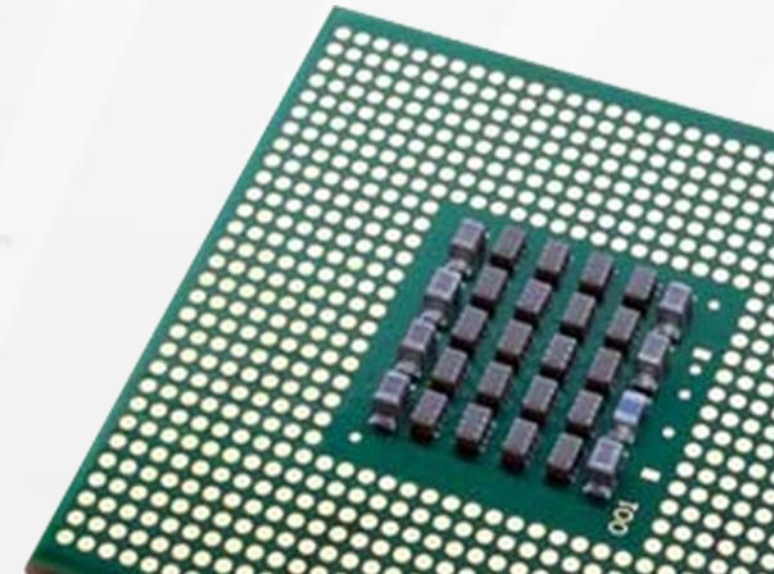


OPTIONS TALK

“Computer Science is no more about computers than astronomy is about telescopes.” - Edsger W. Dijkstra



OPTIONS TALK

## Why choose Computer Science?

**Technology** is embedded in every aspect of our lives.

**Computer Science** is being used help solve many of the world's biggest problems



OPTIONS TALK



OPTIONS TALK

## Entry Requirements

### Maths

- Grade 7

### Computing

- Grade 6



OPTIONS TALK

## The Qualification

### OCR A Level Computer Science

- Linear Course so all the content is examined at the end of two years
- Content overlaps/builds on the content covered in the GCSE

### Paper 1 – Computer Systems

- 40% of A Level
- 2 hours 30 minutes
- 140 marks

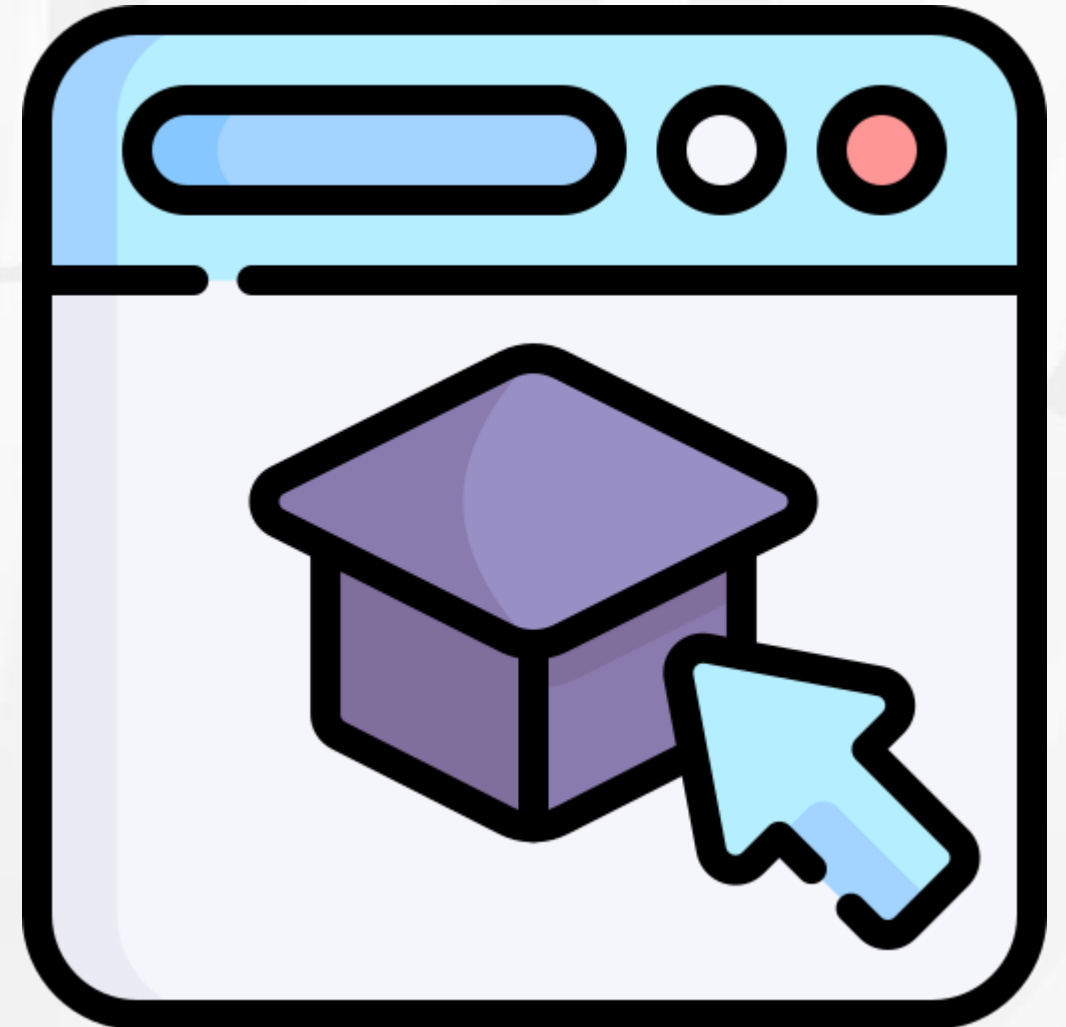
### Paper 2 – Algorithms and Programming

