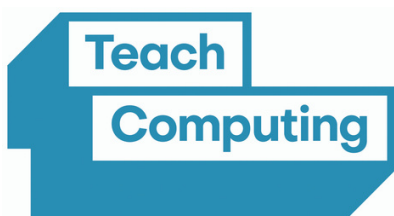# Summer School 2022

The London, Herts and Essex Computing Hub have teamed up with the University of Hertfordshire to offer two intensive CSA programmes this July.

These exciting, face to face programmes give you the opportunity to work with experienced facilitators to improve and extend your computing knowledge.

Accommodation is provided, giving you the chance to network with other teachers and complete your CSA over three days.

The University of Hertfordshire has good transport links to London and the surrounding areas.

New to Computing

The 'new to computing' pathway provides subject knowledge enhancement for new to computing teachers, up to and including GCSE Computer Science. Whether you've recently qualified as a computing specialist teacher or if you're looking to add computing as a second specialism, this CPD will guide you through a supported introduction to computer science.

Completing this pathway will contribute towards recognised certification. You'll be supported along the way by experienced teaching professionals, among a group of your peers.

You'll participate in live face-to-face CPD and will take-away ready-to-use and successful teaching approaches from experienced teachers, supported by the latest research and evidence.

Across the three days you will complete the following courses:
- 25th July: Foundation knowledge of computer science for KS3 and GCSE
- 26th July: Introduction to computer systems, networking and security in computer science
- 27th July: Python programming constructs: sequencing, selection & iteration

Bursary Funded:
Bursaries are available for teachers in state-funded schools in England. These bursaries could be used to cover travel expenses and some meals.

Who is it for?
This pathway is intended for teachers who are new to computing or wanting to learn more about the knowledge required to deliver the computing curriculum. No prior knowledge is required to attend this CPD.

What topics are covered?
Foundation knowledge of computer science for KS3 and GCSE – during this course you'll explore the foundation knowledge needed to teach computer science. You'll learn about programming concepts, algorithms, data representation and computer hardware.

Introduction to computer systems, networking and security in computer science – during this course, you'll learn how computer systems function; how data is input and output; what types of network exist and how they work; and security threats and how to prevent against them.

Python programming constructs: sequencing, selection & iteration – during this course you learn how to program using the text based programming language, Python. You'll learn how to use programming constructs sequencing, selection and iteration.

teachcomputing@swchs.net
@ncceswchs

Programming with Python

Take your first steps to becoming a competent teacher of Python programming; this CPD will develop your foundational knowledge around the Python language. During this three day pathway you'll learn about the three main programming concepts (sequencing, selection and iteration); sub-routines including functions and procedures; using arrays and external data files; advanced programming techniques including validation and using authentication.

This intensive CPD package will provide you with the opportunity to upskill your subject knowledge up to GCSE level. Completing the pathway will contribute towards recognised certification. You'll be supported along the way by experienced teaching professionals, among a group of your peers.

You'll participate in live face-to-face CPD and will take-away ready-to-use and successful teaching approaches from experienced teachers, supported by the latest research and evidence.

 Across the three days you will complete the following courses:
* 27th July: Python programming constructs: sequencing, selection & iteration
* 28th July: Python programming: working with data
* 29th July: Python programming: advanced subject knowledge, implementation and testing

Bursary Funded:
Bursaries are available for teachers in state-funded schools in England. These bursaries could be used to cover travel expenses and some meals.

Who is it for?
This pathway is intended for teachers who have some basic knowledge of programming, either using block or text based languages. We recommend that you attend the 'Introduction to algorithms, programming and data in computer science' course if you're new to programming.

What topics are covered?
Python programming constructs: sequencing, selection & iteration – during this course you learn how to program using the text based programming language, Python. You'll learn how to use programming constructs sequencing, selection and iteration.

Python programming: working with data – during this course you'll learn how to use subroutines; the differences between lists and arrays and how to use external data files in Python.

Python programming: advanced subject knowledge, implementation and testing – during this course you'll explore advanced knowledge, for example authentication, validation etc.; you'll learn how to successfully implement a working solution and how to test effectively.

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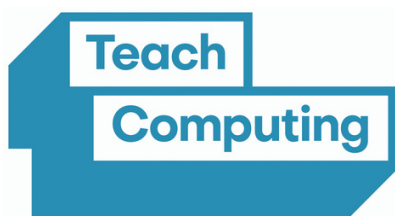**@ncceswchs**

Hurry, spaces are limited!

Your residential package includes:

- Three days of <u>bursary funded</u> CPD
- Two nights accommodation on campus
- Lunch provided each day
- Support to complete the CSA certificate

Hurry, spaces are limited. To book and secure your place on the summer program please click on a link below (free for state schools only):

<u>New to Computing 25th - 27th July</u>

<u>Programming with Python 27th - 29th July</u>

Teach Computing

University of Hertfordshire UH