

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Name: INTRO TO FOURTH GENERATION LANGUAGES

Code No.: CSD206

Program: PROGRAMMER

Semester: Four

Date: January 1998

Previous Outline Dated: January, 1997

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APPROVED:

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Dean

*Jan 5/98*

Date

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**Course Name****Course Number****PREREQUISITES: CSA101****LENGTH OF COURSE: 4 HOURS PER WEEK****TOTAL CREDITS: 5****I. Course Description:**

The course is designed to give the student an awareness of the principles behind the design of fourth generation application solutions. (Prototyping and RAD).

There will be in depth explanations in the use of the MicroSoft's Visual Basic 4.0 and Cogno's POWERHOUSE product components and how to build applications.

**II. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:****A. Learning Outcomes:**

1. Develop applications using Visual Basic 4.0 with a RAD methodology.
2. Develop applications using Powerhouse with a Prototyping methodology.

**III. TOPICS TO BE COVERED:**

1. Prototyping/RAD
2. Cognos's Powerhouse 6.0
3. MicroSoft's Visual Basic 4.0 Pro

## IV. LEARNING ACTIVITIES:

### B. Learning Outcomes with Elements of Performance:

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

#### 1. Develop applications using Visual Basic 4.0 with a RAD methodology.

##### Potential elements of performance:

- Learn their way around Visual Basic
- Know what is in the program
- Drop controls onto a form
- Use the tool box
- Change properties
- Save projects
- Design a VB program
- Put ideas onto the screen
- Use common interfaces
- Build a VB program
- Perform data input
- Run programs
- Allow user to enter text
- Handle multiple lines of text
- Scroll text
- Set boundaries on user input
- Change fonts
- Add pictures to programs
- Change a picture with code
- Limiting Input with Checkboxes and Option Buttons.
- Allow more input choices with List Boxes and Combo Boxes.
- Group Controls into Containers
- Use Scroll Bars and Spin Buttons
- Enhance programs with Custom Menus
- Communicate with the User through Dialog Boxes
- Add Variables to the VB program
- Handle Basic Math functions
- Make decisions made upon Data Comparisons
- Use the operators

## 2. Develop applications using Powerhouse with a Prototyping methodology.

### Potential elements of performance:

- understand what POWERHOUSE is
- recognize the major components that make up the POWERHOUSE product
- have an understanding of a data dictionary
- understand how to develop a data dictionary
- make entries into the data dictionary
- describe the components of QUICK
- create QUICK screens
- write QUIZ reports that report on selected groups in sorted order
- differentiate between the SELECT and CHOOSE statements
- understand what should be contained in a POWERHOUSE data dictionary
- be able to create and maintain a data dictionary suitable for complex applications
- recognize steps to incorporate data into a POWERHOUSE application
- use QSHOW
- list dictionary contents on printer
- retain QSHOW source statements
- choose file types for QUICK screens
- identify source code of QDESIGN
- design QUICK screens
- create screen layouts which permit data for more than one record to be entered on a screen
- design screens in horizontal and vertical manner
- control the prompting for field values
- supply HELP messages to fields
- implement a menu hierarchy of screens
- design QUIZ reports with headings and footings

## V. REQUIRED RESOURCES:

1. Using Visual Basic 4, The Fast and Easy Way to Learn, by Michael McKely

## VI. METHOD OF EVALUATION:

The student's final grade will be determined from the following components:

$$\text{Tests (2@30\%)} = 60\%$$

$$\text{Assignments (4@10\%)} = \frac{40\%}{100\%}$$

## **GRADING:**

A - 80-89%  
B - 70-79%  
C - 60-69%  
R - 0-60%

## **NOTE:**

Students are expected to attend classes regularly, participate in class discussions, conduct themselves and treat their peers and instructors in a professional business-like manner throughout any school dealings.

Any student who misses a test will receive a grade of zero on that test unless they either produce a doctor's certificate if ill, or have the instructor's permission to write the test on a pre-arranged date and time.

Late assignments are subject to a zero grade unless the student has prior permission from the instructor to hand the assignment in at a later date. There will be no re-writes in this course.