SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

Course Title: **System Prototyping & Presentation 1**

Course No.: **CSD300**

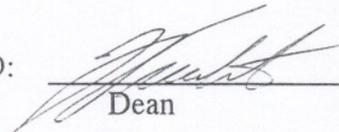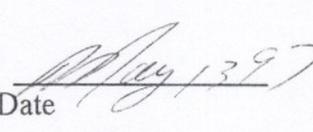Program: **Computer Programmer/Analyst**

Semester: **Five**

Author(s): **Willem de Bruyne**

Date: **May 1997**

Previous
Outline Dated: **May 1996**

APPROVED: _____ _____
                  Dean   Date

TOTAL CREDITS: **5**

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TOTAL CREDITS: 5

I.   COURSE DESCRIPTION:

It has been stated that two of the most severe problems facing
Information Systems today is the increasing backlog of service
request and decline in user confidence. The reasons for these
problems stem from the traditional methodologies of developing
systems which are not meeting these needs. The students have
studied in detail the traditional development life cycle of
business information systems. They are, therefore, prepared to
study new methodologies such as prototyping and RAD, along with
its apparent advantages of pleasing users, reducing development
costs, decreasing communication problems, and so on. The
industry is swinging towards prototyping and using tools such as
Fourth and Fifth Generation Languages, and RAD tools, which
prepares the student to meet these new challenges. The 4th G. L.
tool used in previous semesters was Powerhouse, this semester the
students will be using Visual Basic.

The student will use the CASE tool Excelerator to assist them in
planning, analysis, design, documentation and construction of a
computer based information system in accordance to one or more
software development methodologies.

II. TOPICS TO BE COVERED:

1.   Tradition Life Cycle Methodology reviewed.

2.   RAD using Visual Basic 4.

3.   CASE tool Excelerator for Windows.

4.   Student Project.

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III. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

A.   Learning Outcomes:

1.   Review the Tradition Life Cycle Methodology for developing
     and implementing computer based computer systems.

2.   Examine the Prototying Methodology for developing and
     implementing computer based information systems.

3.   Use the CASE tool Excelerator for Windows.

4.   Analyze and design a computer based system for the School of
     Business and Hospitality or for an external client.

B.   Learning Outcomes and Elements of the Performance:

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

1.   Review the Tradition Life Cycle Methodology for developing
     and implementing computer based computer systems.

Elements of the performance:

o   define the role of the systems analyst
o   describe the system development life cycle
o   explain the systems development methodologies
o   explain the steps in determining feasibility
o   create a process model
o   define the project dictionary
o   perform fact-finding techniques (interviews, questionnaires,
     observation)

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2. Examine the Prototying Methodology for developing and
    implementing computer based information systems.

Elements of the performance:

o   define prototyping.
o   compare prototyping to T.L.C.M.
o   list the advantages vs disadvantages of prototyping vs
    T.L.C.M.
o   use prototyping to design and develop a computer based
    system.
o   creating databases
o   using the Data Manager
o   create data entry forms with bound controls
o   input validation
o   creating reports with Crystal Report Writer
o   using the Visdata Program
o   use the JET Engine
o   create database programs with VB code
o   error trapping

3. Use the CASE tool Excelerator for Windows.

Elements of the performance:

o   understanding Excelerator terminology
o   learn how to log onto Excelerator
o   know how to change Excelerator project defaults
o   understanding effective use of the graphics profile
o   know how to use the action keypad options
o   learn how to print graphics drawings
o   know how to transfer printed output to a file
o   understand how to set print options
o   know how to save project work using the Backup feature
o   know how to transfer backup files into the project
o   understand how to use the Export feature
o   understand how to Import project backup
o   know how to exit Excelerator and the Exit options
o   learn how to move objects, connections, text
o   know how to copy objects
o   know how to delete objects and other graph components
o   understand the screen refresh option
o   learn how to centre the drawing
o   know how to add a line or a block of text to the drawing
o   learn how to add lines and boxes to the drawing
o   understand how to disconnect an object from its XLDictionary
o   know how to create and delete a drawing title
o   learn how to create data flow diagrams

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- understand the various methods of connecting objects
- know how to create labels and data dictionary descriptions
- understand how to link data flow diagram components
- learn how to create child data flow diagrams for processes
- know how to use the Analysis feature to validate data flow
- understand how to produce summary reports
- know how to create a presentation graph
- learn how to describe objects on the graph
- understand how to link an object to the XLDictionary

- understand how to create an explosion path for presentation graph objects
- know how to create a screen flow diagram using Excelerator
- know how to use the XLDictionary feature for creating record structures and elements
- know what to include in the element description areas
- understand the meaning and use of edit rules
- learn how to print data dictionary entries
- understand how to delete, copy, and rename
- know how to list and inspect the data dictionary entities
- learn how to use Excelerator for data modelling

4. Analyze and design a computer based system for the School of Business and Hospitality or for an external client.

Elements of the performance:

- Understand the Visual Basic Language and Environment.
- Explore the Tool Box controls.
- Use the Image Viewer application.
- Interact with end user to obtain detailed system specifications.
- Prototype the system to the end-user.
- Use presentation skills to demonstrate the model.
- Prepare to develop and implement the system.

IV. EVALUATION METHODS:

The mark for this course will be arrived at as follows:

Test #1   40%
Excelerator Assign   10%
Project   40%
Participation   10%

                                 100%

The grading scheme used will be as follows:

A+   90 - 100%   Outstanding achievement
A   80 - 89%   Excellent achievement
B   70 - 79%   Average achievement
C   60 - 69%   Satisfactory achievement
R   Repeat
X   Incomplete.

V.   SPECIAL NOTES

1.   In order to pass this course the student must obtain an
      overall **test/quiz** average of 60% or better.

2.   Assignments must be submitted by the due date according to
      the specifications of the instructor. Late assignments will
      normally be given a mark of zero. Late assignments will
      only be marked at the discretion of the instructor in cases
      where there were extenuating circumstances.

3.   The instructor reserves the right to modify the assessment
      process to meet any changing needs of the class.
      Consultation with the class will be done prior to any
      changes.

4.   The method of upgrading an incomplete grade is at the
      discretion of the instructor, and may consist of such things
      as make°up work, rewriting tests, and comprehensive
      examinations.

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

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

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VI.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course
should consult the instructor.

VII. REQUIRED STUDENT RESOURCES

1.   Excelerator Reference Guides can be signed out from the
      library.

2.   teach yourself DATABASE PROGRAMMING with VISUAL BASIC 4 in
      21 days, SAMS Publishing ISBN: 0-672-30832-0, Michael
      Amundsen and Curtis Smith