section number. The only way to get permission to write a missed quiz is to agree to attend an extra hour outside of class to make up for the missed hour. In the past, students volunteered to attend another section's lab time and provide peer tutoring.

3. Assignments

The student will be assessed through a series of three lab assignments. Collectively these three (3) assignments will be weighted to 30% of the final mark.

4. Attendance

The student attending 15 out of the 16 lectures and labs offered, will receive a 2% bonus for excellent attendance.

Introduction to Computer Applications**CET 110****Summary of Marking Scheme**

1.	Tests	60%
2.	Quizzes	10%
3.	Assignments	30%

		100%
4.	Attendance	2% bonus only

TENTATIVE SCHEDULE:

The following is provided as a reasonable guide to the time spent on each of the major areas in this course.

General computer concepts	5 hours
Operating Systems	5 hours
Word processing	22 hours
Spreadsheets	16 hours
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	48 hours

The following letter grades will be assigned in accordance with the School of Engineering policies:

Course Grading Scheme

A+	90% - 100%	outstanding achievement
A	80% - 89%	above average achievement
B	70% - 79%	average achievement
C	55% - 69%	satisfactory achievement
U		unsatisfactory given at midterm only
S		satisfactory given at midterm only
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 have the Dean's approval and has a maximum time limit of 120 days.

Introduction to Computer Applications**CET 110****VI. SPECIAL NOTES**

1. All students should be aware of the Special Needs Office in the college. If you have any special needs such as being visually impaired, hearing disabled, physically disabled, learning disabilities you are encouraged to discuss required accommodations confidentially with the Professor and/or contact the Special Needs Office, Room E1204, Ext 493, or 717, or 491 so that support services can be arranged for you.
2. Your Professor reserves the right to modify the course as he/she deems necessary to meet the needs of students.
3. It is the responsibility of the student to retain all course outlines for possible future use in gaining advanced standing at other post-secondary.
4. Plagiarism
Students should refer to the definition of "academic dishonesty" in the "Statement of Student Rights and Responsibilities". Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course, as may be decided by the professor.
5. Substitute course information is available at the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the Professor. The student must produce a document containing **text, tables, graphic images, page numbering, and a header**. The multi-page document must be spell checked using main and supplementary dictionaries. The student must demonstrate proficiency in using the up-to-date word processing/spreadsheet or desktop publishing package by altering the document as requested by the examiner. The evaluation or marking scheme is available upon request for each of the modules: word processing, spreadsheets, and operating systems. Approximately 30 sub-tasks have been identified for each module and all sub-tasks must be attempted. Five or more sub-tasks not completed satisfactorily will result in a failing grade for the module.

When the student is already familiar with other word processing or spreadsheet packages, the student is expected to bring the software to the college, load the software for the examination, and upon completion unload the application software. If the student is unable to bring into the college the particular application software learnt, the student is expected to gain familiarity with the WP6.0 or WP6.1 for windows word processing package and the Quattro Pro ver 6 for windows spreadsheet packages. The professor will help the PLA student gain familiarity with the QPW, WPWIN60 or WPWIN61 software packages, within limits, prior to taking the examination, if requested.

