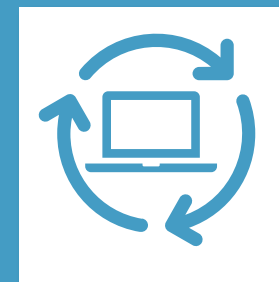
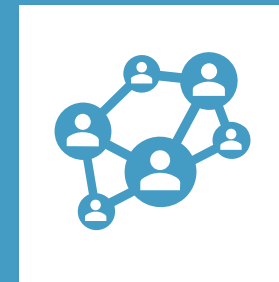


# AS/A LEVEL DIGITAL TECHNOLOGY

DRAFT APPROVAL CRITERIA



# BACKGROUND

In December 2018, Qualifications Wales published its review of qualifications and the qualification system in the information and communication technology sector, [\*Delivering Digital\*](#). In the review, we set out our intention to develop approval criteria for a new GCE AS/A level Digital Technology qualification which would be available to centres from September 2022.

We have worked with stakeholders since the publication of the review to develop our criteria for this qualification. These criteria are summarised in this PDF and the draft approval criteria document itself is also available separately.

We hope that you will take the time to review our proposals and offer your feedback and we thank you in advance for your time and assistance in doing so.



# QUALIFICATION OVERVIEW

Click on an approval criteria area below to find out more.



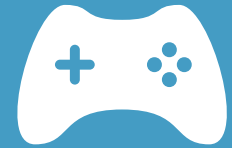
**PURPOSE**



**AIMS & OBJECTIVES**



**INNOVATION IN  
DIGITAL  
TECHNOLOGY**



**CREATIVE DIGITAL  
PRACTICES**



**CONNECTED  
SYSTEMS**



**DIGITAL  
SOLUTIONS**



**ASSESSMENT  
OBJECTIVES**



**ASSESSMENT  
SUMMARY**

# PURPOSE

GCE AS/A level Digital Technology advances learners' understanding of the digital technologies that are used by individuals and organisations across the world, including how they have developed and how they continue to change. The qualification enables learners to develop a deep understanding of how innovations in digital technology, and the increasing levels of connectivity between them, impact the lives of those who use them and wider society.

Learners will also develop practical skills in developing both creative digital products and digital solutions to problems faced by organisations, supporting their progression into employment in a career that utilises digital technologies or onto a programme of higher education involving digital technologies.



## We ask:

- Is the purpose of GCE AS/A level Digital Technology clear?



«« OVERVIEW

AIMS

»»

# AIMS AND OBJECTIVES

The qualification has six aims and objectives. We developed these aims and objectives by engaging with stakeholders in a series of 'Development Days', which we held across Wales.

GCE Digital Technology specifications must enable learners to develop:

- 1** An understanding of significant past, current and emerging digital technologies.
- 2** An understanding of the integrated and connected nature of digital technologies used by individuals and organisations.
- 3** Skills in researching and exploring issues before finding and implementing solutions to them.
- 4** Skills in planning, designing and creating innovative web-based and multimedia content that meets the needs of specified audiences.
- 5** An understanding of the legal, social, ethical and professional, and environmental, impacts of digital technologies on individuals and wider society.
- 6** A knowledge of the systems development life cycle and its iterative and cyclical nature.



«« OVERVIEW

UNIT 1 »»

UNIT  
1

# INNOVATION IN DIGITAL TECHNOLOGY

AS

LEVEL  
UNIT

50%

WEIGHTING  
(20% OF FULL  
A LEVEL)



ON-SCREEN  
EXAMINATION

For Unit 1, our approval criteria require awarding bodies to develop content on innovations in digital technology. The criteria sets out a number of topic areas which must be covered by this content.



Connected systems, smart devices and the principles of the internet of things



Development of AI, including machine learning, and robotics over time



Digital technology life cycles and methodologies



User-centred design, user experience and human-computer interaction



Functions, purposes and uses of social media

In each of these areas, specifications must also require learners to explore a range of legal, social, ethical and professional dimensions. These must be relevant to and integrated with the content developed for the required topics above.

### We ask:

- How far do you agree that the topics included in this unit are suitable to support learners in meeting the subject aims and objectives?
- How far do you agree that on-screen examination is a suitable method of assessment for this unit?

« OVERVIEW

UNIT 2

»

# UNIT 2

## CREATIVE DIGITAL PRACTICES

AS

LEVEL  
UNIT

50%

WEIGHTING  
(20% OF FULL  
A LEVEL)



PRACTICAL  
TASK

In Unit 2, specifications will require learners to undertake a practical task that leads to the creation of a video game that meets the needs of particular audiences/users. Learners will be required to incorporate a range of advanced features.

