

# Teaching GCSE Computer Science Day 1: Hands-On GCSE Overview and Understanding Programming

Get ahead with the programming aspects of the GCSE and develop applications in Python

09.00 **Registration and Morning Refreshments**

09.40 **Introduction to Python Programming for the '7 Strands'**

- ① Algorithm ② Assignment ③ Input/Output ④ Abstraction ⑤ Selection ⑥ Iteration ⑦ Validation
- Understand these terminologies and what they mean in plain language.

11.00 **Coffee Break**

11.20 **7 Strands in Practice: Python**

- Create simple programs and view output
- Accept user input and produce output
- Use variables, produce calculations, use comparison operators and learn Python shortcuts
- Work with selection and create programs
- Pedagogy of teaching programming in the classroom.
- How to think Like a programmer.

12.40 **Lunch**

13.20 **7 Strands in Practice: Developing a controlled assessment type project in Python**

- Extend your skills from the morning session and learn how to build up a large project the right way.

14.40 **Coffee Break**

15.00 **Continue your programming project**

- Extend your project with file handling and extra features

15.40 **Looking at your project as a GCSE Controlled Assessment type task**

- How to write a large project such as a controlled assessment task
- Resources for teaching the theory aspects of the course.

16.20 **Recap and Event Close**

# Teaching GCSE Computer Science - Day 2: Advanced Skills

Develop the more advanced skills  
necessary for success over the GCSE programme

09.00	<b>Registration and Morning Refreshments</b>
09.40	<b>More Advanced Python - Iteration, Procedures, Parameters, Functions, efficiency</b> <ul style="list-style-type: none"><li>• Python Iteration and Iterators</li><li>• Create Procedures and Functions to make your programs more efficient</li><li>• Learn how to pass and return parameters.</li></ul>
11.00	<b>Coffee Break</b>
11.20	<b>BYOB</b> <ul style="list-style-type: none"><li>• Learn how to use BYOB as an introduction to programming constructs</li><li>• Write a selection of programs in BYOB</li><li>• Using BYOB as a second language to back up your Python training</li></ul>
12.40	<b>Lunch</b>
13.20	<b>Advanced Python - Solving Problems using Lists, Libraries, Error Trapping, Sorting</b> <ul style="list-style-type: none"><li>• Apply what has been learnt to situations similar to those found in the controlled assessments</li><li>• Combine all the techniques covered in the previous sessions and introduce more advanced concepts</li><li>• Solve problems using error trapping, Libraries and lists</li><li>• Learn how to sort data in Lists, extend Python with libraries and Extending your Python skills further</li></ul>
14.40	<b>Coffee Break</b>
15.00	<b>Looking at Controlled Assessment-type skills</b> <ul style="list-style-type: none"><li>• How students can achieve A+ in a controlled assessment</li><li>• Examples of past assessment material from exam boards.</li><li>• Identify the key characteristics of student success at GCSE</li></ul>
16.20	<b>Recap and Event Close</b>

## Booking Form (also available in [Word format](#))

### Teaching GCSE 2 Day CPD - Programming — £345 per place

London

5th—6th February 2018

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