- 40% of A Level
- 2 hours 30 minutes
- 140 marks

OPTIONS TALK

## What does the course cover?

- Internal computer components
- Cyber security
- Data representation
- Effect of digital technology on society
- Programming
- Networking and the Internet
- Software development



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## Year 13 – The Project

### Non-exam assessment

- 75 marks
- 20% of A Level
- Create solution to a problem
- Independent research
- Any Language

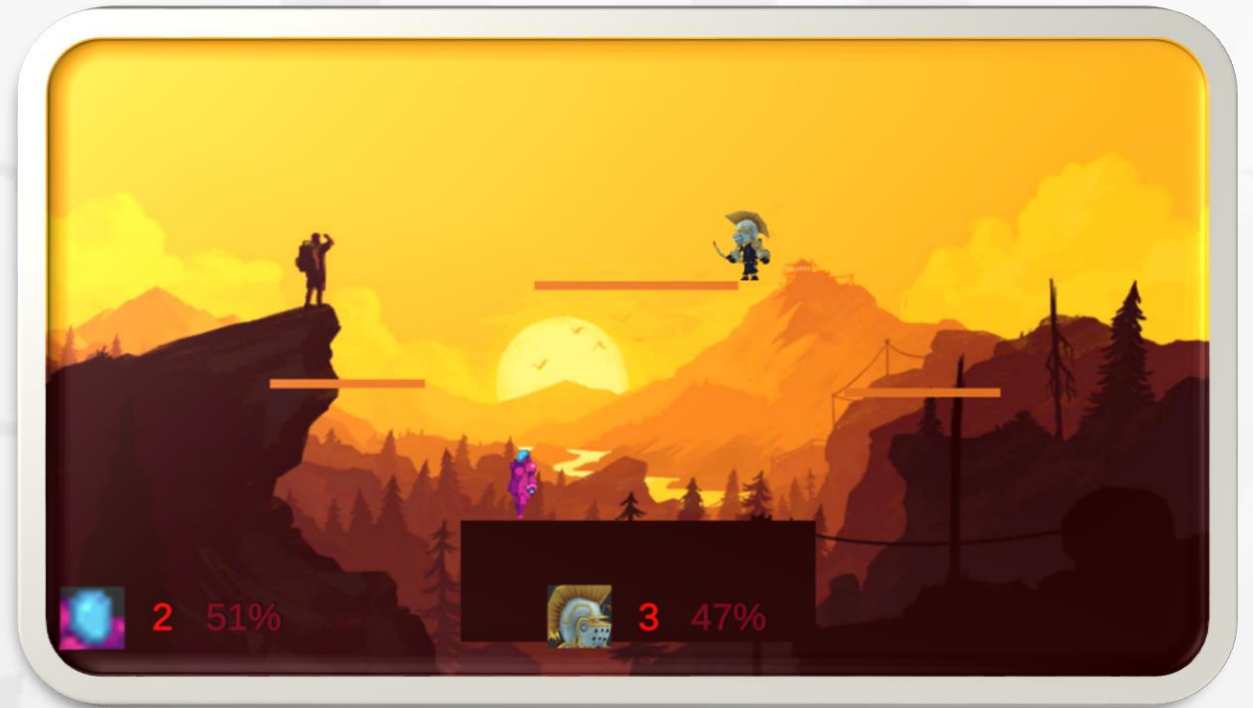
### Examples...

