

# OCR NATIONAL IT



Course Completed

**R050 Exam**  
40% Total Marks

**R070 NEA:**  
Create AR object based upon scenario brief for NEA work.



**Design, Create and Test:**  
Develop AR prototype using triggers, layers and outputs. Testing using test plans and review of processes

**Purpose of AR:**  
Where AR is used in society and functions of this.



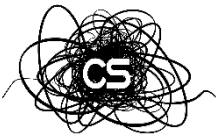
**IT in everyday life:**  
Use of IT in energy management and smart devices.



**Prevention:**  
How to prevent threats to computer systems.



**Threats:**  
What threats exist to computer systems and their impact.



**Data collection and Storage:**  
Investigate how data is stored and appropriate collection methods.

**Revision:**  
Past papers and knowledge organisers for R050.



**R070 NEA**  
30% TOTAL MARKS

**R070**  
3: CREATING AR & 4: TESTING

**R070**  
1: AR & 2: DESIGNING AR

**R050**  
INTERNET OF EVERYTHING

**R050**  
4: CYBER SECURITY & 5: COMMUNICATIONS

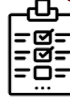
**Planning solutions:**  
Look at design tools for problems



**HCI design:**  
Looking at graphs and navigation systems for a spreadsheet solution.

**Spreadsheet tools:**  
Create a spreadsheet with data validation and a range of spreadsheet functions..

**Testing and Evaluation:**  
Create a test plan and evaluating against client requirements..



**NEA R060:**  
Completing independent NEA scenario..



**Use of data & validation checks**

**YEAR 11**



**R060**  
1.1 & 1.2 DESIGN TOOLS & HCI

**R060**  
2.1 DATA HANDLING

**R060**  
3.1 & 4.1 TESTING & EVALUATIONS

**NEA R060**  
30% TOTAL MARKS

**R050**  
1: DESIGN TOOLS & 2: HCI

**R050**  
3: DATA AND TESTING

**Excel Functions:**  
Experimenting in creating dashboards to data analysis



**Photography:**  
Investigate the principles behind photography.



**Creativity:**  
Using techniques such as biomimicry to create design.

**Security breaches:**  
Protocols and actions to prevent network security breaches.



**Types of Design Tools:**  
The use of different design tools for different projects and their suitability & HCI.



**OCR Introduction**  
Work areas and expectations



**YEAR 10**

**OCR IT TASTER**  
IT THEORY

**INEDIA TASTER**  
FRONT-END DESIGN

**CS TASTER**  
COMPUTATIONAL THINKING

**CYBER SECURITY**  
IT THEORY

**Searching:**  
Use search engines efficiently to improve accuracy of results

**Network Topologies:**  
How networks are designed and constructed.

**Managing Data:**  
Use sorting algorithms to control data.



**SMART Tech:**  
Investigate the impact of SMART technologies on our lives.

**YEAR 9**

**THE INTERNET OF THINGS**  
COMPUTING THEORY

**WEB THEORY**  
IT THEORY

**MICRO-BIT GAMING**  
COMPUTATIONAL THINKING

**COMPUTER ARCHITECTURE**  
COMPUTING THEORY

**BBC SCHOOL REPORT**  
FRONT-END DESIGN

**PYTHON PROGRAMMING**  
COMPUTATIONAL THINKING

**Evaluate:**  
Understand how to make appropriate hardware choices.

**Research and Interviews:**  
Develop questioning techniques to interview staff and students.

**Flowcharts:**  
Breaking down algorithms into simple steps.

**Algorithms:**  
Understanding programming techniques such as FOR loops

**Computer Components:**  
Understanding the function of different computer hardware.



**Graphics:**  
Produce graphics using SmallBasic



**Video editing:**  
Working with videos to edit, import and export.

**Reports:**  
Experimenting with different methods of reporting trends and queries.



**Teams:**  
Work in teams develop flow chart solutions to real world problems.

**Coding:**  
What are the differences between using block and written programming software?



**BLOCK TO WRITTEN PROGRAMMING**  
COMPUTATIONAL THINKING

**DATA ANALYTICS**  
IT THEORY

**FLOWLOL**  
COMPUTATIONAL THINKING

**Data Models:**  
Using spreadsheets and databases for manage data.

**Planning:**  
Create detailed solutions using efficient programming.

**Evaluate:**  
Does your produce work? Can you fix problems?



**APP DESIGN**  
FRONT-END DESIGN

**E-SAFETY**  
IT THEORY

**Viruses:**  
Different computer viruses. How do we protect our devices?



**Rules:**  
How to safely use a variety of computer features.



**Baseline Assessment:**  
What do you already know about CS?



**Introduction to CS:**  
Work areas and expectations

**YEAR 7**

**Welcome!**  
Settling in, usernames and passwords.

**Design:**  
Designing different features such as layout, navigation and information to include in an App.



**Product Analysis:**  
What makes an App suitable, or desirable? How can we learn from others?



**Cryptography:**  
How are messages/data sent securely across networks?

Learning about different CS pathways through project tasters for Year 9 Options/ Experience of multiple pathways and skills available in Year 10.

Broadening knowledge of programming and understanding of the workings of computer hardware. Experience of the practical application of skills in creative and problem solving tasks.

Learning about foundation principles in Computer Systems and an introduction to programming Experience of multiple software both technical and creative.

