# IT Roadmap: Cambridge Nationals OCR J836 (Year 10 & Year 11)

**Subject Aim:** understand and apply the fundamental principles and concepts of IT, including the use of IT in the digital world, Internet of Everything, data manipulation and Augmented Reality. Understand, apply and use IT appropriately and effectively for the purpose and audience. Develop learning and practical skills that can be applied to real-life contexts and work situations. Think creatively, innovatively, analytically, logically and critically. Develop independence and confidence in using skills that would be relevant to the IT sector and more widely  plan, design, create, test and evaluate/review IT solutions and products which are fit for purpose and meeting user/client requirements and apply design and Human Computer Interface (HCI) considerations appropriate for a defined audience  understand the impacts of digital technologies on the individual, organisation and wider society

## Contacts

**Enterprise Department**: Based in the Enterprise Office (the Portakabin in the quad next to the main hall, up the ramp, room 27).  Student issues - please do not hesitate to ask for help (your teacher and/or at the Enterprise Office).  We also run "drop-in" sessions (open to students for any help / questions etc.) in CR3 on Monday, Tuesday and Wednesday after school

## Overview

The OCR Level 1/Level 2 Cambridge National in IT is aimed at students aged 14-16 years and will develop knowledge, understanding and practical skills that would be used in the IT sector. You may be interested in this if you want an engaging qualification where you will use your learning in practical, real-life situations, such as: using different applications and tools to design, create and evaluate IT solutions and products, creating a data manipulation solution creating an Augmented Reality prototype. This will help you to develop independence and confidence in using skills that would be relevant to the IT sector. The qualification will also help you to develop learning and skills that can be used in other life and work situations, such as: planning and designing IT solutions and products for a given purpose selecting the best tools and techniques to solve a problem  solving problems by exploring different software application tools and techniques creating IT solutions and digital products  use of planning techniques to complete tasks in an organised and timely way  finding imaginative ways to solve IT problems. This qualification will complement other learning that you're completing for GCSEs or vocational qualifications at Key Stage 4 and help to prepare you for further study.

## IT OCR Specification

### [CLICK ME: OCR J836 Cambridge National in IT](#)

## R050(Exam)
## R060 & R070 (Coursework)

**Key to units for this qualification:**

| | |
|---|---|
| M = Mandatory | Students must achieve this unit |
| E = External assessment | We set and mark the exam |
| N = NEA | You assess this and we moderate it |

| Unit no. | Unit title | Unit ref. no. (URN) | Guided learning hours (GLH) | How are they assessed? | Mandatory or optional |
|---|---|---|---|---|---|
| R050 | IT in the digital world | M/618/6129 | 48 | E | M |
| R060 | Data manipulation using spreadsheets | H/618/6130 | 36 | N | M |
| R070 | Using Augmented Reality to present information | K/618/6131 | 36 | N | M |

