

I. COURSE DESCRIPTION:

This course uses Microsoft Visual Basic 2015. The course is an introduction to ways to design and write programs using Visual Basic 2015. The goal of this course is to provide an introductory-level course in computer programming for students with little or no previous programming experience. The major objectives of this course are:

- To teach the fundamentals of the Microsoft Visual Basic 2015 programming language
- To understand and apply graphical user interface design principles
- To emphasize the development cycle when creating applications, which mirrors the same approach that professional developers use
- To illustrate well-written and readable programs using a disciplined coding style, including documentation and indentation standards
- To demonstrate how to implement logic involving sequence, selection, and repetition using Visual Basic 2015
- To write useful, well-designed programs for personal computers and handheld computers that solve practical business problems

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. Introduction to Programming and Visual Basic

Potential Elements of the Performance:

- Understand programs and programming languages
- Specify the roles of input, processing, output, and data when running a program on a computer
- Be familiar with Visual Studio 2015 and Visual Basic 2015
- Specify the programming languages available for use with Visual Studio 2015
- Explain the .NET Framework
- Describe classes, objects, and the .NET Framework class libraries
- Explain ADO.NET and ASP.Net

2. Creating Applications with Visual Basic

Potential Elements of the Performance:

- Use the Forms and control objects
- Create GUI for applications
- Write the code
- Create Labels
- Create multiple event handlers
- Use Intellisense
- Use the PictureBox control
- Write code to close an application's Form
- Use comments
- Deal with errors
- Display user messages at runtime

3. Variables and Calculations

Potential Elements of the Performance:

- Use Variables and different Data Types
- Perform different Calculations
- Format numbers and dates
- Use Exception handling
- Debug code

4. Making Decisions

Potential Elements of the Performance:

- Use different Decision structures
- Make decisions using If...Then statements
- Make decisions using If...Then...Else statements
- Make decisions using nested If statements
- Make decisions using logical operators
- Select Case statement
- Input validation

5. Lists and Loops

Potential Elements of the Performance:

- Use Input boxes
- Use List boxes
- Use Loops
- Use Nested loops

6. Procedures and Functions

Potential Elements of the Performance:

- Create and call Procedures
- Work with Functions and call ByVal and ByRef
- Debug Procedures and Functions

7. Multiple Forms, Modules, and Menus

Potential Elements of the Performance:

- Use Multiple forms
- Work with Modules
- Build Menus

8. Arrays and More

Potential Elements of the Performance:

- Use and Process Arrays
- Use arrays with Procedures and Functions
- Use Multidimensional arrays

III. TOPICS:

1. Introduction to Programming and Visual Basic
2. Creating Applications with Visual Basic
3. Variables and Calculations
4. Making Decisions
5. Lists and Loops
6. Procedures and Functions
7. Multiple Forms, Modules, and Menus
8. Arrays and More

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Starting Out With Visual Basic 7th Edition (Paperback)

Tony Gaddis and Kip R. Irvine

ISBN-10: 0134400151

ISBN-13: 978-0134400150

Or, eText ISBN-13: 9780134399461

See student portal for availability of e-book version from bookstore
(bookstore offers an “unlimited” timeframe on subscriptions)

The student can purchase a web version or a downloadable version. The most common subscription timeframe is 180 days but this varies depending on the text, publisher and/or web site. After the subscription timeframe has expired, the student no longer can access the text unless they extend/renew the subscription. If the bookstore offers an e-version of the text, the subscription timeframe is unlimited, but the subscription cost may be greater.

The advantages of the eBook version over the hardcopy version are twofold: savings of approximately 40% – 60%, and, no physical text to carry.

V. EVALUATION PROCESS/GRADING SYSTEM:

Theory Tests	45%
Lab Tests	10%
Quizzes	10%
Lecture Assignments	10%
<u>Lab Assignments</u>	<u>25%</u>
Total	100%

(The percentages shown above may have to be adjusted to accurately evaluate student skills. Students will be notified of any changes made.)

NOTE: You must obtain a minimum marks of 50% on the average in the tests in order to pass. Obtaining an individual marks less than 50% in either the Tests or Assignments/Quizzes or Labs marks will result in an overall “F” Grade.

The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

NOTES: If a student misses a test or surprise quiz without contacting the instructor, the Dean's office or the switchboard prior to the test or quiz, a mark of zero will be assigned with no option for a re-write.

A minimum of 80% attendance is required in the lectures and labs.

- Makeup Tests are at the discretion of the instructor and will be assigned a maximum grade of 50%.
- The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.
- A student who is absent 3 or more times without a valid reason or effort to resolve the problem will result in action taken.
NOTE: If action is to be taken, it will range from marks being deducted to a maximum of removal from the course.

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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.	

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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.

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. Unauthorized absences could result in a zero grade being assigned. The penalty depends on course hours and will be applied as follows:

Course Hours	Deduction
5 hrs/week (75 hrs)	1% / hr
4 hrs/week (60 hrs)	1.5% /hr
3 hrs/week (45 hrs)	2% /hr
2 hrs/week (30 hrs)	3%/hr

Absentee reports will be discussed with each student during regular meetings with Faculty Mentors. Final penalties will be reviewed by the professor and will be at the discretion of the professor.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.