SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	INTRODUCTION TO COMPUTER APPLICATIONS
CODE NO.:	CET 110
PROGRAM:	ENGINEERING TECHNOLOGY PROGRAMS
SEMESTER:	ONE
REVISION DATE:	AUGUST 17, 1992
AUTHOR:	PETER SAVICH
PREVIOUS COURSE OUTLINE DATE:	JANUARY 2, 1992
PREVIOUS AUTHOR:	PETER SAVICH

DEAN APPROVED: 92-08-19 DATE:

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

LENGTH OF COURSE: 3 PERIODS PER WEEK FOR 16 WEEKS

PREREQUISITES: NONE

I. PHILOSOPHY/GOALS

THIS IS AN INTRODUCTORY COMPUTER COURSE FOR STUDENTS IN OTHER PROGRAMS. THIS COURSE IS NOT INTENDED TO BUILD EXPERTISE BUT RATHER TO ACQUAINT THE STUDENT WITH SOME APPLICATION SOFTWARE THAT WILL ASSIST THEM IN FUTURE COURSES. THE STUDENT WILL BUILD SOME FAMILIARITY IN THE AREAS SUCH AS KEYBOARDING, DOS, WORDPERFECT, LOTUS AND THE BASIC PROGRAMMING LANGUAGE.

II. STUDENT PERFORMANCE OBJECTIVES

AT THE END OF THIS COURSE THE STUDENT WILL:

1. UNDERSTAND THE GENERAL CONCEPTS OF THE COMPUTER FIELD.
2. APPRECIATE THE VARIETY OF SOFTWARE APPLICATION PROGRAMS AVAILABLE FOR THE IBM PC MICROCOMPUTER AND COMPATIBLES.
3. DEMONSTRATE SOME PROFICIENCY IN KEYBOARDING.
4. DEMONSTRATE BASIC SKILLS WITH REPRESENTATIVE SOFTWARE APPLICATIONS SUCH AS DOS (DISK OPERATING SYSTEM), WORD PERFECT (WORD PROCESSING PACKAGE), GW BASIC (PROGRAMMING LANGUAGE), LOTUS 123 (SPREADSHEET).

III. TOPICS TO BE COVERED

1. GENERAL COMPUTER CONCEPTS.
2. HARDWARE
3. KEYBOARDING.
4. MS DOS.
5. WORDPERFECT.
6. LOTUS. (MECHANICAL/CIVIL/ARCHITECTURAL) 6 WEEKS
7. GW BASIC. (MECHANICAL/CIVIL/ARCHITECTURAL) 0 WEEKS

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IV. LEARNING ACTIVITIES / REQUIRED RESOURCES

BLOCK 1: GENERAL COMPUTER CONCEPTS

AT THE END OF THIS BLOCK THE STUDENT SHALL BE ABLE TO:

1. UNDERSTAND THE COMPUTER SYSTEM AND EACH OF ITS INDIVIDUAL COMPONENTS.
2. DESCRIBE THE HISTORICAL DEVELOPMENT OF THE COMPUTER.
3. DISCUSS TYPICAL APPLICATIONS OF THE COMPUTER.
4. DESCRIBE THE STAGES OF DEVELOPMENT OF SOFTWARE SYSTEMS.

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.
6. UNDERSTAND WHAT IS MEANT BY "BOOTING THE SYSTEM", "WARM BOOT", "COLD BOOT".

BLOCK 3: KEYBOARDING SKILLS

IN THIS BLOCK THE STUDENT WILL USE A SOFTWARE TRAINING PROGRAM TO IMPROVE THEIR SKILLS IN COMPUTER KEYBOARDING. IT ALSO SERVES AS AN EXAMPLE OF THE RELATIONSHIP BETWEEN USERS AND A COMPUTER SOFTWARE PACKAGE.

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BLOCK 4: 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. "TOP TWENTY" OR MOST FREQUENTLY USED DOS COMMANDS:
   EXTERNAL DOS COMMANDS:
   FORMAT, DISKCOPY, DISKCOMP, CHKDSK, EDIT, EDLIN, TREE, XCOPY, LABEL, BACKUP, RESTORE, SORT, MORE, PRINT, ATTRIB, HELP, DOSKEY, DEBUG, RECOVER, FASTOPEN
   INTERNAL DOS COMMANDS:
   CD, RD, MD, DIR, TYPE, PATH, COPY, REN, DEL OR ERASE, VER, DATE, TIME, CLS, PROMPT, PAUSE, ECHO, REM, SYS

   THE ABOVE COMMANDS ARE DISK ORIENTED, FILE ORIENTED, OR UTILITY TYPE COMMANDS.

