

# Learning pathway: Teaching advanced GCSE computer science

## Who is this pathway for?

For teachers who are already confident in teaching the GCSE Computer Science specification and looking to improve student progress and attainment even further, this pathway will guide you through the more advanced elements of the curriculum.

**Key stage 4**

1 remote learning course



3 online courses

1

### Python programming: working with data

In this course you'll learn about data types, and how data structures are manipulated in Python programs.



CP433 remote course

2

### Programming with GUIs

Discover how to build your own Graphical User Interface (GUI) with Python and guizero.



CO217 online course

3

### Introduction to encryption and cryptography

Discover the history of encryption and learn how it's used in the modern world.



CO220 online course

4

### Design and prototype embedded computer systems

Discover embedded system design and work your way through the product design lifecycle.



CO218 online course

You might also consider...

## Remote learning:

Live courses that are delivered online by our network of Computing Hubs and can be accessed from home. Remote learning offers the flexibility of short sessions designed to fit around your day.

### Other courses to enhance this pathway:

CP432 - The internet and cyber security

CP420 - Representing algorithms using flowcharts and pseudocode

## Online courses:

On-demand courses that offer a new and exciting way to learn about computing and digital making. Take part in these free online courses and learn at your own pace, in the comfort of your own home.

### Other courses to enhance this pathway:

CO221 - Introduction to web development

CO210 - Object oriented programming in Python: build your own adventure game

CO225 - Introduction to databases and SQL

## Take the next step

To find out more about the programme, our national support network and how we can help, email the team at [info@teachcomputing.org](mailto:info@teachcomputing.org)