ITC Level 3 Certificate in Safe Working Practice in the Wind Turbine Industry

G103

Qualification Specification
Guidance for Centres

Qualification Number: 610/0618/X

Developed in collaboration with:

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Website Access
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Appendix Documents Listing

Hard copy documents go out of date. For up-to-date versions of documents please go to the Support Resources section of the ITC Web-Office (Members section).

Unit Specifications

- D/650/1763 First Aid in the Wind Turbine Environment
- H/650/1765 Manual Handling in the Wind Turbine Environment
- L/650/1768 Fire Safety Awareness in the Wind Turbine Environment
- Y/650/1770 Working at Heights in the Wind Turbine Environment
- A/650/1771 Marine Safety and Sea Survival in the Wind Turbine Environment ● D/650/1772 Working with Mechanical Systems in the Wind Turbine Environment ● F/650/1773 Working with Electrical Systems in the Wind Turbine Environment ● H/650/1774 Working with Hydraulic Systems in the Wind Turbine Environment ● J/650/1775 Enhanced First Aid in the Wind Turbine Environment
- K/650/1776 Advanced Rescue in the Wind Turbine Environment

Delivery Resources

- G103 Centre Guidance [This document]
- ACET2.103 Wind Turbine Level 3 Unit Tracking Document
- ACET2S.103 Wind Turbine Level 3 Unit Tracking Summary Document ● PT1 Individual Learning Plan Template
- PT2 Tutorial Template
- PT3 Reflective Journal Entry Template
- PT4 Personal Summative Review Template
- PT6 Professional Discussion Record Template
- Specific Unit Assessment Documents

Internal Quality Assurance

- IQA1 Internal Moderation Process
- IQA2 Centre Standardisation Records
- IQA3 Internal Moderation Sampling Record
- IQA4 Internal Moderation Sampling Report Record
- IQA5 Internal Quality Assurance Record Form

Centre Approval

- C9 Centre Agreement

ITC Forms

- C4 Access to Training & Assessment Request Form
- C7 Special Considerations Request Form
- F3 Malpractice & Misconduct Report Form
- 05 Replacement Certificate Request Form

ITC Policies

- P1 Customer Charter
- P3 Fees Policy
- P5 Appeals Policy
- P6 Malpractice, Maladministration & Misconduct Policy
- P7 Other Language Policy
- P8 Equality, Diversity and Assessment Policy
- P9 Record Retention Policy
- P12 Automatic E-mail Policy - Removal from list
- P14 Sanctions Policy
- P15 Withdrawal from Delivery Policy
- P16 Complaints Policy
- P17 Invoice Policy
- P19 Recognition of Prior Learning Policy
- P22 Data Protection and Privacy Policy

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1. General Information

1.1 Using this document

This document has been developed to provide guidance for Centre staff involved in the delivery of ITC Level 3 Certificate in Safe Working Practice in the Wind Turbine Industry.

Qualification Number: 610/0618/X

It explains the administration, assessment and quality assurance requirements for these qualifications.

It directs ITC Centres to appropriate and relevant ITC resources [See contents page].

It identifies and lists other ITC documents that Centres are required to understand in order to deliver this qualification.

1.2 Documented Procedures

ITC First is a regulated Awarding Organisation supporting SQA Accredited and Ofqual regulated qualifications. All who work with ITC are supported by a documented framework of policies and procedures updated regularly on the ITC website. To seek policy guidance to inform your relationship with ITC, visit:

http://www.itcfirst.org.uk/policies.asp

If you are a Centre log into your ITC Web-Office and view or download up to date documents from 'Support Resources

2. Qualification Details

2.1 Qualification Objectives

This qualification is designed to support an individual's entry to the Wind Turbine Industry, it is aimed at those who wish to gain essential safety skills and knowledge to allow entry to employment in this sector.

The qualification has been developed with support from the Global Wind Organisation (GWO) and RenewableUK (RUK) as well as several sector training organisations, employers and further education providers.

2.2 Learner Entry Requirements

There are no formal entry requirements. Direct entry for any learner who would benefit from the programme, this qualification is normally for those 18+ years wishing to gain employment in this sector. Learners are expected to undertake internet research, self directed study, portfolio development and be able to deliver short presentations to the group.

Level 2 Literacy and Numeracy is advisable. The Centre should interview and undertake a Centre devised diagnostic assessment of learners to confirm suitability.

