

# Course Outline | Microsoft Learning to Program with C#

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4 day(s)

## Overview

If you're new to programming, this is the place! C#.NET from the very ground up will be explained. Maybe those of you who are more code-wise ought to see our C# for Existing Developers.

## Prerequisites

None.

## Course Outline

### WHERE DO I BEGIN?

- Programming the Easy Way
- The systems development life cycle (SDLC)
- Output Design
- Input Design
- Processing Design

### GETTING COMFORTABLE WITH C#

- Writing our first c# program
- Elements of a c# program

### DATA

- Computer data
- Variables
- Constants
- C# data types
- Numeric data types
- Nonnumeric data types
- The string object
- Operations on data
- Arithmetic operations
- Comparison operators
- Logical operators

### SELECTION STRUCTURES

- The if statement
- Getting input into your program
- The if...else statement
- String response
- The switch statement
- An introduction to windows
- Windows out

### LOOPS

- Why loops?
- The for loop
- While loops

### CREATING YOUR OWN METHODS

- Modular programs are easier to maintain and understand
- What is a method?
- Creating your own methods...

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- Method header
- Access modifiers
- The return type
- Method parameters and arguments
- Method overloading

## CREATING OBJECTS FROM INSTANTIABLE CLASSES

- Objects Have Data
- Objects Have Behaviour
- Changing an Object's Attributes
- Calling an Object's Methods
- Destroying an object

## ARRAYS

- Why arrays
- What's an array?
- Declaring and initializing an array
- Adding data to the elements of an array
- Multiple dimensioned arrays
- Creating arrays of objects

## EXCEPTION HANDLING

- Common beginner errors
- Compiler errors
- Runtime errors/logic errors
- C# error handling
- C# exceptions
- Try-catch-finally blocks

## DEVELOPING A GRAPHICAL USER INTERFACE

- Building a graphical user interface
- Designing our GUI
- Creating our GUI summary

## EVENT HANDLING

- C# event handling
- What's an event?
- What's an event procedure?
- Implementing a simple event handler in your code