

## **Beginning Programming 1-2**

### **Course Syllabus**

**Course Title:** Beginning Programming 1-2

**Course Length:** Two Semesters

**Prerequisite:** Information Technology Fundamentals 1-2

**Beginning Programming:** This course is designed to introduce high school students, with little or no background in computer programming, the basic concepts of computer programming while creating fun and engaging applications using Visual Basic 2008.

Throughout the course students are introduced to basic concepts of programming. Project allows students to explore the world of programming as they develop a better sense of what it means to be a computer programmer.

#### **Course Objectives:**

*Prepare students to:*

- Apply fundamental principals of software development.
- fundamentals of the Microsoft Visual Basic 2008 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
- 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 2008
- To write useful, well-designed programs for personal computers and handheld computers that solve practical business problems
- To encourage problems solving and critical thinking

#### **Visual Studio 2008**

In this course, students will use the Visual Studio 2008 development system. What is Visual Studio? The Microsoft Visual Studio development system is a suite of tools created to aid software developers—whether they are novices or seasoned professionals—face complex challenges and create innovative solutions. Visual Studio's role is to improve the process of development and make the work of achieving solutions easier and more satisfying. Build applications for Windows, the Web, the Microsoft Office system, the .NET Framework, SQL Server, and Windows Mobile with integrated drag-and-drop designers. Visual Studio integrates Visual Basic, Visual C#, and Visual C++ to support a wide variety of development styles. Develop rich Web experiences with Visual Studio, ASP.NET, AJAX, and Silverlight.

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**Course Standards:** The standards listed below will be covered during the semester. These standards are taken from the Arizona Department of Education [Career and Technical Education \(CTE\) Program Software Development \(Option C\)](#).

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|--|---|
| <p>27c Demonstrate program analysis and design</p> <p>28c Use software to create programs</p> <p>29c Test and debug to verify program operation</p> <p>30c Write code to perform arithmetic calculations</p> <p>31c Employ modularity in writing programs</p> <p>32c Write code using conditional structures</p> | <p>33c Utilize repetition structures</p> <p>34c Use simple data types and strings</p> <p>35c Implement arrays in programs</p> <p>36c Identify ways to input and output information</p> <p>37c Use external data sources within a program</p> <p>38c Employ object-oriented programming techniques</p> |
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**General Information:** This course incorporates lecture, discussion, and participation within lessons through presentation, demonstration, discussion and individual and collaborative activities, exercises, labs, and projects. Assessment includes both objective and performance assessments.

**Internet:** Internet access is required for some assignments. All appropriate paperwork (Acceptable Use Policy, Internet Users Agreement, etc.) must be on file with appropriate personnel.

**Grading Scale:** Arizona’s Department of Education definition of the level of attainment for assignments in CTE courses; assignments and tests will be given a numerical value and graded based on the scale below:

			Letter Grade		State Level of Attainment
100	-	90%	=	A	Mastered
89	-	80%	=	B	Exceeded
79	-	70%	=	C	Attained
69	-	60%	=	D	Approaches
Below		60%	=	F	Unattained

**Tutoring:** Students have five days to make up work missed due to an excused absence. Tutoring is offered both before and after school.

**Plagiarism:** Plagiarism and cheating are considered serious offenses and may result in failure on the assignment or exam in question, and a disciplinary referral. For more information, refer to these policies in the student handbook.

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**Supplements:** The supplements for the class will be the MSDN website, online videos and tutorials, lecture notes and presentations. Class participation will be vital for success in the class.

The text books that will be utilized for the 2008-2009 beginning programming class will be:

Visual Basic 2008 for Windows, Mobile, Web, Office, and Database Applications:  
Comprehensive

ISBN 13: 978-1-4239-2716-7

ISBN 10: 1-4239-2716-8

© Jun. 2008 (900 pages)

Author(s): Gary B. Shelly, Corinne Hoisington

Clearly Visual Basic: Programming with Microsoft Visual Basic 2008

ISBN 13: 978-1-4239-0241-6

ISBN 10: 1-4239-0241-6

© Aug. 2008 (550 pages)

Author(s): Diane Zak

Microsoft Visual Basic 2008: RELOADED, Third Edition

ISBN 13: 978-1-4239-0250-8

ISBN 10: 1-4239-0250-5

© Jul. 2008 (776 pages)

Author(s): Diane Zak