

## BTEC IT transition project

For IT BTEC we follow the **Pearson BTEC National Diploma in IT specification** and will study the following units:

Information Technology Systems  
Creating Databases  
Social Media in Business

Cyber Security  
Website Development  
Data Modelling (Spreadsheets)



<https://qualifications.pearson.com/en/qualifications/btec-nationals/information-technology-2016.html>

Computers are an important part of pretty much every part of everyday life. IT students need to have a broad view of a range of different aspects of computers and how they work. Probably the most fundamental part of computers are the components that fit together to make a modern computer. In the tasks below you will need to think about what makes a computer.

The project is set up to become more challenging as you work through each task and whilst some of the topics in the videos are a little more advanced than you need, they're presented well and should make some sense when you look at the questions. We'd like you to bring your project to enrolment in August, but if you'd like to get in touch about the project, get some feedback or find out more about the course, please email Mike Watts at [mwa@woking.ac.uk](mailto:mwa@woking.ac.uk)

### Task 1 (30 minutes)

Start off by finding an image and a definition of each of the following components of a computer

1	CPU	
2	RAM	
3	HDD	
4	ROM	
5	BIOS	

### Task 2 (2 hours)

Ben Eater has a fantastic series on building a simple 8-bit computer from scratch using the kind of parts you might have found in a typical home computer in the 1980s (all of which can still be bought today!):

<https://www.youtube.com/playlist?list=PLowKtXNTBypFbtuVMUVXNR0z1mu7dp7eH>

Watch through the first 4 videos and explain:

1. How the computer he builds relates to the devices that you've described above.
2. How is a program stored in the computer?
3. The computer doesn't really have a BIOS, so how does Ben get information in and out of his computer?

### Task 3 (1.5 hours)

For this task you need to choose components from a range of choices. You need to think about what components you need to make a modern computer. Start by reading this techradar guide on building a pc. Use it to make a list of the components you are going to need for your computer:

<https://www.techradar.com/uk/how-to/how-to-build-a-pc>

Once you have a list of components that you'll need, you can use online stores such as:

<http://www.overclockers.co.uk>

<http://www.scan.co.uk>

<http://www.newegg.com>

Specify all of the components that would be needed for a mid-range business desktop machine. You should aim for a budget of £800.