- Complex Games (e.g. may involve playing against the computer)
- Simulations
- Automated scheduling/timetabling
- Online multi-user websites
- Robotics
- Mobile Apps/Games

OPTIONS TALK

## Past Projects

- Hive Lighting style system
- 2D and 3D Computer Games
- Poker Tutorial
- Chess Tutorial
- DJ Software
- Software for Parents Business
- Stock Control Systems





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**Results**

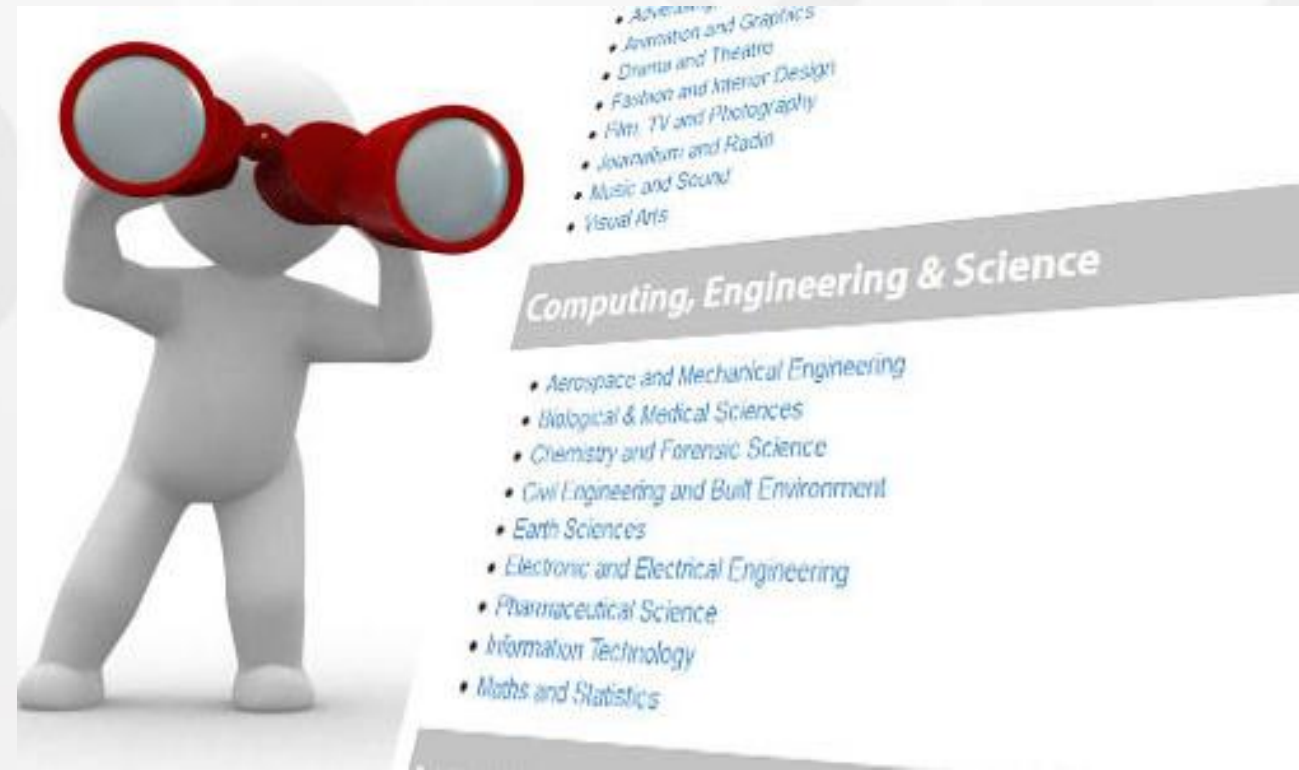
	% of A* to A Grades	% of A*/B Grades	% of A* to E Grades
<b>2022</b>	46	77	100
<b>2019</b>	39	54	100
<b>2018</b>	7	29	100
<b>2017</b>	57	64	100