For learners who have completed GCSE Digital Technology, Unit 2 will allow them to progress the skills they developed when producing a short animation or section of a video game for that qualification.

This task allows learners to demonstrate a wide range of skills which stakeholders in our recent survey on practical tasks in this qualification told us were important for learners at AS level.



### PLAN

Learners will plan a project that leads to the creation, testing and refinement of a video game that meets the needs of particular audiences or users, including creating an action plan and a development log.



### DESIGN

Learners will design the components for the video game, which could include character sprites and models, levels and terrain, audio and sound effects, game systems and methods of interaction.



### CREATE

Learners will create the video game, using a variety of advanced features, which could include player reward and progression systems, texture mapping, character animations and tweening, 3D elements, camera control and modifiable difficulty elements.



### REVIEW

Learners will review the video game against the planned outcomes, including by testing and refining the digital product, and the effectiveness of the approaches taken to creating the product.

### We ask:

- How far do you agree that the stages included in this unit are suitable to support learners in meeting the subject aims and objectives?
- How far do you agree that a practical task is a suitable method of assessment for this unit?

« OVERVIEW

UNIT 3



UNIT  
3

## CONNECTED SYSTEMS

A2

LEVEL  
UNIT

30%

WEIGHTING



ON-SCREEN  
EXAMINATION

For Unit 3, our approval criteria require awarding bodies to develop related to the connected nature of digital systems. The criteria sets out a number of topic areas which must be covered by this content.



Contemporary practices involved in collecting, storing, analysing and using data.



Cyber security, resilience controls and social engineering.



Digital technology networks and their role in communications and transmissions, and mobile technologies.

In each of these areas, specifications must also require learners to explore a range of legal, social, ethical and professional dimensions. These must be relevant to and integrated with the content developed for the required topics above.



### We ask:

- How far do you agree that the topics included in this unit are suitable to support learners in meeting the subject aims and objectives?
- How far do you agree that on-screen examination is a suitable method of assessment for this unit?

« OVERVIEW

UNIT 4

»



UNIT  
4

## DIGITAL SOLUTIONS

A2

LEVEL  
UNIT

30%

WEIGHTING



PRACTICAL  
TASK

In Unit 4, specifications will require learners to undertake a practical task that leads to the creation of a digital solution comprised of a database with a web front end. This task will allow learners to develop skills in database creation and data handling that respondents in our recent survey on practical tasks in this qualification told us were important for learners at A2 level in this subject area.



Investigate  
a realistic  
systems  
problem.



Identify  
success  
criteria for a  
solution.



Design,  
plan and  
develop a  
database  
solution.



Create a  
connected  
web front  
end.



Populate  
the  
database to  
refine and  
test it.



Review the  
success of  
the overall  
solution.

Learners will complete this practical task by using suitable project management tools and following an iterative approach to the development of the overall solution.



### We ask:

- How far do you agree that the stages included in this unit are suitable to support learners in meeting the subject aims and objectives?
- How far do you agree that a practical task is a suitable method of assessment for this unit?

« OVERVIEW

OBJECTIVES »»







# ASSESSMENT OBJECTIVES

Assessments in GCE AS/A level Digital Technology must target three assessment objectives.

|            |   | AS LEVEL | A2 LEVEL |
|------------|---|----------|----------|
| <b>AO1</b> | Demonstrate knowledge and understanding of digital technology systems, including how they are used by, and impact on, individuals, organisations and society.               | 25-30%   | 20-25%   |
| <b>AO2</b> | Apply knowledge and understanding to investigate, analyse and evaluate digital technology products and systems, and their impact on individuals, organisations and society. | 30-35%   | 35-40%   |
| <b>AO3</b> | Plan, design, create, and review approaches to developing, digital products.  | 35-40%   | 35-40%   |

# ASSESSMENT SUMMARY

GCE AS/A level Digital Technology is comprised of four units – two at AS level and a further two units to complete the A level qualification.

|   |  UNIT 1 |  UNIT 2 |  UNIT 3 |  UNIT 4 |
|---|--|--|--|--|
|  ON-SCREEN EXAMINATION | ✓  |  | ✓  |  |
|  PRACTICAL TASK        |  | ✓  |  | ✓  |
|  WEIGHTING           | 50% AS<br>20% A LEVEL  | 50% AS<br>20% A LEVEL  | 30% A LEVEL  | 30% A LEVEL  |

« OVERVIEW