

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON



COURSE OUTLINE

Course Title: Visual Basic - Prototyping

Code No.: CSD301

Semester: Five

Program: Computer Programmer/Analyst

Author: Willem de Bruyne

Date: January 2002

Previous Outline Date: July 2001

Approved: _____

Dean

Date

Total Credits: 5

Prerequisite(s): CSD300

Length of Course: 16 WKS

Total Credit Hours: 64

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I. COURSE DESCRIPTION:

This course is an extension of the CSD206 and CSD300 Visual Basic courses. All learning styles will be addressed by having the students learn by using manuals; lectures; small group work; online referencing, step-by-step exercises, as well as the development of a real life computer system.

The development of the computer system will place the students in a project team and complete the analysis, design, development and the implementation of a computer based system using Visual Basic, Crystal Reports and a database tool to handle file storage. The nature of the projects are real, therefore, there is a Community Value Added component of the course. The instructor will secure a project that will involve a non-profit organization or a small business within Sault Ste. Marie. The students must work closely with the business acting as the primary end -users.

The students have gained a solid background in data base design, programming, and systems analysis and design, as well as working in small teams to complete project work. This course will bring all of these curriculum components together and challenge the students with real life projects that will prepare them for their computer profession. The completion of the project will take place in the follow up course CSD315 Web Programming.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Designing and Coding Programs.

Potential Elements of the Performance:

- Explain the application development cycle, the user interface, coding guidelines, Error handling, performance optimization

2. Building Applications

Potential Elements of the Performance:

- Introduce a number of useful ActiveX controls for user interface design, develops a point-of-sale application in several stages, introduces the CommonDialog control, and shows how to save and restore system registry settings.

3. Objects and Collections

Potential Elements of the Performance:

- Introduces objects, collections, the ListView, TreeView, and CoolBar controls, and MDI applications

4. Data-Bound Controls

Potential Elements of the Performance:

- Shows how to use the ADO data control, data-bound fields, the DataList, DataCombo, and DataGrid controls, and performing sorting, searching, and filtering records.

5. ActiveX Data Objects

Potential Elements of the Performance:

- Concentrates on direct programming with ADO object methods, properties, and events.

6. Relational Databases and SQL

Potential Elements of the Performance:

- Shows how to design multi-table databases, create SQL Queries for searching and sorting, define and modify recordsets

7. DataReport, MSFlexGrid, and MSChart

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Potential Elements of the Performance:

- Shows how to create connections, commands, and reports using the DataEnvironment Designer and DataReport Designer.

8. Crystal Reports

Potential Elements of the Performance:

- Report Design Concepts
- Introduction to reporting record selection
- Sorting and grouping
- Running totals
- Multi section reports
- Formatting
- Charting
- Mapping
- OLE
- Cross tab
- Using formulas
- Parameter fields
- The Crystal SQL Designer

9. Major Project

Potential Elements of the Performance:

- Create Service Request
 - Develop the problem statement
 - Establish priorities
 - Establish a method to study the present system
 - Organize the products of the study
 - Review existing procedures
 - Observing current operations
 - Perform interviews and walkthroughs
 - Create data flow diagrams
 - Define the prototype
 - Build prototyped reports, screens, functions, controls and any interfaces.
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- Define the database structure and contents, from table definitions and keys identified, to attributes.
 - Ensure data normalization

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- Describe types of data validation and verification techniques
- Identify different reporting types
- Identify output formats
- Create the required windows interfaces.
- Design any required coding techniques, code each object and any functions and modules.
- Develop and enter test data
- Establish version controls
- Establish documentation procedures, and creation of user guide
- Identify the hardware the system will eventually reside on.
- Monitor team member progress.
- Establish milestones and monitor progress.
- Train end users
- Establish a conversion process.
- Ensure operating acceptance
- Establish responsibilities for making revisions.
- Establish backup procedures.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Advance Visual Basic 6, Kip Irvine & Kaiyang Liang
Instructor Handouts

V. EVALUATION PROCESS/GRADING SYSTEM

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

Project 50%
Tests 1 @ 25%
Assignments 20%
Participation 5%

Grading Scheme:

A+ 90–100% (Outstanding)
A 80–89% (Excellent)
B 70–79% (Average)
C 60–69% (Satisfactory)
R (Repeat)

VI. SPECIAL NOTES:

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Attendance; even though it is expected groups will meet and work on the project during the evenings and weekends, if you are absent during class time, you are deemed to not be a participant during that time.

- Students will receive a grade of zero for late assignments unless prior permission is granted from the instructor.
- Students are expected to attend classes on a regular bases and treat their peers and instructors in a business like manner.
- Students are expected to inform the instructor via phone or e-mail if they are unable to attend class, 2% penalty for each infraction.
- Students missing a test will receive a grade of zero unless prior permission is granted from the instructor.