OPTIONS TALK

## Subject Links

- Maths
- Further Maths
- Physics
- Design and Technology
- Business



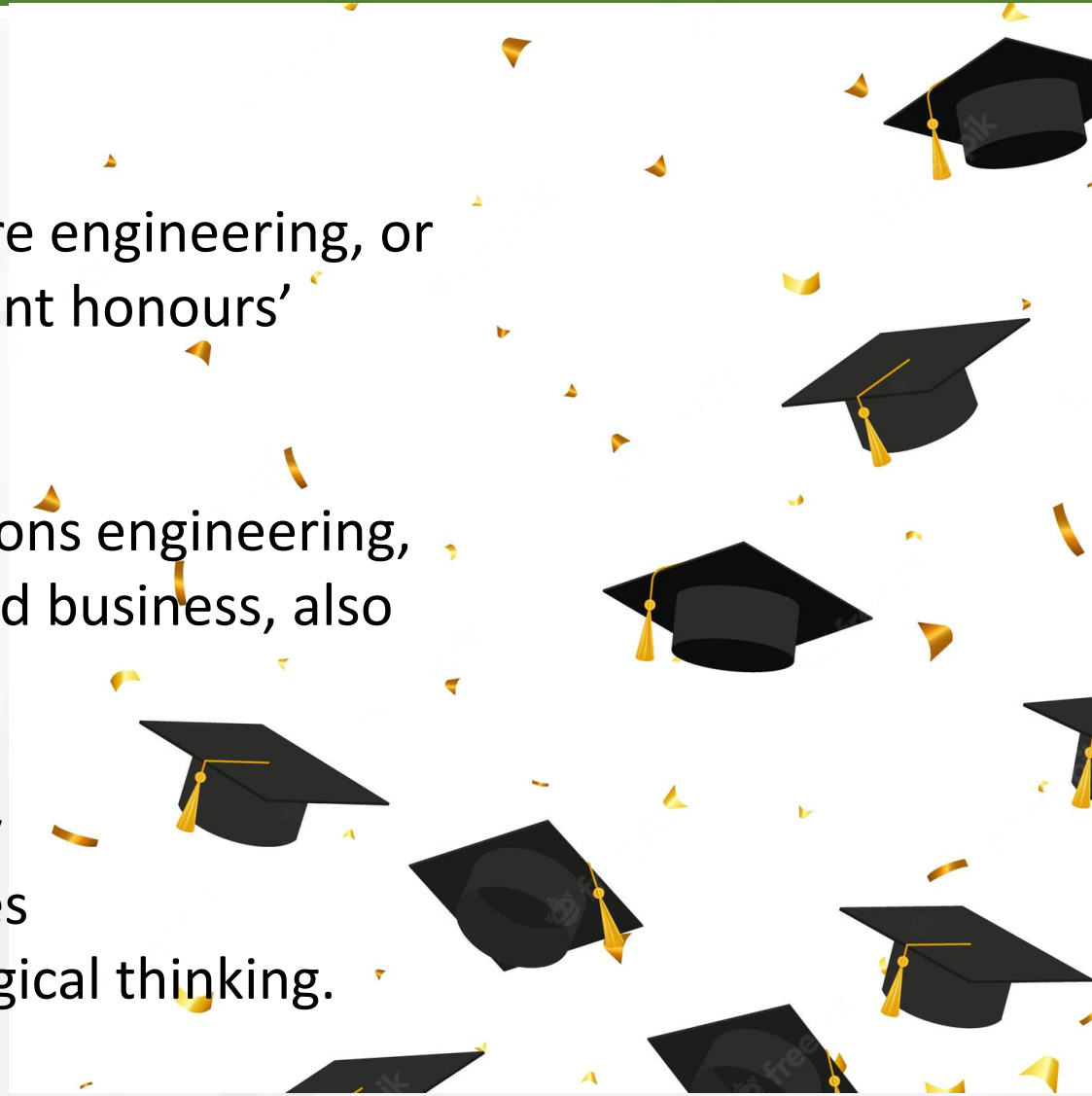
OPTIONS TALK

## Degrees

Many universities offer computer science, software engineering, or computing degrees either on their own or as a 'joint honours' program.

More specialist degrees, such as telecommunications engineering, hardware engineering, games programming, IT and business, also benefit from A-level computing.

Computing is also useful for the application of any science or engineering based degree, as it provides opportunities for practical problem solving and logical thinking.



