

General Syllabus for:

**Computer Programming II**

**10-12 GRADES**

**CONNEAUT SCHOOL DISTRICT**

**Type of course:** Elective Course. The goal of this course is to teach the fundamental concepts of programming so that knowledge can be applied to other programming languages. From the beginning the student is taught to implement programming solutions with proper programming techniques. Programming style is emphasized so that students can make their applications easy to read, modify, and debug. Numerous reviews are presented which provides immediate reinforcement to newly learned concepts. Program exercises are given varying difficulty, making them appropriate for students with a range of abilities. Most exercises include a demonstration run and to help make clear what output is expected from the student's application.

**Prerequisites:** Algebra and Computer Programming I

**Text Information:** Microsoft Visual Basic 2008 by Shelly Hoisington ISBN-13: 978-1-4239-2716-7  
Microsoft WSH and VBScript Programming, 3<sup>rd</sup> Edition by Ford (Cengage/Course) ISBN:  
HTML and JavaScript BASICS, 4th edition by Barksdale and Turner ISBN: 978-0-538-74235-1

**Objectives:**

- A thorough understanding of Visual Basic Studio 2005 Software Suite
- An understanding of the Java programming language and the Java standard edition platform.

**Topics Covered:**

Review of the VB Scripting method. (15 days)

Review of chapter 1-3

Review of Chapter 4-6

Review of Chapter 7-8

**Chapter 9: *Using Arrays and File Handling (10 days)***

- Introduction
- Chapter Project
- Procedures
- Exceptional Handling
- Program Design
- Summary
- Learn it Online
- Knowledge Check
- Debugging Exercises

- Program Analysis
- Case Programming Assignments

**Chapter 10:** *Incorporating Databases with ADO.NET (10 days)*

- Introduction
- Chapter Project
- Procedures
- Exceptional Handling
- Program Design
- Summary
- Learn it Online
- Knowledge Check
- Debugging Exercises
- Program Analysis
- Case Programming Assignments

**Chapter 11:** *Multiple Classes and Inheritance (10 days)*

- Introduction
- Chapter Project
- Program Structure Using Classes
- Coding Classes
- Inheritance
- Persistence Classes
- Program Design
- Guided Program Development
- Summary
- Learn it Online
- Knowledge Check
- Debugging Exercises
- Program Analysis
- Case Programming Assignments

**Chapter 12:** *Cell Phone Applications and Web Services (10 days)*

- Introduction
- Chapter Project
- Create a Smartphone Application
- Program Design
- Design the Program Processing Objects
- Guided Program Development
- Web Design
- Program Design
- Design the Program Processing Objects
- Guided Program Development
- Microsoft Reports
- Summary
- Learn it Online
- Knowledge Check
- Debugging Exercises

- Program Analysis
- Case Programming Assignments

### **Enrichment Chapter: Visual Studio Tools for Office (10 days)**

- Introduction
- Chapter Project
- Programming an Office Document
- Program Design
- Design the Program Processing Objects
- Guided Program Development
- Summary
- Learn it Online
- Knowledge Check
- Debugging Exercises
- Program Analysis
- Case Programming Assignments

### **Java Script: (11 days)**

#### **Lesson 6 Introducing JavaScript**

- Display Web page text with JavaScript
- Using HTML formatting tags both in and around JavaScript code
- Create conditional statements with JavaScript
- Using the JavaScript alert() method
- Access the browser status line with JavaScript
- Programming Assignments
- Concepts and Terms Exams
- Program Application Exams

#### **Lesson 7 Using Images with JavaScript**

- Name and describe JavaScript events
- Create an image rollover
- Make a hyper link rollover
- Construct a cycling banner
- Display random images
- Create a JavaScript slide show
- Programming Assignments
- Concepts and Terms Exams
- Program Application Exams

#### **Lesson 8 Creating Forms with JavaScript**

- Create an HTML form
- Make a form submission button functional
- Make a form clearing button functional
- Validate text fields with JavaScript
- Validate radio buttons with JavaScript Case Programming Assignments
- Programming Assignments
- Concepts and Terms Exams
- Program Application Exams

### **Lesson 9 Using JavaScript with Frames**

- Create a JavaScript function with a parameter list
- Create JavaScript-enabled hyperlinks and affect frames
- Create JavaScript-enabled buttons that affect frames
- Create top-level JavaScript functions
- Programming Assignments
- Concepts and Terms Exams
- Program Application Exams

### **Lesson 10 Using JavaScript with Styles**

- Define a simple frame-based style viewer
- Make your style viewer functional
- Define a simple frame-based document viewer
- Make your document viewer functional
- Create a dynamic style class viewer
- Programming Assignments
- Concepts and Terms Exams
- Program Application Exams

### **Final Project: Project (14 days)**

- Analyze and Design
- Plan & Develop Program
- Write Code
- Test Code Create Presentations
- Present Final Projects

### **Assessment:**

- Knowledge Check
- Debugging Exercises
- Program Analysis
- Case Programming Assignments
- Concepts and Terms Exams
- Program application Exams

### **Parent/Student Resources:**

Parents: Edline (<http://www.edline.net>) \*online tracking of progress and grades

Students: Data files for Application exercises are available on Conneaut School District network.  
Each student maintains a personal portfolio of completed work.