



Training  
Qualifications UK

## Alternative Academic Qualification Factsheet

TQUK Level 3 AAQ Certificate in Design, Engineer and Construct in the Digital Built Environment

TQUK Level 3 AAQ Diploma in Design, Engineer and Construct in the Digital Built Environment

# TQUK Level 3 AAQ Certificate in Design, Engineer, and Construct in the Digital Built Environment

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## What are AAQs?

Alternative Academic Qualifications (AAQs) have been approved by the Department for Education (DfE) and, when combined with A Levels as part of a mixed-study programme, provide learners with a high-quality entry route into higher education with the added reassurance of allocated UCAS tariff points. AAQs provide a flexible and inclusive progression opportunity for learners who commence at certificate level with the option of working towards the diploma that builds on the knowledge and skills they have already completed.

The purpose of the AAQs in Design, Engineer, and Construct in the Digital Built Environment is to provide learners with the knowledge and skills necessary to progress to higher education and ultimately to work within the built environment sector. They provide learners with a strong foundation of knowledge and skills in design, engineering, and construction principles that complement theoretical concepts covered in the A Level curriculum. This integrated approach will enable learners to gain a full understanding of academic principles and their practical application. This will showcase their ability to apply concepts and techniques and strengthen their university/college applications giving them a competitive edge.

## What will learners study?

The AAQs seek to equip learners with in-depth knowledge and understanding of the approaches required when designing a sustainable construction project. The diploma comprises 6 mandatory themes and includes the 3 themes that are studied at certificate level as outlined in the following table:

Themes	Certificate	Diploma
1. Defining a sustainable construction project	✓	✓
2. Developing a sustainable construction project	✓	✓
3. Design, structural, and service aspects of a sustainable construction project	✓	✓
4. Delivering design, structural, and services aspects of a sustainable construction project		✓
5. Lifecycle and financial planning for a sustainable construction project		✓
6. Evaluating and documenting a sustainable construction project		✓

## The difference between the certificate and the diploma

Learners who study an AAQ have the choice between a certificate or a diploma. The certificate is equivalent to an AS Level and comprises 3 themes that learners may typically complete in one year, or as part of a 2-year programme of study. Learners may choose to study the certificate to gain core knowledge of the principles of researching, pre-designing, and designing a sustainable construction project and have the option of continuing their studies to diploma level. The diploma is equivalent to one A Level and comprises 6 themes that learners would typically complete within a 2-year study programme. The diploma builds on the 3 themes completed at the certificate level and provides learners with the opportunity to expand their knowledge and skills in design, the use of BIM, financial planning, and a building's lifecycle as well as honing review and evaluation skills.

## The target age group



The certificate and diploma have been designed for learners aged 16-19 who wish to develop core knowledge and understanding of design and engineering principles.

## Focus of the diploma

Learners build on studies at certificate level. They will develop a strong foundation of design, engineering, and construction principles used in the digital built environment. They will explore key stages of a sustainable construction project from initial design idea to review and evaluation. It focuses on the role of the built environment in climate change, addressing how design, engineering and construction methods can reduce carbon emissions through the use of sustainable materials, green building techniques and energy-efficient design.

Project management will form a large part of knowledge and essential skills-building and learners will gain an understanding of techniques to include, 3-D modelling, floor planning, and the use of Building Information Modelling (BIM). Learners study financial planning, budgeting, and control to create cost-effective design solutions. They will also learn about the key role of a building's lifecycle when designing a construction project and its economic and social impact.

## Focus of the certificate

Learners will study the core principles that underpin the research, pre-design, and design stages of a sustainable construction project. Learners will explore the preliminary stages of a construction project from the initial and concept design stages to the design phase itself. They will develop skills throughout the qualification to understand the approaches needed for specific projects including the regulatory requirements, sustainability concerns, and the exploration of structural materials and building services elements to incorporate within a construction design.

## Total Qualification Time (TQT)

An estimate of the overall time a learner will typically take to achieve and demonstrate the required level of attainment:

Qualification	Guided Learning Hours (GLH)	Direct Study	Total qualification time (TQT)
TQUK Level 3 AAQ Certificate in Design, Engineer, Construct in the Digital Built Environment	180	20	200
TQUK Level 3 AAQ Certificate in Design, Engineer, Construct in the Digital Built Environment	360	40	400

## Assessment

The qualifications are assessed holistically and comprise an examined assessment (EA) and a non-exam assessment (NEA). The NEA will be released each year in September. The assessment weightings are:

Qualification	Examined assessment (EA)	Non-exam assessment (NEA)
TQUK Level 3 AAQ Certificate in Design, Engineer, Construct in the Digital Built Environment	40%	60%
TQUK Level 3 AAQ Certificate in Design, Engineer, Construct in the Digital Built Environment	40%	60%