OPTIONS TALK

## Cyber First

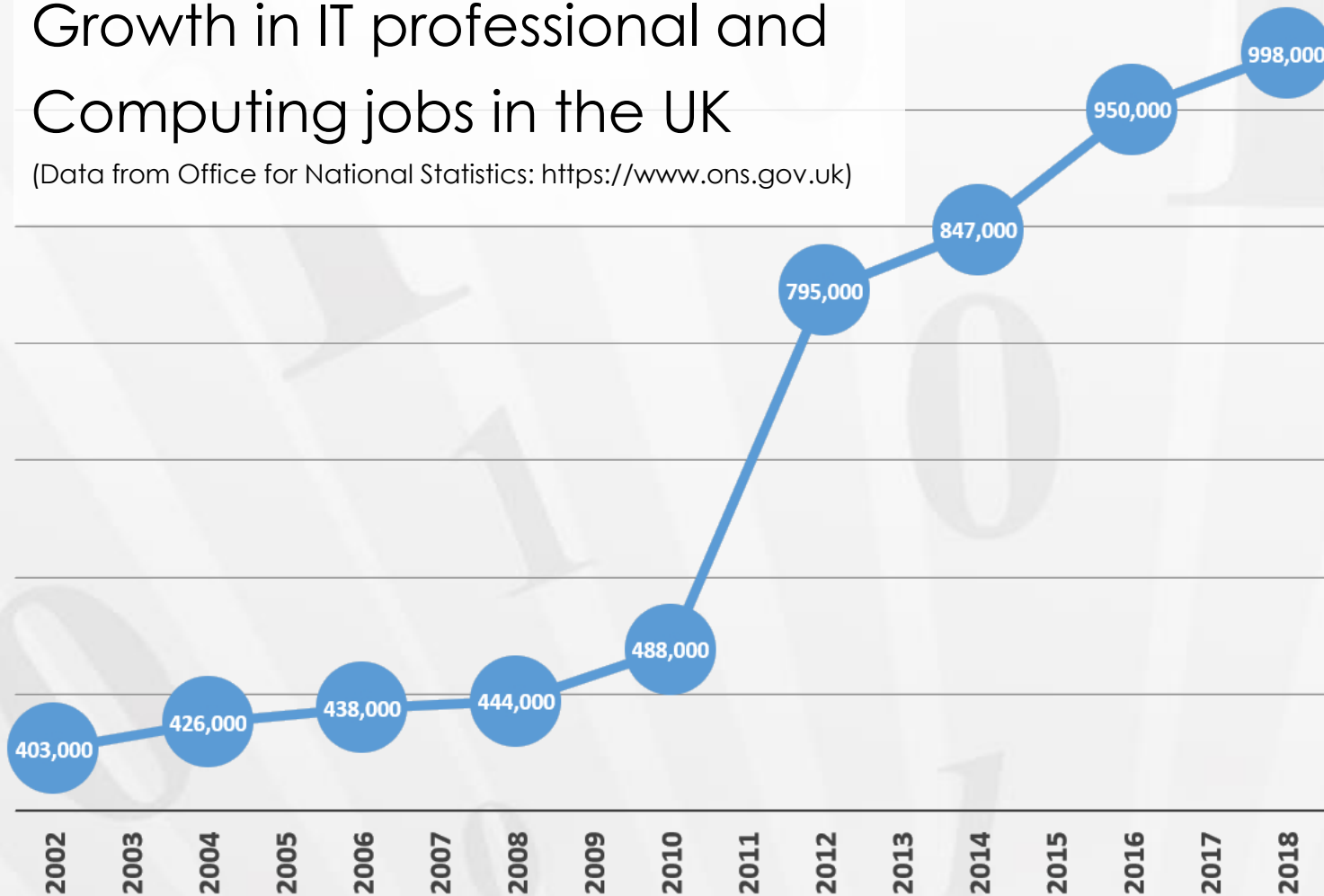
**CyberFirst offers students a real choice after A Levels or whilst at University.**

- A CyberFirst Bursary offers undergraduates £4,000 per year financial assistance and paid cyber security training each summer to help kick start their career in cyber
- A CyberFirst Degree Apprenticeship allows undergraduates to earn whilst they learn, ready for a job with GCHQ
- <https://www.ncsc.gov.uk/cyberfirst/bursary-and-degree-apprenticeship>

OPTIONS TALK

## Growth in IT professional and Computing jobs in the UK

(Data from Office for National Statistics: <https://www.ons.gov.uk>)



**Growth in this sector is predicted to continue to grow!**

Did you know the computer games industry is bigger than the film and music industries combined?



OPTIONS TALK

Skills in Computer Science can offer you an incredible wide range of jobs!

