



National Certificate in Electricity Supply (Power Technician) with an optional strand in Generation and Sustainable Energy

level of qualification: 5

credit total: 162

Purpose and content of the National Certificate

Purpose:

This National Certificate caters for trainees within this industry whose primary role is carrying out acceptance, installation, commissioning, and maintenance testing of primary and secondary equipment installed on an electricity supply system.

Equipment and systems with which holders are able to demonstrate their competence in carrying out this role are: battery banks and charge systems, multiple input protection systems, power and instrument transformers, high voltage power cables, and ancillary service (AC and DC) and uninterrupted power supply supplies, high voltage circuit breakers, single input protection relays, and test instruments used.

Content:

Compulsory unit standards

core electrical

		level	credit
22722	Demonstrate and apply introductory knowledge of electrical circuit engineering principles	4	15
22723	Demonstrate and apply intermediate knowledge of the elements of power engineering	5	15
22724	Demonstrate and apply knowledge of electrical machines	5	15

electrotechnology

16992	Describe and apply knowledge of electrotechnology fault-diagnosis procedures	4	15
22734	Demonstrate and apply introductory knowledge of electrotechnology engineering mathematics	4	15

design and commissioning

14297	Carry out tests on multiple input protection systems	5	6
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		level	credit
power system maintenance			
26019	Demonstrate knowledge of introductory concepts in power system protection	4	10
26020	Demonstrate knowledge of intermediate concepts in power system protection	5	10
testing			
14271	Carry out tests on power transformers	4	6
14272	Carry out maintenance and/ or acceptance tests on high voltage circuit breakers	4	6
14273	Carry out tests on instrument transformers	4	5
14274	Carry out electrical tests on other high voltage bus connected equipment	3	4
14276	Carry out tests on high voltage power cables	3	4
14280	Carry out acceptance and maintenance tests on single input protection relays	4	4
14285	Carry out tests on ancillary service (AC and DC) and uninterrupted power supply supplies	3	4
14287	Use and maintain test instruments used within the high voltage electrical industry	3	4
14288	Carry out tests on battery banks and charge systems	3	4
core electronics			
22726	Demonstrate and apply introductory knowledge of electronic engineering	4	15
22727	Demonstrate and apply intermediate knowledge of programmable logic controller engineering applications	5	15



level credit

Generation and Sustainable Energy Optional strand

power system management

11577	Describe and apply electricity power generation technology	6	15
19326	Maintain and modify distributed control systems to control electricity supply plant operations	5	15
23409	Utilise a Distributed Control System (DCS) in the operation of an electricity generation power station	5	6