2. DOS EDITING KEYS:
   F1, F2, F3, F4, F5, DEL, INS, ESC, AND THE CONTROL-FUNCTION KEYS: CTRL BREAK, CTRL NUMLOCK, SHIFT PRTSC, CTRL PRTSC, BACKSPACE, CTRL BACKSPACE

3. REDIRECTING COMMAND OUTPUT AND INPUT

4. FILTER COMMANDS: SORT, MORE, AND FIND. HOW PIPING IS ACCOMPLISHED.

5. DIRECTORIES: DIRECTORY NAMES AND HIERARCHY, PATH AND TREE COMMANDS, MAKE DIRECTORY (MD), CHANGE DIRECTORY (CD), REMOVE DIRECTORY (RD), RULES FOR PATH NAMES

6. BACKUP AND RESTORE COMMANDS.

7. BATCH FILES: RULES, RUNNING .BAT FILES, AUTOEXEC.BAT FILE, BATCH SUBCOMMANDS, BATCH PARAMETERS.

8. CONFIGURING DOS WITH CONFIG.SYS

9. DEVICES AND MODE COMMAND: PARALLEL PRINTERS ON LPT#, SERIAL COMMUNICATIONS FOR MODEMS ON COM#

10. LINE EDITOR (EDLIN) AND TEXT EDITOR (TED)

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BLOCK 5: WORDPERFECT WORD PROCESSING

AT THE END OF THIS BLOCK THE STUDENT WILL BE ABLE TO:

1. CREATE, SAVE AND RETRIEVE WORDPERFECT FILES.
2. ENHANCE TEXT BY EMPLOYING THE: FLUSH RIGHT, CENTERING, UNDERLINING, BOLDING AND OTHER FEATURES.
3. REVEAL, VIEW AND DELETE A CODE KEY.
4. USE THE BLOCK COMMANDS TO MOVE TEXT AND COPY TEXT.
5. SET TABS, INDENT PARAGRAPHS, SET MARGINS, SET LINE SPACING.
6. PRINT A CURRENT DOCUMENT, PRINT A PAGE OF THE CURRENT DOCUMENT, PRINT MULTIPLE COPIES OF A CURRENT PAGE OR DOCUMENT, STOP PRINTING A JOB, RUSH A PRINT JOB, CANCEL A PRINT JOB AND DISPLAY PRINT JOBS.
7. USE "SPELLCHECKER" TO SPELL-CHECK A WORD, A PAGE, A DOCUMENT, CHANGE DICTIONARIES AND COUNT WORDS.

ADDITIONAL TOPICS WORTHY OF STUDY (TIME PERMITTING)

8. USE "THESAURUS" TO LOOK UP SYNONYMS FOR A WORD.
9. DRAW LINES.
10. USE WORD PERFECT DRAWINGS WITHIN A DOCUMENT.

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BLOCK 6: BASIC PROGRAMMING

(NOT TO BE COVERED FOR MECHANICAL/CIVIL/ARCHITECTURAL STUDENTS)

AT THE END OF THIS BLOCK THE STUDENT SHALL BE ABLE TO:

1. UNDERSTAND THE CONCEPT OF COMPUTER PROGRAMMING AND COMPUTER LANGUAGES.
2. UNDERSTAND THE CONSTRUCTS AND KEY TERMS USED BY THE BASIC LANGUAGE.
3. UNDERSTAND THE COMMON DATA TYPES AND THEIR PROPER USES SUCH AS STRINGS, NUMBERS, AND ARRAYS.
4. UNDERSTAND LOOPING CONTROL TECHNIQUES AND THEIR USAGE.
5. WRITE AND RUN PROGRAMS IN BASIC.

BLOCK 7: LOTUS 123

(EXTRA COVERAGE FOR MECHANICAL/CIVIL/ARCHITECTURAL STUDENTS)

AT THE END OF THIS BLOCK THE STUDENT SHALL BE ABLE TO:

1. UNDERSTAND THE PRINCIPLES INVOLVED IN SPREADSHEETS.
2. SELECT A LOTUS COMMAND FROM A MENU, VIEW A SPREADSHEET, ENTER LABELS INTO A SPREADSHEET, SPECIFY A RANGE OF CELLS, USE THE POINTER TO ENTER A FORMULA, ADD DATA TO A SPREADSHEET, FINISH OFF AND SAVE A SPREADSHEET, THEN QUIT LOTUS.
3. LOAD A SPREADSHEET, GLOBAL CHANGE A COLUMN, ALTER A SPREADSHEET, PRINT AND RESAVE A SPREADSHEET.
4. PERFORM ROW/COLUMN CALCULATIONS.
5. PRODUCE GRAPHS USING THE PRINTGRAPH UTILITY.

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V. REQUIRED STUDENT RESOURCES

1. "UNDERSTANDING AND USING APPLICATION SOFTWARE" BY JONATHAN P. BACON, STEVEN ROSS, CODY T. COPELAND WEST PUBLISHING CO.
2. BOX OF 10 5 AND 1/4" DOUBLE SIDED DOUBLE DENSITY DISKS

VI. SPECIAL NOTES

1. STUDENTS WITH SPECIAL NEEDS ARE ENCOURAGED TO DISCUSS REQUIRED ACCOMMODATIONS CONFIDENTIALLY WITH THE INSTRUCTOR.
2. YOUR INSTRUCTOR RESERVES THE RIGHT TO MODIFY THE COURSE AS HE/SHE DEEMS NECESSARY TO MEET THE NEEDS OF STUDENTS.