There are almost no job sectors which don't make use of skills related to:

- Information Technology
- Computer Science



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## Types of Careers

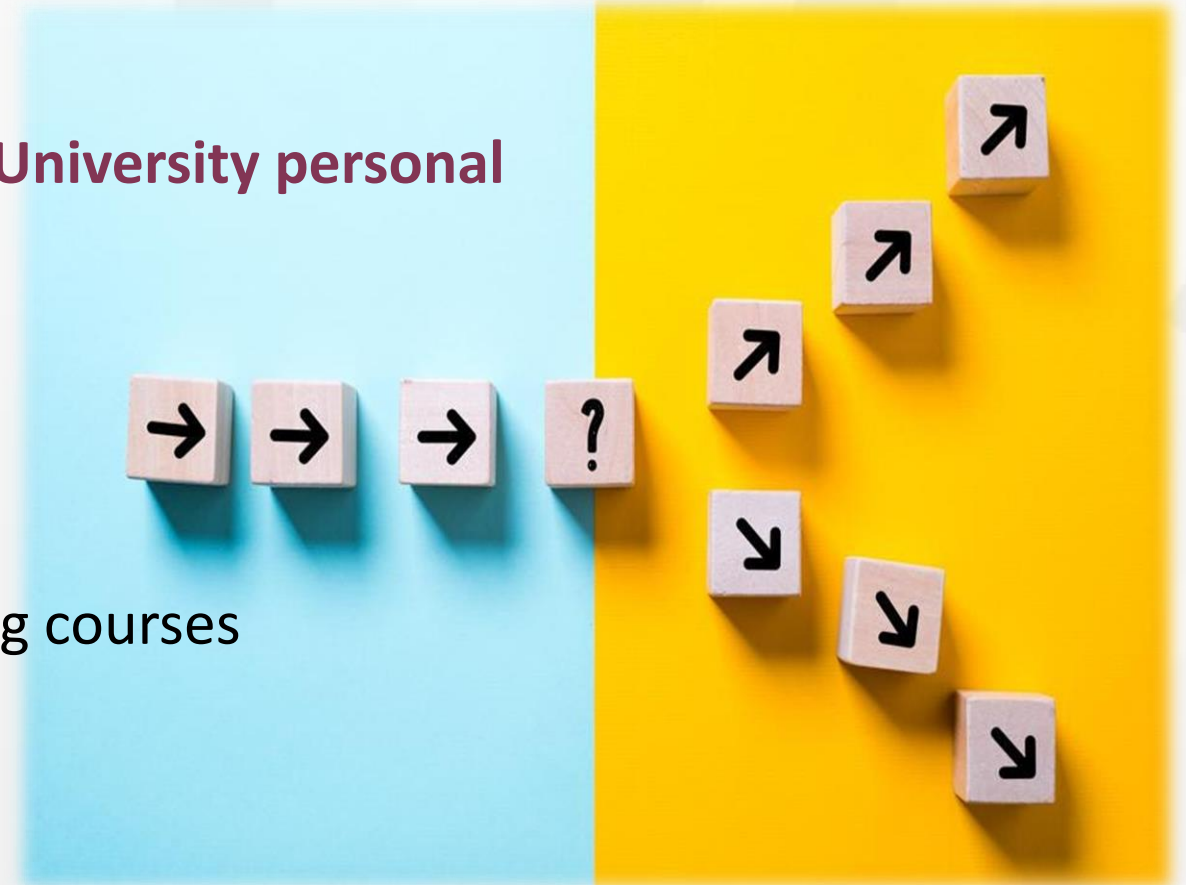
- Software developer
- Systems engineer
- Database administrator
- Games developer
- Information systems manager
- Project Manager
- Cyber Security
- IT consultant
- Multimedia programmer
- Network engineer
- Systems analyst
- Systems developer
- Web Developer
- App Developer

OPTIONS TALK

## Opportunities

**Numerous ways the boys can boost CV and University personal statement content**

- Mentor boys from 4<sup>th</sup> and 5<sup>th</sup> year
- Run lunchtime clubs
- Open Days
- Complete any number of programming courses
- Cyber Start course
- Research, Research, Research





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**Thank you for listening. If you have any questions feel free to ask now or you can put them in an email**

**Where to get more information**

- [mrdsweeney@st-ambrosecollege.org.uk](mailto:mrdsweeney@st-ambrosecollege.org.uk)
- OCR Exam board website:  
<https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/>