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2.3 Qualification Structure

Qualification details:

Title	Number
ITC Level 3 Certificate in Safe Working Practice in the Wind Turbine Industry	610/0618/X

Qualification Review Date - 31 March 2027

Guided Learning Hours (GLH) = 126h
Total Qualification Time (TQT) = 182h

GLH is the time a learner spends being taught or otherwise participating in education under the immediate guidance of an appropriate tutor. It includes directed study time and time taken for assessments. Guided learning hours include:

a) tutor contact time in lessons;
b) participating in education or training under the immediate guidance or supervision of a tutor;
c) directed study time.

TQT is the time an average learner will take to complete the qualification and includes self-directed independent study.

It is expected that the practical assessments and portfolio of evidence would be submitted within 2 years from a learner's commencement on a course.

This qualification consists of 10 (ten) mandatory units.

[1.2] **Unit details:**

The qualification is derived from 10 mandatory units:

Unit Title	Unit Number	Credit	Level	GLH
First Aid in the Wind Turbine Environment	D/650/1763	2	3	8
Manual Handling in the Wind Turbine Environment	H/650/1765	1	2	4
Fire Safety Awareness in the Wind Turbine Environment	L/650/1768	1	2	10
Working at Heights in the Wind Turbine Environment	Y/650/1770	2	2	14
Marine Safety and Sea Survival in the Wind Turbine Environment	A/650/1771	1	2	10
Working with Mechanical Systems in the Wind Turbine Environment	D/650/1772	2	3	10

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Working with Electrical Systems in the Wind Turbine Environment	F/650/1773	2	3	10
Working with Hydraulic Systems in the Wind Turbine Environment	H/650/1774	2	3	10
Enhanced First Aid in the Wind Turbine Environment	J/650/1775	3	3	24
Advanced Rescue in the Wind Turbine Environment	K/650/1776	3	3	26
	Total	19		126

Unit Review dates
31/3/2027

2.4 Learning Outcomes and Assessment Criteria

a)

Learning outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1.	Understand the role and responsibilities of a first aider in the wind turbine generator (WTG) environment	1.1	Explain risks and hazards
		1.2	Summarize national legislation relevant to first aid
		1.3	Explain differences between first aid guidelines
		1.4	Recognise differences between first aid guidelines internationally
2.	Be able to assess an incident in the wind turbine generator (WTG) environment	2.1	Identify how to minimize the risk of infection to self and others
		2.2	Conduct a scene survey
		2.2	Conduct a primary survey of a casualty C.A.B.C
		2.3	Summon appropriate assistance when necessary
		2.4	Describe when and how to move casualties
		2.5	Conduct a head-to-toe survey
3.	Be able to manage an unresponsive casualty who is breathing normally	3.1	Assess the level of consciousness of a casualty
		3.2	Open a casualty's airway and check breathing
		3.3	Place an unresponsive casualty in the recovery position
		3.4	Manage a casualty who is in seizure
4	Be able to manage an unresponsive casualty who is not breathing normally	4.1	Recognise the need to commence cardiopulmonary resuscitation
		4.2	Demonstrate cardiopulmonary resuscitation using a manikin
		4.3	Demonstrate a lead role in 2 person cardiopulmonary resuscitation
		4.4	Explain accepted modifications to current resuscitation guidelines for a casualty suspected of drowning
		4.5	Use an automated external defibrillator according to manufacturer's guidance
5	Be able to recognise and assist a casualty who is choking	5.1	Describe how to identify a casualty with a: ● partially blocked airway ● completely blocked airway
		5.2	Administer first aid to a casualty who is choking
6	Be able to manage a casualty with external bleeding	6.1	Identify the types of external bleeding
		6.2	Control external bleeding
		6.3	Administer first aid to a casualty with small cuts, grazes and bruises
7	Be able to manage a casualty who is in shock	7.1	Recognise shock
		7.2	Administer first aid to a casualty who is in shock
8	Be able to administer first aid to a casualty	8.1	Recognise and administer first aid for suspected fractures, dislocations, sprains and strains
		8.2	Recognise and administer first aid for chest injuries

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	with injuries in the wind turbine industry	8.3	Recognise and administer first aid for abdominal injuries
		8.4	Administer first aid for eye injuries involving: ● dust ● chemicals ● embedded objects
		8.5	Describe the recognition and management of suspected suspension trauma
		8.6	Describe the recognition and management of crush injuries
		8.7	Administer first aid to a casualty with small splinters
		8.8	Administer first aid for bites and stings
9	Be able to administer first aid to a casualty with burns and scalds	9.1	Identify the factors that affect the severity of burns and scalds
		9.2	Administer first aid for burns involving ● dry heat ● wet heat ● chemicals
		9.3	Administer first aid to a casualty with minor burns and scalds
10	Understand how to administer first aid to a casualty who has been shocked by electricity	10.1	Explain how to manage an incident involving electricity
		10.2	Describe first aid treatments at electric shock incidents
11	Understand how to administer first aid to a casualty who is experiencing the effects of extreme heat or cold	11.1	Describe how to recognise the effects of extreme heat and cold
		11.2	Explain how to manage the effects of extreme heat and cold
12	Be able to provide first aid to a casualty with suspected major illness.	12.1	Recognise major illnesses including: ● heart attack ● stroke ● epilepsy ● asthma
		12.2	Administer first aid to a casualty suffering from major illnesses including: ● **heart attack** ● **stroke** ● epilepsy ● asthma

