6 SPRINGBOARD

A-Level Computer Science

OUR COURSE DETAILS

The intention of the Computer Science course at Bilborough College is to support student learning to help them to achieve their next pathway of Higher Education, an apprenticeship or employment in the field of Computer Science and ICT. This course develops hardworking, organised and confident students who can problem solve and develop working solutions. In addition, other skills developed, include time management and presentational skills, which will be valued by a wide variety of workplaces and higher education institutions.

We have chosen the Eduqas A-Level Computer Science specification. All exam board content is very similar; however, we feel the assessments offered by the Eduqas exam board are more accessible and more in line with what happens in the real world. The topics offer the best preparation for our students, keeping their skills and knowledge in line with the current technical issues and skills gap in the UK economy, e.g. Software Development/Programming, System Analysts, Ethical Hacking and Testing.

USEFUL ONLINE LINKS

Chips with Everything (UK): This podcast from The Guardian covers a wide variety of topics http://bit.ly/SecEdChips

CS Unplugged: CS Unplugged's existing range of videos are very useful for getting you to understand concepts: www.youtube.com/user/csunplugged

PREPARING FOR STUDY

1. Click the following link below and choose to sign up for a login into Isaac computer science website filling in the details as required
2. https://isaaccomputerscience.org/account?authToken=RYDM3Q
3. Click on For students menu and choose For students from the options again
4. Click on View all topics

Read, make notes and complete the quizzes for the Theory GCSE to A level transition topics:

a. Programming concepts

b. Data representation

c. Boolean logic

d. Systems

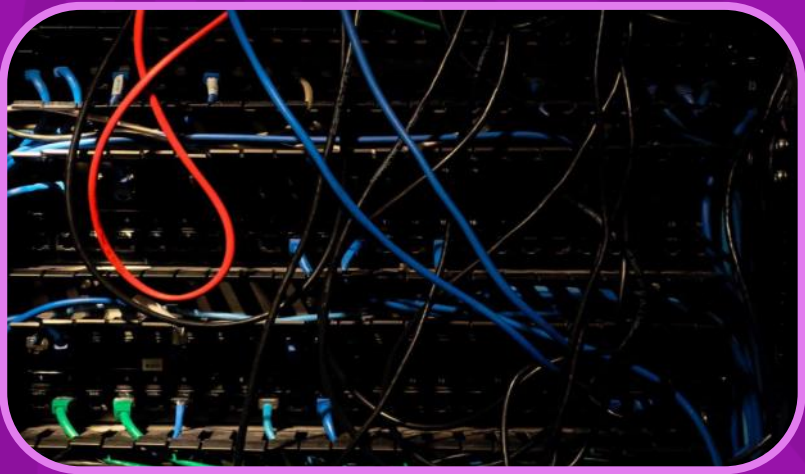
e. Networking

UNIVERSITY COURSES

There are many courses to choose from when looking at applying to universities. Some degrees will be solely dedicated to Computer Science and other degrees, called a combined degree, allows you to study another subject with Computer Science.

Computer Science, Software Engineering, Maths & Computer Science, Information Technology, Computer Science and Information Technology, Information Technology and Management of Business, Cyber Security, Internet Security etc.

Check out UCAS. A useful tool to finding out about the different degrees courses available at different universities, as well as providing you with all the information you need to know about entry requirements: https://www.ucas.com/



PEOPLE TO RESEARCH

- **Muhammad Ibn Musa Al-Khawarazemi (Algoritmi)**
- **John Von Neumann**
- **Ada Lovelace**
- **Marisa Mayer**
- **Tim Berners Lee**
- **Monica S. Lam**
- **Yoky Matsuoka**

OUR TOP READS

- **Data Visualization Made Simple** by Kristen Sosulski
- **Structured Computer Organization** by Andrew S Tanenbaum

EMPLOYABILITY

https://www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree - This might be a starting point but if you have better places to find the info from your subject that's great!

Computer Science provides many pathways of employability, either within the Computer Science field or not.

For example, here are just some examples of employability options available to you, if you choose to study Computer Science:

Cyber Security Analyst, Data Analyst, IT Consultant, IT Technician. Database Administrator, Network Administrator, Software Programmer, Web Programmer, Games Programmer etc.

FILMS

- The Imitation Game (2014)
- **Hackers**:
- **Jumpin Jack Flash**:

LINKS TO THE SPECIFICATIONS

Eduqas A-Level Computer Science:

https://www.eduqas.co.uk/media/zhpapwjj/eduqas-a-level-computer-science-spec-from-2015-e-24-01-2020.pdf