

## 2010/2011 Visual Basic Programming II

PTP308 - 18 weeks

### DoDEA Course Description and Competencies

#### About the Program

Visual Basic Programming II prepares students for careers in the IT industry. The course sequence focuses on advanced duties and tasks performed by professionals in computer programming as well as pre-employment and employment skills.

**Major Concepts/Content:** Programming in Visual BASIC II is a one-semester course designed to be a continuation of Visual BASIC I. The emphasis of this course is to write computer programs to solve complex problems. Students learn to write programs using the Microsoft Visual Basic.net programming language. Programs include decision and looping structures, graphics, sound, animation, and Microsoft Access databases. Students also learn to create web pages using HTML coding.

**Major Instructional Activities:** Students will analyze a problem, design a solution, write the program needed to solve the problem, test the program and make the necessary corrections in the program. Activities will include hands-on programming, group and individual assignments and special projects. Students will use electronic learning services to access additional resources.

**Major Evaluative Techniques:** Assessment will be accomplished by the successful completion of assignments. Assignments will be evaluated for structure, the correct use of programming statements, documentation, conciseness, and appropriateness of the solution to the problem. Success may be demonstrated by written tests, oral tests, class work, projects, or other means deemed appropriate by the instructor.

**Essential Software:** The focus of this course will be the use of Visual Basic.net to produce a variety of programs.

The table below is a competency list for the Visual Basic Programming II course. The competencies are considered essential and are required of all students.

PTP308 18 weeks	Visual Basic Programming II TASKS/COMPETENCIES
<b>Implementing DoDEA's CTE Course Requirements</b>	
• 001	Demonstrate DoDEA's Workplace Readiness Skills in course activities.
• 002	Identify issues related to this field of study that affect the environment and impact local and global communities.
• 003	Identify Internet safety issues and procedures for complying with acceptable use standards.
<b>Using Algorithmic and Programming Procedures</b>	
• 004	Incorporate efficient use of algorithmic and programming procedures.
<b>Mastering Programming Code</b>	
• 005	Create a program using appropriate objects, variables, constants, conditional structures, data types, prefixes, and documentation.
• 006	Create a graphical user interface that adheres to industry standards.
• 007	Code a program that uses exponential, mathematical, and/or business functions.

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• 008	Code a program that uses arrays.
• 009	Code a modular program that uses methods.
• 010	Code a modular program that uses looping structures.
• 011	Code a modular program that uses counters and/or accumulators.
• 012	Code a modular program that manipulates string data.
• 013	Code a modular program that uses File Access.
• 014	Code a modular program that uses menus.
• 015	Code a modular program that uses multiple forms.
<b>Developing Interactive Multimedia Applications</b>	
• 016	Code a modular program that uses multimedia such as sound.
• 017	Code a modular program to animate objects.
• 018	Examine the history of interactive program design and development.
• 019	Analyze the impact of intellectual property law for programs.
• 020	Identify the target markets for applications.
• 021	Create a storyboard for an interactive program.
• 022	Code a program from the storyboard.
• 023	Develop an interactive program that uses a scoring method.
• 024	Create an interactive program with multiple levels.
• 025	Code an interactive program that utilizes error-trapping and dialog boxes.
<b>Using Web Technology</b>	
• 026	Utilize resources and references to aid program development.
• 027	Evaluate the validity of sample code obtained from the Internet and other sources and modify the code as needed to create a valid program.
<b>Developing Employability Skills</b>	
• 028	Create or update a portfolio containing representative samples of student work.