

## Networks and cyber-security in GCSE computer science

Broaden your understanding of networks and cyber-security to enhance your teaching of GCSE computer science in this 2 day course.

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### Summary

**This course is delivered as part of the National Centre for Computing Education, and forms part of the Computer Science Accelerator programme.**

Networked computers, and cyber-security issues, are the focus of this two-day professional development. Gain comprehensive knowledge of the hardware and software systems that comprise networks, including the globally connected systems forming the internet. We will demystify the numerous protocols, network topologies and key applications used for data transfer between computers, and help you make learning relevant and engaging to students.

Based in this knowledge of networks, you'll also develop your knowledge of computer security including measures to guard against a range of threats, both technical and behavioural. You'll learn about vulnerabilities – where they come from, how they are exploited, and what can be done about them; knowledge which helps inform your students and make them safer online citizens.

Mapped closely to the specifications of GCSE computer science, the course will provide you with deepened knowledge and confidence that your students are equipped for their exams.

### Outcomes

You will gain the required knowledge to help your students:

- recognise the benefits and drawbacks of networked computers in a variety of wired and wireless configurations, and understand the technologies that make this possible
- understand how data moves around networks designed around different topologies, and the factors that affect network performance

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- know the purpose of data transfer protocols including : Ethernet; Wi-Fi; TCP; IP; HTTP / HTTPS; FTP and email protocols including SMTP; IMAP and POP
- confidently describe cyber-security threats and the vulnerabilities they aim to exploit
- be able to apply security measures to a range of contexts, and know what can happen when these fail

**Price: £0 per delegate\***

\*This course is part of the GCSE Computer Science Accelerator Programme CPD and is free for teaching staff from state maintained schools if they do not have an existing degree in Computer Science or related degree. In addition, a bursary of £220 per day can be reclaimed as long as the teacher completes 2 x 2d face to face training courses (total £880). Any subsequent courses a teacher undertakes are free of charge but no bursary is available. There is also an additional bursary of £600 if the teacher completes 16 hours of online training modules and the associated online knowledge test. The time frame for these bursaries is the teacher must complete the face to face training, online learning and knowledge test by 31st July to receive the total bursary of £1480. All bursaries are managed by Stem Learning as part of the course booking and delivery process and will be paid direct to the school.

Non-eligible teachers or teachers from non state maintained schools will pay £440 per course and will not be eligible for a bursary. Online training is free of charge.

Further bursary information can be found here [teachcomputing.org/bursary](https://teachcomputing.org/bursary)

This is a 2 day course. Delegates will be booked onto both dates.

**Course Dates**

7 May and 3 June 2019	Sale, Trafford
19 June and 17 July 2019	Sale, Trafford
25 June and 9 July 2019	Ashton, Tameside
24 September and 8 October 2019	Cheadle, Cheshire

Sign up to courses via: [www.mglworld.com/ncce](http://www.mglworld.com/ncce)