



This course covers the following topics (any items marked with a * will be covered if time allows):

<p>Working with sets</p> <ul style="list-style-type: none">• Sets versus lists• Examples of set use	<p>Working with JSON</p> <ul style="list-style-type: none">• The JSON module• Loading and dumping data	<p>Attributes</p> <ul style="list-style-type: none">• Instance attributes• Setting attributes on the fly• Class attributes
<p>Dictionaries</p> <ul style="list-style-type: none">• Key/value pairs• Retrieving items• Looping over items	<p>Working with databases</p> <ul style="list-style-type: none">• The PYODBC module• Connections and cursors	<p>Methods</p> <ul style="list-style-type: none">• Instance methods• Different ways to instantiate• Class methods
<p>Functions</p> <ul style="list-style-type: none">• Defining functions• Passing arguments• Optional arguments• Modular programming	<p>Overview of Pandas</p> <ul style="list-style-type: none">• Dataframes and series• Reading/writing dataframes• Filtering, sorting and renaming• Dataframe calculations	<p>Read/write properties</p> <ul style="list-style-type: none">• Getting and setting values• Private underscored variables• Action properties
<p>Comprehensions</p> <ul style="list-style-type: none">• List comprehensions• Generators	<p>Overview of NUMPY (*)</p> <ul style="list-style-type: none">• Shapes, ranks and data types• Slicing arrays• Array operations	<p>Inheritance (*)</p> <ul style="list-style-type: none">• Designing for inheritance• Inheriting classes• Overloading• Using "super"
<p>Scraping websites</p> <ul style="list-style-type: none">• Understanding HTML• The REQUESTS module• Using BeautifulSoup	<p>Power BI and Python (*)</p> <ul style="list-style-type: none">• Getting Python data• Python visuals using dataframes	<p>Dunder methods</p> <ul style="list-style-type: none">• Doc strings• String representations of objects
<p>Working with CSV files</p> <ul style="list-style-type: none">• Reading and writing CSV files• Dictionaries using the CSV module	<p>Introduction to classes</p> <ul style="list-style-type: none">• An example class• Designing properties / attributes• Designing methods	<p>Understanding existing classes</p> <ul style="list-style-type: none">• Viewing definitions• Everything is a class
<p>Working with Excel</p> <ul style="list-style-type: none">• Using OPENPYXL• Workbooks, worksheets and cells• Python for Excel or VBA?	<p>Coding classes</p> <ul style="list-style-type: none">• Simple classes• Instantiating objects	<p>A case study (*)</p> <ul style="list-style-type: none">• Aim of the program• Choosing the objects• Properties or methods?• Implementing your classes

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/>.