## HE progression

The qualifications have been designed to support progression to higher education. They may support entry to the following degree programmes:

- Architectural Engineering
- Architectural Technology
- Building Services Engineering
- Building Surveying
- Civil and Structural Engineering
- Construction Project Management
- Construction Site Management
- Electrical Engineering
- Geographical Information Systems
- Geospatial Science and Mapping
- Interior Architecture and Design
- Landscape Architecture
- Mechanical Engineering
- Property Development and Planning
- Quantity Surveying and Construction
- Urban Planning
- Architecture

## Knowledge and skills and their benefits for future study

Learners will develop specialist skills such as conducting research to inform the creation of initial design concepts; developing and adapting designs; responding to feedback; project management and planning; teamworking, and presenting a design to an audience.

Learners will also gain knowledge of the approaches to use when evaluating site conditions; conducting a feasibility study; applying sustainable construction principles and practices involving energy efficiency; waste management, and assessing the environmental impact of a construction project. This knowledge and skills base will be invaluable for learners wishing to further their studies in disciplines such as design engineering, architecture, urban planning, building surveying, construction management, and quantity surveying.

## A Levels to complement the AAQs

The A Level subject areas that would complement the AAQs include mathematics, Physics, Art and Design, Design and Technology, Environmental Technology, Business Studies, and Economics.

Combining the AAQs with A Levels in Mathematics, Physics, or Chemistry would introduce learners to the quantitative and analytical skills required in a range of engineering disciplines. This would be particularly relevant for degrees in civil, mechanical, or chemical engineering. Studying the AAQs with A levels in Mathematics, Computer Science or Physics would be advantageous for learners interested in structural engineering or robotics. This combination integrates technical with analytical skills fostering creativity with practical design elements.

Learners may also choose to combine the AAQs with A Levels in Geography, Biology, or Chemistry. This would allow them to explore the sustainable and environmental aspects of construction and develop a greater understanding of ecological and chemical principles. This combination would support entry to degrees in environmental science or engineering.

## Mixed Study Programmes

Our AAQs, available in both 180glh and 360glh options, can be pursued sequentially as nested qualifications or independently as standalone qualifications. They are designed to provide flexibility in mixed study programmes, allowing learners to choose the approach that best aligns with their abilities and goals. Learners can choose between full A Level or AS Level study alongside 180glh and 360glh AAQ options, depending on their desired breadth and depth in a subject, and to meet their higher education needs. Tailoring education through a combination of fewer subjects with greater depth or a broader range of subjects allows learners to better support progression to higher education. For more details, please see 'mixed study programme' examples on the next page or refer to the 'course delivery' section in the qualification specification.

### More Information

For further information about the TQUK Level 3 AAQ Certificate and Diploma in Design, Engineer, and Construct in the Digital Built Environment, please visit the TQUK [website](#). If you're new to Training Qualifications UK, you can contact us in a variety of ways:

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## Mixed Study Programme Examples

This section of the factsheet is to provide an overview of A-level subjects that may be beneficial when studied alongside our Alternative Academic Qualifications (AAQs) in a mixed study program, to support progression to higher education. The following examples have been designed to illustrate the different options available to learners. These options aim to assist learners in making informed choices of qualifications based on their abilities and goals.

### Building Surveying: Mixed study programme examples

To pursue higher education in Building Surveying in the UK, it's important to choose A-level and AAQ subjects that will prepare you for this field and provide a strong foundation in relevant areas. Building Surveying involves assessing and managing the condition of buildings, including their design, construction, maintenance, and renovation. Here are some A-level and AAQ subjects that can be beneficial for study in a mixed study programme:

#### Option 1

A Level	Mathematics
A Level	Geography
Small AAQ	360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner may study 1 A Level in year 1 and the other in year 2, whilst studying the Diploma AAQ over 2 years. The other option is to study all 3 subjects over a 2 year period.

#### Option 2

A Level	Mathematics
A Level	Geography
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment
	360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period, whilst studying the Certificate AAQ in year 1 and then the Diploma in year 2.

#### Option 3

A Level	Mathematics
A Level	Geography
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment
	180glh Certificate in IT & Computing

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period. Alongside this, the learner has the option to select 2 x 180glh AAQs (equivalent to A/S Levels) whereby they will typically study one in year 1 and the other in year 2.

#### Option 4

A Level	Mathematics
A Level	Geography
A/S Level	Physics
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 2.5 A Levels across a typical 2 year study programme alongside 1 x 180glh AAQ equivalent to an AS Level to make up a 2 year study programme equivalent to 3 A Levels in total.

