

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

**COURSE TITLE: Advanced Visual Basic**

**CODE NO. : CSD300 SEMESTER: Four**

**PROGRAM: Computer Programmer/Analyst**

**AUTHOR: Willem de Bruyne**

**DATE: Jan. PREVIOUS OUTLINE DATED: Jan.**  
**2011 2010**

**APPROVED: "Penny Perrier" Jan/11**

---

	<b>CHAIR</b>	<b>DATE</b>
<b>TOTAL CREDITS: 5</b>		
<b>PREREQUISITE(S): CSD206, CSD204</b>		
<b>HOURS/WEEK: 16 WKS Total Credit Hours: 80</b>		

**Copyright ©2011 The Sault College of Applied Arts & Technology**  
*Reproduction of this document by any means, in whole or in part, without prior written permission of Sault College of Applied Arts & Technology is prohibited.*  
*For additional information, please contact Penny Perrier, Chair*  
*School of Business*  
*(705) 759-2554, Ext. 2754*

**I. COURSE DESCRIPTION:**

1. This course is an extension of the CSD206 Visual Basic introductory course that covered the basics of Visual Basic.NET programming. More advanced programming will be dealt with such as: Using Arrays and File Handling, Incorporating databases with ADO.NET 4.0, Multiple Classes and Inheritance, Creating Web Applications, and Cell Phone Applications and Web Services. The course focuses on hands-on, so there will be plenty of do-it-yourself features throughout the course.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

**1. Using Arrays and File Handling****Potential Elements of the Performance:**

- Initialize an Array
- Initialize an Array with default values
- Access array elements using a loop
- Use ReDim to resize an array
- Initialize two-dimensional arrays
- Read a text file
- Calculate depreciation
- Use multiple Form objects
- Access Variable objects on other forms

## 2. Incorporating databases with ADO.NET 4.0

### Potential Elements of the Performance:

- Understand database files
- Connect to a database using ADO.NET 4.0
- Use multiple database types
- Connect Form objects to the data source
- Bind database fields to the Window Form object
- Access database information on a Windows Form object
- Add & delete records
- Select records from a list
- Program beyond the Database Wizard
- Create the OleDbDataAdapter object
- 

## 3 . Multiple Classes and Inheritance

### Potential Elements of the Performance:

- Use the TabIndex property
- Edit input, including a masked textbox, and combo box
- Describe the three-tier program structure
- Understand a class
- Create a class
- Instantiate an object
- Pass arguments when instantiating an object
- Write a class constructor
- Call a procedure in a separate class
- Code a base class and a subclass incorporating inheritance
- Call procedures found in a base class and a subclass
- Write overridable and overrides procedures
- Create and write a comm.-delimited text file

## 4 . Creating Web Applications

### Potential Elements of the Performance:

- Create a Web application
- Build a Web form using ASP.NET 4.0
- Set Web form properties
- Add objects to a Web form
- Add a DropDownList object
- Add a Calendar object

- Add a custom table layout
- Validate data on Web forms
- Use the <br> tag in VB code
- Use String Manipulation methods in the String class

## **5 Cell Phone Applications and Web Services**

### **Potential Elements of the Performance:**

- Create a Smartphone application
- Use a cell phone keypad for input
- Enter input using a Smartphone
- Enter other characters using a keypad
- Add a Smartphone Toolbox objects
- Create softkey menu
- Code the Smartphone application
- Display MessageBox objects in a Smartphone environment
- Find Web services
- Create a Web service connection
- Call a Web service method
- Create a Crystal report
- Display a Crystal report

### **III. TOPICS:**

- Using Arrays and File Handling
- Incorporating databases with ADO.NET 4.0
- Multiple Classes and Inheritance
- Creating Web Applications
- Cell Phone Applications and Web Services

### **IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

MICROSOFT Visual Basic 2008 for Windows, Mobile, Web, Office and Database Applications. Comprehensive *Authors: Shelly, Hoisington*

**V. EVALUATION PROCESS/GRADING SYSTEM:**

The following semester grades will be assigned to students in postsecondary courses:

<b>Quizzes 3</b>	<b>@ 20%</b>
<b>Attendance &amp; Part.</b>	<b>@ 4%</b>
<b>Assign 3</b>	<b>@ 12%</b>
<hr/>	
	<b>100%</b>

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

**VI. SPECIAL NOTES:**Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

- ◆ **You must attain a minimum of 60% on your quizzes in order to receive a passing grade in this course.**

**VII. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.