

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



COURSE OUTLINE

Course Title: Advanced Visual Basic

Code No.: CSD3000

Semester: Four

Program: Computer Programmer/Analyst

Author: Willem de Bruyne

Date: January 2003

Previous Outline Date: Dec. 2002

Approved: \_\_\_\_\_  
Dean Date

Total Credits: 5

Prerequisite(s): CSD206, CSD204

Length of Course: 16 WKS

Total Credit Hours: 80

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COURSE NAME

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## I. COURSE DESCRIPTION:

Advanced Visual Basic is an extension to the CDS206 Introduction to Visual Basic course. More fundamental programming concepts are covered in this course, such as Random Access Files, Database Access, and invoking function calls. Newer more advanced concepts such as Objects and Collections are covered, as well as Data-Bound Controls. The course focuses on hands-on, so there will be plenty of do-it-yourself features throughout the course.

### 1) Random Access Files

#### Potential Elements of the Performance:

- ◆ Create a user-defined data type
- ◆ Open and close a random access file
- ◆ Write data to a random access file
- ◆ Read data from a random access file
- ◆ Initialize a random access file
- ◆ Utilize a control array and a random access file in an application
- ◆ Include Visual Basic's color constants in code
- ◆ Pass information to a sub procedure
- ◆ Refer to a control in another form
- ◆ Clear a record from a random access file
- ◆ Use the Trim function

### 2) Database Access

#### Potential Elements of the Performance:

- ◆ Design a database
- ◆ Create a database using Visual Data Manager
- ◆ Create an index
- ◆ Define data validation rules and data validation text
- ◆ Add records to and delete records from a table
- ◆ Edit records in a database table
- ◆ Search a table for records that match a search criterion
- ◆ Define UDA, OLE DB, and ADO
- ◆ Display database records using the ADO data control
- ◆ Query a database using the SQL Select command
- ◆ Use the Recordset and Field objects and the Fields collection
- ◆ Add new records to a recordset with the AddNew method
- ◆ Delete records using the Delete and MoveNext methods
- ◆ Cancel the update of a record using the Update method
- ◆ Update the current record using the Update method
- ◆ Test for the end of the recordset using the EOF property
- ◆ Use the ADO data control's Refresh method to recreate the recordset

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COURSE NAME

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COURSE NUMBER

### 3) Invoking a Function Procedure

#### Potential Elements of the Performance:

- ◆ Create a function
- ◆ Pass an array to a function
- ◆ Pass an object to a function

### 4) Data-Bound Controls

#### Potential Elements of the Performance:

- ◆ Tables and databases
- ◆ Relational databases
- ◆ ActiveX Data Objects (ADO)
- ◆ Using the ADO control
- ◆ Using data-bound controls
- ◆ ADODB recordsets
- ◆ Displaying records
- ◆ Moving the recordset pointer
- ◆ Adding, deleting, and updating records
- ◆ Sorting records
- ◆ Filtering records
- ◆ Using SQL to create recordsets
- ◆ Using the find method
- ◆ Displaying images
- ◆ ADO control events
- ◆ DataGrid, DataCombo, and DataList

### 5) Objects and Collections

#### Potential Elements of the Performance:

- ◆ Introduces objects
- ◆ Collections
- ◆ the ListView
- ◆ TreeView
- ◆ CoolBar controls
- ◆ MDI applications

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## IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Programming with Microsoft Visual Basic 6.0 Enhanced Edition, Diane Zak  
Advanced Visual Basic 6, 2<sup>nd</sup> Ed, by Kip Irvine and Kaiyang Liang

## V. EVALUATION PROCESS/GRADING SYSTEM

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

Quizzes 4 @ 15%	= 60%
Assignments 4 @ 10%	= 40%
	100%

### Grading Scheme:

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

## VI. SPECIAL NOTES:

- ◆ Students will receive a grade of zero for late assignments, or missed tests unless prior permission is granted from the instructor.
- ◆ **You must attain a minimum of 60% on your quizzes in order to receive a passing grade in this course.**
- ◆ Students are expected to attend classes on a regular bases and treat their peers and instructors in a business like manner.

## VII. PRIOR LEARNING ASSESSMENT

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