**Note:** It's important to research the specific entry requirements for Higher Education programmes at different universities or institutions, as these requirements can vary. Some programmes may have prerequisites or recommended subjects, so it is advised that learners check the admission criteria of the institutions they're interested in. Additionally, learners could also consider seeking guidance from school counselors or career advisors to ensure their A-level and AAQ choices align with their career goals.

Each mixed study programme option is equivalent to 3 A Levels

## Mixed Study Programme Examples

This section of the factsheet is to provide an overview of A-level subjects that may be beneficial when studied alongside our Alternative Academic Qualifications (AAQs) in a mixed study program, to support progression to higher education. The following examples have been designed to illustrate the different options available to learners. These options aim to assist learners in making informed choices of qualifications based on their abilities and goals.

### Urban Planning - Mixed study programme examples

To pursue higher education in Urban Planning in the UK, it's important to choose A-level and AAQ subjects that will prepare you for this field and provide a strong foundation in relevant areas. Urban Planning involves designing and managing urban spaces and communities. Here are some A-level and AAQ subjects that can be beneficial for study in a mixed study programme:

#### Option 1

A Level	Geography
A Level	Mathematics
Small AAQ	360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner may study 1 A Level in year 1 and the other in year 2, whilst studying the Diploma AAQ over 2 years. The other option is to study all 3 subjects over a 2 year period.

#### Option 2

A Level	Geography
A Level	Mathematics
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment
	360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period, whilst studying the Certificate AAQ in year 1 and then the Diploma in year 2.

#### Option 3

A Level	Geography
A Level	Mathematics
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment
	180glh Certificate in IT & Computing

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period. Alongside this, the learner has the option to select 2 x 180glh AAQs (equivalent to A/S Levels) whereby they will typically study one in year 1 and the other in year 2.

#### Option 4

A Level	Geography
A Level	Mathematics
A/S Level	Environmental Science
Small AAQ	180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 2.5 A Levels across a typical 2 year study programme alongside 1 x 180glh AAQ equivalent to an AS Level to make up a 2 year study programme equivalent to 3 A Levels in total.

**Note:** It's important to research the specific entry requirements for Higher Education programmes at different universities or institutions, as these requirements can vary. Some programmes may have prerequisites or recommended subjects, so it is advised that learners check the admission criteria of the institutions they're interested in. Additionally, learners could also consider seeking guidance from school counselors or career advisors to ensure their A-level and AAQ choices align with their career goals.

Each mixed study programme option is equivalent to 3 A Levels

## Mixed Study Programme Examples

This section of the factsheet is to provide an overview of A-level subjects that may be beneficial when studied alongside our Alternative Academic Qualifications (AAQs) in a mixed study program, to support progression to higher education. The following examples have been designed to illustrate the different options available to learners. These options aim to assist learners in making informed choices of qualifications based on their abilities and goals.

### Mechanical Engineering - Mixed study programme examples

To pursue higher education in Mechanical Engineering in the UK, it's important to select A-level subjects that will prepare you for this field and provide a strong foundation in relevant areas. Mechanical Engineering involves aspects of mathematical equations, physics, design technology and engineering. Here are some A-level and AAQ subjects that can be beneficial for study in a mixed study programme for study in a mixed study programme:

#### Option 1

A Level

Mathematics

A Level

Physics

Small AAQ

360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner may study 1 A Level in year 1 and the other in year 2, whilst studying the Diploma AAQ over 2 years. The other option is to study all 3 subjects over a 2 year period.

#### Option 2

A Level

Mathematics

A Level

Physics

Small AAQ

180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment

360glh Diploma in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period, whilst studying the Certificate AAQ in year 1 and then the Diploma in year 2.

#### Option 3

A Level

Mathematics

A Level

Physics

Small AAQ

180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment

180glh Certificate in Sound Engineering

In this option, the learner has options to study 1 A Level in year 1 and the other in year 2 or to study both A Levels over a 2 year period. Alongside this, the learner has the option to select 2 x 180glh AAQs (equivalent to A/S Levels) whereby they will typically study one in year 1 and the other in year 2.

#### Option 4

A Level

Mathematics

A Level

Physics

A/S Level

Environmental Technology

Small AAQ

180glh Certificate in Design, Engineer, and Construct in the Digital Built Environment

In this option, the learner has options to study 2.5 A Levels across a typical 2 year study programme alongside 1 x 180glh AAQ equivalent to an AS Level to make up a 2 year study programme equivalent to 3 A Levels in total.

**Note:** It's important to research the specific entry requirements for Higher Education programmes at different universities or institutions, as these requirements can vary. Some programmes may have prerequisites or recommended subjects, so it is advised that learners check the admission criteria of the institutions they're interested in. Additionally, learners could also consider seeking guidance from school counselors or career advisors to ensure their A-level and AAQ choices align with their career goals.

Each mixed study programme option is equivalent to 3 A Levels