



This course combines topics from the following courses (any items marked with a \* will be covered if time allows).

Topics taken from our [INTRODUCTION TO VISUAL C#](#) course

<b>Creating forms</b> <ul style="list-style-type: none"><li>• Drawing controls</li><li>• Formatting forms</li></ul>	<b>Conditions</b> <ul style="list-style-type: none"><li>• Using IF and ELSE</li><li>• The SWITCH statement</li></ul>	<b>Debugging and trapping errors</b> <ul style="list-style-type: none"><li>• The TRY clause</li><li>• Stepping through code</li><li>• Setting breakpoints</li></ul>
<b>Coding form events</b> <ul style="list-style-type: none"><li>• Forms and their events</li><li>• The two event arguments</li></ul>	<b>Modular code</b> <ul style="list-style-type: none"><li>• Passing arguments</li><li>• Writing functions</li></ul>	<b>Using lists</b> <ul style="list-style-type: none"><li>• Populating lists</li><li>• Finding items</li></ul>
<b>Laying out your code</b> <ul style="list-style-type: none"><li>• Commenting out code</li><li>• Using regions</li></ul>	<b>Arrays</b> <ul style="list-style-type: none"><li>• Using arrays</li><li>• Splitting text</li></ul>	<b>Properties in C#</b> <ul style="list-style-type: none"><li>• RO, WO and RW properties</li><li>• Coding properties</li></ul>
<b>C# variables</b> <ul style="list-style-type: none"><li>• Creating and using variables</li><li>• The types of variable</li></ul>	<b>Looping</b> <ul style="list-style-type: none"><li>• Looping n times</li><li>• WHILE loops</li><li>• Looping over collections</li></ul>	
<b>Enumerations and constants (*)</b> <ul style="list-style-type: none"><li>• Enumerations</li><li>• Constants</li></ul>	<b>Files and folders</b> <ul style="list-style-type: none"><li>• Stream readers and writers</li><li>• The USING statement</li><li>• FileInfo and DirectoryInfo</li></ul>	



Topics taken from our **INTERMEDIATE C#** course

### Designing classes

- The domestic cat object
- Properties and methods
- Encapsulation and exposure

### Creating classes

- Using namespaces
- Creating constructors
- Fields, properties and methods
- Static members

### The form as a class

- Partial classes
- InitializeComponent method
- Instantiating forms

### Data structures

- Generics
- Arrays
- Lists, stacks and queues
- Dictionaries

### Overloading (\*)

- Overloaded methods
- Overloading constructors

### LINQ theory

- Extension methods
- IEnumerable
- Query vs. method syntax

### Writing LINQ

- Arrays, lists and data tables
- Criteria and ordering
- Using LET expressions

### Advanced LINQ (\*)

- Projecting data
- Anonymous types
- Forcing query execution
- Taking and skipping

### Types of model

- Code first
- Model first
- Database first

### Entity Frameworks

- Creating entity data models
- Data contexts
- Updating models

### LINQ with Entity Frameworks

- Creating a data context
- Selecting data using LINQ
- Using relationships (associations)
- Adding, editing and deleting

### Advanced LINQ with EF (\*)

- Returning anonymous types
- Using stored procedures
- Extending (partial classes)

### Grouping using LINQ (\*)

- IGrouping and IEnumerable
- Grouping keys
- Group into and ordering
- Using multiple keys

Maximum 6 people per course. Scheduled classroom courses include lunch at a local restaurant; you can see how our online training works [here](https://www.wiseowl.co.uk/). For more information, see <https://www.wiseowl.co.uk/>.