| | TOPICS (Year 10) | ASSESSMENT (Year 10 & Year 11) |
|---|---|---|
| **AUTUMN TERM** | **R060**: Data manipulation is an important part of many job roles, supporting development and growth in different sectors. Businesses in different sectors such as IT, finance, retail, hospitality, education and government all manipulate data for different purposes. Spreadsheet applications are commonly used to create input, processing and output solutions which manipulate data. In this unit you will learn the skills to be able to plan and design a spreadsheet solution to meet client Requirements. You will be able to use a range of tools and techniques to create a spreadsheet solution based on your design, which you will test. You will be able to evaluate your solution based on the user requirements | You are regularly assessed in two ways:<br><br>1). End of unit tests<br><br>2). Homework<br><br>You will be marked using the Cambridge National Grading Scheme – For more info, see the Specification |
| | TOPICS (Year 10) | HOMEWORK (Year 10 & Year 11) |
| **SPRING TERM** | **R060**: Data manipulation is an important part of many job roles, supporting development and growth in different sectors. Businesses in different sectors such as IT, finance, retail, hospitality, education and government all manipulate data for different purposes. Spreadsheet applications are commonly used to create input, processing and output solutions which manipulate data. In this unit you will learn the skills to be able to plan and design a spreadsheet solution to meet client Requirements. You will be able to use a range of tools and techniques to create a spreadsheet solution based on your design, which you will test. You will be able to evaluate your solution based on the user requirements | Homework will be set regularly usually in these categories:<br>• Maintaining skills over the holidays<br>• "Revision Homework" in preparation for each end of Unit Tests<br>• R050 Exam Prep homework such as making "Flash Cards" and Doing Past Papers<br>• Finishing VINs sections - work started in class to complete for homework<br>• VINs checkpoints to ensure their quality / quantity<br>• Watching Videos / Doing Research as: backup / background / "extras" to lessons<br>• Practical IT tasks in preparation for the Coursework |
| | TOPICS (Year 10) | ASSESSMENT REVISION (Year 10 & Year 11) |
| **SUMMER TERM** | **R060 (as above) + R070**: Augmented Reality (AR) has made it possible to present information so that users can see more detail in items/products with 2D or 3D images and can place the item digitally in their surroundings. AR provides increased engagement, interaction and a richer user experience. Businesses in different sectors such as IT, architecture, retail and hospitality, education and government are presenting information and/or products in a digital world using a range of digital devices. Augmented Reality software development kits (SDK) are used to create the AR product for different contexts. In this unit you will learn the basics of Augmented Reality (AR) and the creation of a model prototype product to showcase how it can be used appropriately for a defined target audience to present information. You will also learn the purpose, use and types of AR in different contexts and how they are used on different digital devices. You will develop the skills to be able to design and create an AR model prototype, using a range of tools and techniques. You will also be able to test and review your AR model prototype. | Full details of any assessment, how to revise for it and the revision materials available will be accessible from the Brightspace course homepage |
| | | **ENRICHMENT (Year 10 & Year 11)** |
| | | There will always be opportunities to go "further than the course" and these will be accessible from the Brightspace course homepage |

## Where next from Year 10 IT?

The course continues into Year 11, where you will take your R050 written exam in June.

| | TOPICS (Year 11) |
|---|---|
| **AUTUMN TERM** | **R070**: Augmented Reality (AR) has made it possible to present information so that users can see more detail in items/products with 2D or 3D images and can place the item digitally in their surroundings. AR provides increased engagement, interaction and a richer user experience. Businesses in different sectors such as IT, architecture, retail and hospitality, education and government are presenting information and/or products in a digital world using a range of digital devices. Augmented Reality software development kits (SDK) are used to create the AR product for different contexts. In this unit you will learn the basics of Augmented Reality (AR) and the creation of a model prototype product to showcase how it can be used appropriately for a defined target audience to present information. You will also learn the purpose, use and types of AR in different contexts and how they are used on different digital devices. You will develop the skills to be able to design and create an AR model prototype, using a range of tools and techniques. You will also be able to test and review your AR model prototype. |

| | TOPICS (Year 11) |
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| **SPRING TERM** | **R050**: The IT industry is vast and provides work for a wide range of people across sectors, from those working as freelance IT consultants, right through to those in large or specialist IT teams in multinational companies. Job roles frequently overlap across multiple sectors as there are common aspects to inputs, processing and outputs of IT systems which can be used in many ways, from supporting the planning, designing and Implementation of services or products to enhancing our daily lives in the digital world.<br>In this unit you will learn the theoretical knowledge and understanding to apply design tools for applications, principles of human computer interfaces and the use of data and testing in different contexts when creating IT solutions or products. You will understand the uses of Internet of Everything and the application of this in everyday life, cyber-security and legislations related to the use of IT systems, and the different types of digital communications software, devices, and distribution channels |

| | TOPICS (Year 11) |
|---|---|
| **SUMMER TERM** | **Take R050 Exam** |

## Where next from Year 11 IT?

At WBS 6th form we offer the Cambridge Technical L3 (Extended Certificate) in IT (Exact A Level equivalent) which is a natural successor to this course.  See: The L3 IT Summary Brochure for more details