

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



**City & Guilds IVQ Technician Diploma in Applied Telecommunication Systems (2730-02)**

<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 the certificate is able to:

- Describe the principles of advanced mathematics
- Explain the fundamentals of electronic communication
- Describe the principles of communication systems and digital networks
- Apply the laws of Boolean algebra and construct and investigate an electrical circuit consisting of logic gates and light emitting diodes (LEDs)
- Calculate the impedance of a series circuit consisting of inductance capacitance and resistance (LCR) and calculate the overall voltage gain of a cascade of amplifiers and attenuators
- Draw and label diagrams relating to telecommunication systems
- Investigate the design characteristics of modems and analyse the modulation schemes employed for the transfer of data
- Describe basic elements and historical aspects of telephone networks, the routing of various types of call and the necessary systems and subsystems required
- Prepare, from a building plan, a cable design which adheres to the latest version of ISO/IEC 11810 cabling standard
- Describe the SDH/SONET systems
- Describe the principles of radio systems
- Plan a global system for a mobile communication (GSM) network
- Use pseudocode following established programming principles
- Plan, install and maintain telecoms equipment in a customer's premises
- Carry out a pre-installation survey to premises
- Carry out risk assessments to identify risks and prevent hazards
- Accurately test and measure analogue and digital signals
- Install high speed synchronous and wireless networks
- Set up internet data centres
- Adopt and maintain safe working practices above and below ground
- Use specialist telecoms tools and equipment safely in accordance with national standards
- Provide and maintain exchange equipment
- Lay copper or fibre-optic cables internally or externally
- Operate a telecoms plant.

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

- Aerial Rigger
- Equipment Wirer and Assembler
- Mobile Switching Engineer
- Radio Frequency Engineer
- Radio Repair Technician
- Specialist Cable Installer
- Telecoms Engineer
- Telecoms Project Technician.

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

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

### <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>.

© European Communities 2002

## 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 2885 F +44 (0)20 7294 2405 <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>International Vocational Qualifications (IVQs) are a unique set of qualifications designed by City &amp; Guilds specifically for international use.</p> <p>They are subject to global quality assurance rules and regulations set by City &amp; Guilds. These policies are based on the quality assurance practices which have been approved by Ofqual.</p> <p>Within a study of IVQs against international and national standards, UK NARIC/NRP mapped the IVQ Technician Diploma in Telecommunications to level 3 of the National Qualifications Framework of England, Wales and Northern Ireland (NQF).</p> <p>This qualification is also endorsed by the UK Sector Skills Council for Telecommunications, e-skills UK.</p>
<p><b>Level of the certificate (national or international)</b></p> <p>Level 3* – National Qualifications Framework of England, Wales and Northern Ireland (NQF)</p> <p><i>*broad comparability</i></p>	<p><b>Grading scale/Pass requirements</b></p> <p>Written assessments are graded 'Pass', 'Credit', '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>• IVQ Advanced Technician Diploma in Telecommunication Systems (2730-03)</li> <li>• Level 2 IVQ Advanced Technician Diploma in Engineering (2565-03)</li> <li>• Level 2 IVQ Advanced Technician Diploma in Electrical and Electronic Engineering (8030-23)</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

<p>This qualification can only be offered by an institution/provider ('centre') that has been approved by City &amp; Guilds and therefore meets its quality requirements for staff and centre resources and is subject to regular checks.</p> <p>The following assessment methods are used:</p> <ul style="list-style-type: none"> <li>• Ongoing assessments carried out by the centre</li> <li>• Final assessments:             <ul style="list-style-type: none"> <li>- written test set and marked by City &amp; Guilds</li> <li>- practical assessments set by City &amp; Guilds and marked by the centre.</li> </ul> </li> </ul> <p>All assessments are quality assured by City &amp; Guilds verifiers.</p> <p>The vocational education and training is a combination of classroom based and/or work based and/or realistic working environment based activities.</p> <p>The recommended Guided Learning Hours (GLHs) for this qualification are 600 hours.</p> <p><b>Entry requirements</b></p> <p>City &amp; 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.</p> <p><b>More information (including a description of the national qualifications system) available at:</b> <a href="http://www.naric.org.uk">www.naric.org.uk</a>. <b>National reference point:</b> <a href="http://www.uknrp.org.uk">www.uknrp.org.uk</a>.</p>
--