THE ARCHITECTURAL, CIVIL, AND MECHANICAL STUDENTS WILL DISCOVER THAT MANY OF THEIR REQUIRED COURSE WORK WITHIN THEIR PROGRAMS WILL REQUIRE IBM PC MICROCOMPUTER WORK. THE USE OF THE SPREADSHEET PROGRAM "LOTUS 1-2-3" WILL BE STUDIED IN GREATER DEPTH FOR THESE STUDENTS.

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VII. METHOD(S) OF EVALUATION

1.

THE STUDENT WILL BE ASSESSED THROUGH A SERIES OF THREE (3) WRITTEN TESTS. THESE TESTS WILL EACH BE WEIGHTED TO 20% OF THE FINAL MARK.

THE TENTATIVE DATES ARE: OCT 6/92
NOV 3 /92
DEC 15/92

THESE TEST DATES WILL BE RE-ANNOUNCED APPROXIMATELY 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. IT IS EXPECTED THAT MOST TESTING CAN BE COMPLETED INSIDE CLASS TIME, HOWEVER, STUDENTS MAY BE ASKED TO COMPLETE THE TEST OUTSIDE REGULARLY SCHEDULED CLASS TIME.

2.

THE STUDENT WILL BE ASSESSED THROUGH A SERIES OF UNANNOUNCED QUIZZES. THE TOTAL WEIGHT OF THESE QUIZZES ARE NOT TO EXCEED 10% OF THE FINAL MARK.

3.

THE STUDENT WILL BE ASSESSED THROUGH A SERIES OF LAB ASSIGNMENTS. COLLECTIVELY THESE ASSIGNMENTS WILL BE WEIGHTED TO 25% OF THE FINAL MARK.

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4.

THE STUDENT WILL BE ASSESSED ON HIS/HER ABILITY TO ANSWER QUESTIONS ABOUT THE LAB ASSIGNMENT ONCE SUBMITTED. THE STUDENT'S RESPONSE TO THESE LAB DEMONSTRATION QUESTIONS WILL BECOME PART OF HER/HIS "PRACTICAL DEMONSTRATION" MARK. STUDENTS MAY BE ASKED TO DEMO OUTSIDE OF CLASS TIME, IF TIME IN CLASS DOES NOT PERMIT.

5.

THE STUDENT ATTENDING MORE THAN 80% OF THE TIME WILL RECEIVE A BONUS OF 2%.

6.

LATE ASSIGNMENTS WILL BE MARKED 5% OFF FOR EVERY DAY LATE. AFTER TWO WEEKS PAST THE DEADLINE, THE LATE ASSIGNMENTS MAY STILL BE SUBMITTED BUT NO MARK WILL BE RECORDED.

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SUMMARY OF FINAL MARK

1.	TESTS	60%
2.	QUIZZES	10%
3.	ASSIGNMENTS	25%
4.	DEMOS	5%
		100%
5.	ATTENDANCE	2% BONUS ONLY

COURSE GRADING SCHEME

A+	90+	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 CHAIRPERSON'S APPROVAL AND HAS A MAXIMUM TIME LIMIT OF 120 DAYS.

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3. UPGRADING OF INCOMPLETES

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 "REPEAT" GRADE ON ALL TESTS WILL REMOVE THE OPTION OF ANY UPGRADING AND AN "R" GRADE WILL RESULT. THE HIGHEST ON A RE-WRITTEN TEST OR ASSIGNMENT WILL BE 56%.

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 PROJECTS
RE-DOING OF TESTS
WRITING OF COMPREHENSIVE SUPPLEMENTAL EXAMINATION

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VIII. ADDITIONAL RESOURCE MATERIALS (AVAILABLE IN COLLEGE BOOKSTORE AND/OR LIBRARY)

THERE ARE MANY OTHER BOOKS ON BASIC PROGRAMMING, WORDPERFECT, LOTUS 1-2-3, AND MS DOS OPERATING SYSTEM.

1. SAULT COLLEGE SOFTWARE SUPPORT
   - MS DOS NOTES
   - WORDPERFECT 5.1
   - ADVANCED WORDPERFECT 5.1 (MAY BE OPTIONAL)
   - LOTUS NOTES

VIDEO TAPES:
- SPREADSHEETS
- ADVANCED SPREADSHEET AND PROGRAMMING
- WORD PROCESSING 1
- WORD PROCESSING 2
- WORD PROCESSING 3
- COMPUTER APPLICATIONS/SOFTWARE INTRODUCTION
- APPLICATIONS
- ELECTRONIC PUBLISHING

PERIODICALS:
- PC MAG, BYTE MAG, COMPUTING CANADA
- COMPUTERS IN EDUCATION
- COMPUTERS IN NURSING