SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO, CANADA

COURSE OUTLINE

COURSE TITLE: MICROCOMPUTER APPLICATIONS

CODE NO: CSA101

PROGRAM: Computer Programmer
                 Computer Engineering

SEMESTER: TWO

DATE: JANUARY 1997

AUTHOR: M. VANLANDEGHEM

APPROVED: _____   97·01·03
                    DEAN   DATE

CSA101   PC APPLICATIONS -   MICROSOFT EXCEL
                                    MICROSOFT ACCESS

TOTAL HOURS TIME: 64 HOURS

PREREQUISITES: CSA100

I   PHILOSOPHY/GOALS

     In this course students will learn to use the basic to
     intermediate features of Microsoft Excel and basic to advanced
     features of Microsoft Access.

     Practical "hands-on" applications will be utilized to incorporate
     basic database and spreadsheet concepts.

II. STUDENT PERFORMANCE OBJECTIVES

     Upon completion of this course the student will be able to:

     1.   Understand spreadsheet concepts and applications
     2.   Understand the Excel screen and title bars
     3.   Move around a spreadsheet and perform calculations
     4.   Edit and format spreadsheets
     5.   Use special formulas
     6.   Chart data and create graphs
     7.   Print and save your spreadsheet
     8.   Understand the concepts of a database and tables
     2.   Use menu and toolbars for the ACCESS SYSTEM
     3.   Open a database/table and enter data
     4.   Understand and use a form
     5.   Edit records in a table
     6.   Create a new database and tables
     7.   Be able to set up forms to enter information and
          perform calculations
     8.   Filter data to see only the information you want to see
     9.   Create customized Queries and Reports
     10. Use data indexing and sorting
     11. Create a link between two tables.
     12. Apply pictures to database records

III. TOPICS TO BE COVERED

1. Understanding Excel concepts and screen layouts
2. Building a Worksheet
3. Using Formulas and Formatting the worksheet
4. Creating Charts
5. Enhancing the Worksheet and Charts
6. Overview of a database structure
7. Creating a database
8. Creating queries for the database
9. Maintaining the database
10. Create customized data entry Forms and Reports
11. Advanced database management and object linking

IV. LEARNING ACTIVITIES/REQUIRED RESOURCES

1. Understanding Excel Concepts and screen layouts

Learning Activities

Overview

. Explanation of spreadsheets concepts and structure
. Explain situations where spreadsheets are used
. Review Excel screen, menus and toolbars
. Demonstration of typical spreadsheets

Resources

See text, Student practice disk, handouts

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2. Building a worksheet

Learning Activities:

. Starting Excel
. Selecting cells and entering text
. Enter numbers and calculate a sum
. Using Fill Handle to copy a cell to an adjacent cell
. Use Autoformat to format a worksheet
. Add a simple chart to the worksheet
. Save and print the worksheet
. Open a workbook and correct errors
. Planning a worksheet

Resources:

See text, student practice file, handouts

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3.   Using Formulas and Formatting the Worksheet

Learning Activities:

    .   Enter titles and numbers into the worksheet
    .   Enter Formulas using the Point Mode
    .   Using the Average, Max and Min functions
    .   Apply formats to the worksheet
    .   Using Number formats
    .   Using consolidated formulas
    .   Change column widths and row height
    .   Check spelling in the worksheet

    Resources:

    Text, Student practice file, handouts

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4.   Creating Charts

    Learning Activities:

    .   Create Pie, Column and Bar charts
    .   Edit charts
    .   Creating charts on a separate worksheet
    .   Printing sections of a worksheet
    .   Print and display formulas in a worksheet

    Resources

    Text, student practice disk, handouts

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5.   Enhancing the Worksheet and Charts

    .   Using Fill Handles to create a series
    .   Copy cell formats using Format Painter
    .   Centre row titles
    .   Copy range of cells to non adjacent paste areas
    .   Insert and delete cells
    .   Enter numbers with a format symbol

- Freeze titles
- Absolute and Relative addressing
- Save, preview and print the worksheet
- Goal Seeking

Resources

Text, student practice disk, handouts

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6. Overview of Database Structure

Learning Activities:

- What is a database
- Understanding field types and record layouts
- Understanding tables
- Single and Relational database
- Understanding Key Fields and Indexing
- What is Access
- Review Access screen layout and toolbars

Resources:

Text, student practice file, handouts

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7. Creating a Database

Learning Activities

- Follow procedure to create a new database
- Create and save a table in the database
- Add records to the table
- Open a database and add additional records
- Preview and print the contents of a table
- Create additional tables
- Use a Form to view data
- Create a graph
- How to Plan and design a database

Resources

Text, Student data disk, handouts

8. <u>Creating Queries for the database</u>

   <u>Learning Activities</u>

   - What are Queries?
   - Creating new queries
   - Display selected fields in a query
   - Running a Query
   - Printing the results of a query
   - Include all fields in a query
   - Clearing the QBE grid
   - Using Text data in Criteria
   - Using Numbers and Wild cards in Criteria selection
   - Using Comparison operators
   - Create Compound criteria selections
   - Sorting data in queries and using multiple keys
   - Grouping and saving queries
   - Graphing answers to queries

   <u>Resources:</u>

   Text, practice disk , student handout

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9. <u>Maintaining the Database</u>

   <u>Learning Activities</u>

   - Add, change and delete records in the database
   - Change the database structure
   - Create validation rules
   - Update tables with validation rules
   - Specify Referential Integrity
   - Perform mass updates
   - Create and use indexes

   <u>Resources:</u>

   Students text, data disk, handouts

10   <u>Customized data entry forms and reports</u>

    <u>Learning Activities</u>

- Creating a report
- Grouping reports
- Create and use Custom forms
- Setting up custom reports and forms
- Creating reports from queries

    <u>Resources:</u>

    Students text, data disk, handouts

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11.   <u>Advanced database management and object linking</u>

    <u>Learning Activities</u>

- Creating Date, Memo and Graphic fields
- Use Date and Memo fields in a query
- Change the structure of a table
- Use advanced FORM and Report techniques

    <u>Resources:</u>

    Students text, data disk, handouts

V.   METHOD OF EVALUATION

MICROSOFT EXCEL	35%
MICROSOFT ACCESS	65%
	100%

BREAKDOWN:

EXCEL

3 - ASSIGNMENTS	at	5%	15%
2 - Tests	at	10%	20%
		Total	35%

ACCESS

4 - ASSIGNMENTS	at	5%	20%
2 - TESTS	at	15%	30%
1- DATABASE PROJECT	at	15%	15%
		Total	65%

Note..

All assignments must be completed satisfactorily to complete the
course. Late hand in penalties will be 2% per day. Assignments that
are late will not be accepted after 3 days unless there are
extenuating and legitimate circumstances.

GRADING SCHEME

A+	90 - 100%	Outstanding achievement
A	80 - 89%	Excellent achievement
B	70 - 79%	Average achievement
C	55 - 69%	Satisfactory achievement
U		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 authorised by the Dean, It reverts to an R if not upgraded in an agreed-upon time, less than 120 days.

VI. RESOURCE MATERIALS

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Shelly-Cashman Series -      MOD55M   EXCEL 5
Shelly-Cashman Series -      MOD53M   ACCESS
2 BLANK DISKS
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Data files will be supplied by instructor.

VII. SPECIAL NOTES

Students with special needs (e.g. physical limitations, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.