

<b>Dept Number</b>	<b>CS 301</b>	<b>Course Title</b>	<b>Introduction to Visual Basic</b>							
<b>Semester Hours</b>	<b>3</b>	<b>Course Coordinator</b>	<b>Namdar Mogharreban</b>							
<b>Catalog Description</b>	This course is designed to introduce students to the fundamentals of programming in Visual Basic. The topics include, but are not limited to, design and development of the user interface, development of algorithms, and writing computer programs. The course will cover the history of programming languages, object oriented programming, data types, arrays, control structures, string manipulation and Web-based applications.									
<b>Textbooks</b>										
<i>Programming and Problem Solving with Visual Basic .Net.</i> Dale, Nell. Jones & Bartlett Learning, 2002, ISBN: 9780763717636.										
<b>References</b>										
<b>Course Learning Outcomes</b>										
<ul style="list-style-type: none"> <li>• Students will be able to design a layout for an interface based on the requirements of an application in Visual Basic environment.</li> <li>• Students will be able to develop pseudo code to implement an algorithm for a problem.</li> <li>• Students will be able to understand and implement different control structures of sequence, selection and repetition to implement an algorithm.</li> <li>• Students will be able to implement simple data structures such as single dimension arrays for solution development.</li> <li>• Students will be able to differentiate between a procedural code development and an object oriented solution.</li> <li>• Students will be able to develop a simple web application such as a calculator or a currency conversion application using Visual Basic environment.</li> </ul>										
<b>Assessment of the Contribution to Program Outcomes</b>										
<b>Outcome →</b>	1	2	3	4	5	6	7	8	9	10
<b>Assessed →</b>										
<b>Prerequisites by Topic</b>										
No prerequisite.										

**Major Topics Covered in the Course**

1. Introduction to programming languages and a VB environment
2. Introduction to Designing a Program: designing the interface, designing the algorithm
3. Creating Forms and understanding objects' properties
4. Variables, data types and operators
5. Arrays
6. Control Structures: the selection structure, If...then..Else, case select, the loop structure, for loop 2, while loop
7. Accessing Databases: single table processing
8. Web Services