

## 1. Title of the certificate <sup>(en)</sup>



**City & Guilds Level 5 IVQ Advanced Technician Diploma in Construction  
(6165-30) (500/5785/6)**

<sup>(1)</sup> In the original language

## 2. Translated title of the certificate <sup>(1)</sup>

<sup>(1)</sup> If applicable. This translation has no legal status.

## 3. Profile of skills and competences

A typical holder of a certificate is able to:

- Define surveying principles using electronic distance instruments and laser alignment equipment
- Describe scientific principles which determine the behaviour of materials and the relevant technological processes involved in the construction industry
- Relate surveying and scientific principles to long span, low rise and multi-storey buildings and consider the implications for alterations, modification and demolition of existing buildings
- Comply with the legal requirements in order to minimise breaches of duty under common law
- Communicate effectively, interpret events and their legal implications correctly
- Explain management theory, including the roles and competences of management
- Describe the principles of personnel management and industrial relations applicable to the construction industry
- Define all aspects of pre-construction procedures including the tender, pre-construction/construction planning, method study, method statements and programming taking into account safe practices, welfare and efficiency

plus any **two** from the following areas:

### (1) Tendering, estimating and quantity surveying

- Explain the functions of the estimator, buyer and senior management
- Submit a formal tender for small residential works
- Prepare Bills of Quantities for domestic, commercial and industrial buildings using traditional, non-traditional and computer aided techniques
- Establish, organise and manage a quantity surveying office.

### (2) Building services, science and technology

- Explain and apply the theories and principles of various systems\* into the framework of building design, construction and services across domestic, industrial and commercial projects  
*\* water sources, storage, treatment and distribution (to, within and external to the building); sound generation and acoustic performance within a building; levels of artificial lighting to match usage and/or occupancy of a building, relevant to geographical location; heating and air conditioning requirements and design*
- Demonstrate specialist knowledge of building services, particularly in the areas of heating, air conditioning and electrical/electronic services
- Co-ordinate requirements at design project planning, installation and commissioning of services installation.

### (3) Structural elements, geology, soil mechanics and hydraulics

- Define the underlying factors which underpin the design of simple structural elements
- Carry out the design of structural elements and compare designs with those obtained using computer software packages
- Describe the origins and composition of minerals and rocks
- Describe the structure classification and engineering properties of engineering soils
- Describe fluids at rest and in motion and their effects on other bodies
- Describe the operating principles of hydraulic machinery and pumping head calculation methods.

### (4) Architectural design

- Prepare detailed architectural drawings
- Prepare specialist and fitting out drawings
- Identify legal considerations involved in architectural design
- Operate a Computer Aided Design (CAD) programme effectively in architectural design.

### (5) Construction mathematics

- Apply advanced mathematical skills to structural analysis and civil engineering.

### <sup>(1)</sup> Explanatory note

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers. More information available at: <http://europass.cedefop.eu.int>.

#### 4. Range of occupations accessible to the holder of the certificate <sup>(1)</sup>

- Quantity Surveyor
- Construction Supervisor
- Construction Manager.

*Note: the above are examples only, other occupations may also be accessible to holders of the certificate.*

<sup>(1)</sup> If applicable

#### 5. Official basis of the certificate

<p><b>Name and status of the body awarding the certificate</b></p> <p>City &amp; Guilds 1 Giltspur Street London EC1A 9DD United Kingdom T +44 (0)20 7294 2800 F +44 (0)20 7294 2400 <a href="http://www.cityandguilds.com">www.cityandguilds.com</a></p> <p>City &amp; Guilds was established in 1878 as a registered charity (no. 312832) and received Royal Charter (RC117) in 1900.</p> <p>City &amp; Guilds is accredited as an awarding body by the Office of the Qualifications and Examinations Regulator (Ofqual) and the Scottish Qualifications Authority (SQA) to offer qualifications.</p>	<p><b>Name and status of the national/regional authority providing accreditation/recognition of the certificate</b></p> <p>Office of the Qualifications and Examinations Regulator (Ofqual) Spring Place Coventry Business Park Herald Avenue Coventry CV5 6UB England T +44 (0)300 303 3344 F +44 (0)300 303 3348 <a href="http://www.ofqual.gov.uk">www.ofqual.gov.uk</a></p>
<p><b>Level of the certificate (national or international)</b></p> <p>Level 5 – National Qualifications Framework of England, Wales and Northern Ireland (NQF)</p>	<p><b>Grading scale/Pass requirements</b></p> <p>Written assessments are graded 'Pass', 'Merit', 'Distinction' or 'Fail'.</p> <p>Practical assessments are graded 'Pass' or 'Fail'.</p> <p>The overall qualification is not graded. A certificate will only be awarded on successful completion of the required number of units.</p>
<p><b>Access to next level of education/training</b></p> <p>We consider the following options to be relevant progression routes from this qualification:</p> <ul style="list-style-type: none"> <li>• Full Technological Diploma (FTD)</li> <li>• Engineering Council examinations</li> <li>• Higher/further education</li> <li>• Management qualifications</li> <li>• Employment.</li> </ul>	<p><b>International agreements</b></p>
<p><b>Legal basis</b></p> <p>Not applicable.</p>	

#### 6. Officially recognised ways of acquiring the certificate

This qualification can only be offered by an institution/provider ('centre') that has been approved by City & Guilds and therefore meets its quality requirements for staff and centre resources and is subject to regular checks.

The following assessment methods are used:

- Ongoing assessments carried out by the centre
- Final assessments:
  - written test set and marked by City & Guilds
  - practical assessments set by City & Guilds and marked by the centre.

All assessments are quality assured by City & Guilds verifiers.

The vocational education and training is a combination of classroom based and/or work based and/or realistic working environment based activities.

The recommended Guided Learning Hours (GLHs) for this qualification are 660 hours.

**Entry requirements**

City & Guilds exercises a policy of open access and does not set formal entry requirements for its qualifications. Centres are however required to ensure that learners are registered for a programme of study and examination at the appropriate level.

**More information (including a description of the national qualifications system) available at:** [www.naric.org.uk](http://www.naric.org.uk).

**National reference point:** [www.uknrip.org.uk](http://www.uknrip.org.uk).