

# 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 Registration and Morning Refreshments

## 09.40 More Advanced Python - Iteration, Procedures, Parameters, Functions, efficiency

- Python Iteration and Iterators
- Create Procedures and Functions to make your programs more efficient
- Learn how to pass and return parameters.

## 11.00 Coffee Break

## 11.20 BYOB

- Learn how to use BYOB as an introduction to programming constructs
- Write a selection of programs in BYOB
- Using BYOB as a second language to back up your Python training

## 12.40 Lunch

## 13.20 Advanced Python - Solving Problems using Lists, Libraries, Error Trapping, Sorting

- Apply what has been learnt to situations similar to those found in the controlled assessments
- Combine all the techniques covered in the previous sessions and introduce more advanced concepts
- Solve problems using error trapping, Libraries and lists
- Learn how to sort data in Lists, extend Python with libraries and Extending your Python skills further

## 14.40 Coffee Break

## 15.00 Looking at the Controlled Assessment

- How students can achieve A+ in the controlled assessment
- Examples of sample assessment material from exam boards.
- Identify the key characteristics of student success at GCSE

## 16.20 Recap and Event Close

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

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

London 6th—7th December 2017

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