Before You Begin

Please read the following topics before you begin the course.

This Course is for Hands-On Students!

This course was designed for 9th-12th grade students by experienced software professionals. We have created a program that will give students a solid, practical foundation in the field of game programming. Lessons begin with basic concepts, including sample code, and move quickly to hands-on implementation. Students will enjoy writing their own games as they progress through the course.

Each chapter includes at least one hands-on activity in which your student will complete all or parts of a game or other program that demonstrates the concepts they have learned. Beginning in Chapter 2, these activities will have students writing and running their very own C# programs. These activities will start simple and will move up in complexity as the course progresses. In the final chapter, students will complete a final project, which will allow them to apply all they have learned in the course.

What Do Students Need to Start?

Students will need to meet the following requirements in order to successfully complete the course:

- Students should have completed the first-semester *TeenCoder^{TM}: Windows Programming* course
- Students should have the pre-requisite computer skills listed in the Student Textbook
- Students should have a Windows-based computer that meets the minimum hardware and software requirements listed in the Student Textbook
- Students will need an Internet connection to complete the download and installation of XNA Game Studio. An Internet connection is optional for the rest of the course.

Why Did We Choose the "Visual C#" Programming Language?

This course is taught using the Visual C# programming language. C# is an easy to learn yet powerful object-oriented language that is compatible with the Microsoft XNA Game Studio. The XNA Framework is Microsoft's latest game development environment that allows programmers to write games for Windows platforms, the Xbox 360, and Windows phones!

What Do Teachers Need to Do?

The course is largely a self-study curriculum where students can simply read the textbook, complete the activities, and refer to this Solution Guide to clear up any questions about the activities. Teachers may choose to have greater involvement if they wish to administer the course for a more formal grade or school credit. Some students, especially younger students, may need additional assistance.

Grading a student's progress is done in two ways. First, each chapter has one or more hands-on activiites which should be completed by the student. These activities are the focal point of the course and we recommend assigning at least 50% of the course grade to the activities. Guidance on grading activities is given below. In addition, we provide 10-question multiple choice tests for every chapter. Test can be accessed from your Solution Menu and are in PDF format.

Please see the chapter on "Evaluating Student Progress" for more details!

How Do I Get Help?

If you have questions or concerns about any of the activities, solutions, or tests, please contact us according to the "Getting Help" instructions on our website. You will receive a personalized reply. Please also check the Errata section of our website for any reported corrections or clarifications to this edition.

Using Xbox 360 Gamepads

Your student is not required to have an Xbox 360 gamepad to complete any activity. However, if the student owns one or more Xbox 360 gamepads, we have included some alternate instructions and code to allow them to use these controls in the game programs they write for this course. All activities in which students are responsible for writing the input logic will allow students to implement their own gamepad code to incorporate the controller(s) into the game program instead of the default keyboard controls.

Any activity starter project that contains pre-written input logic will already have built-in support for both the keyboard *and* Xbox 360 gamepad(s). The only exception to this support is the Tic-Tac-Toe game, which will only accept mouse input.