b) Manual Handling in the Wind Turbine Environment

Learning outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1.	Understand the reasons for safe manual handling the wind turbine industry	1.1	Describe national manual handling legislation
		1.2	Describe international manual handling legislation
		1.3	Explain common causes of injuries
		1.4	Explain consequences of injury
2.	Understand how risk assessment contributes to safe manual handling in the wind turbine industry	2.1	Describe specific hazards associated with manual handling in the sector
		2.2	Complete a risk assessment following published HSE guidance for manual handling operations
		2.3	Describe the term dynamic risk assessment
		2.4	Describe a risk control hierarchy applied to manual handling
		2.5	Describe the procedures to follow in the event of a manual handling operations incident
		2.6	Identify manual handling control measures

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3.	Understand the personal safety principles when manual handling in the wind turbine industry	3.1	Describe the importance of good posture in manual handling
		3.2	Identify common musculoskeletal injuries and disorders associated with Manual handling and the use of handheld vibration tools.
4.	Be able to apply safe manual handling principles in the wind turbine industry	4.1	Select appropriate personal protective equipment for a manual handling task
		4.2	Perform a manual handling operation from. below knee above shoulder height whilst Kneeling. lifting Carrying
		4.3	Lead a team manual handling task
		4.4	Demonstrate correct Manual handling methods and techniques when performing WTG rescues

c) Fire Safety Awareness in the Wind Turbine Environment

Learning outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1.	Understand the reasons for fire safety in the wind turbine industry	1.1	Describe national legislation associated with fire prevention and equipment
		1.2	Describe global legislation associated with fire prevention and equipment
		1.3	Describe the hazards during or after a fire including the constituents of smoke
		1.4	Describe the actions to be followed in the event of a fire
2.	Understand the principles of fire risk control in the wind turbine industry	2.1	Describe common fuel sources found in this sector
		2.2	Describe how knowledge of the fire triangle can be used to control fire risks
		2.3	Describe how fire and smoke spread
		2.4	Describe fire hazards present on wind turbines
		2.5	Describe different classes of fire
		2.6	Describe how to extinguish a fire
3.	Understand fire safety practice in the wind turbine industry	3.1	Describe methods of raising the alarm onshore and offshore
		3.2	Describe types of fire detection systems found in wind turbines
		3.3	Describe fire prevention measures that minimize risk in this industry
4.	Apply fire safety principles in the wind turbine industry	4.1	Select appropriate portable fire fighting equipment
		4.2	Use appropriate portable fire fighting equipment
		4.3	Describe how to perform Pre use inspection of fire fighting equipment
		4.4	Evacuate from a smoke filled environment

d) Working at Heights in the Wind Turbine Environment

Learning outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1.	Understand working at height principles in the wind turbine industry	1.1	Explain the legislation that regulates the working at height in the UK and globally
		1.2	Describe the hazards and risks associated with working at height
		1.3	Compare fall prevention and fall arrest hierarchy, personal and collective measures.
		1.4	Describe the process and content of risk assessments for working at height
2.	Understand the safety principles when working at height in the wind turbine industry	2.1	Describe the types of personal fall protection equipment (PFPE) used when working at height
		2.2	Explain how to maintain a full body harness
		2.3	Explain global variations in PFPE safety standards
		2.4	Describe the different fall arrest indicators used on PFPE in this sector

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		2.5	Describe the feature differences between harnesses used in this sector
		2.6	Describe work restraint equipment and fall arrest equipment used when working at height
		2.7	Describe the safety features of Wind turbine ladders
		2.8	Describe the contents of an emergency evacuation/rescue kit, its preparation and use
3.	Be able to apply safe working at height principles in the wind turbine industry	3.1	Perform standard inspections to PFPE and other safety equipment
		3.2	Select and use appropriate personal protective equipment (PPE)
		3.3	Select and use appropriate PFPE
		3.4	Ascend and descend using fall arrest Traveler/lanyard/SRL systems
		3.5	Demonstrate effective work positioning on a ladder
		3.6	Demonstrate the use of a self-retracting lifeline
		3.7	Demonstrate a pre use inspection and lift a load with a WTG rescue device.
		3.8	Rescue a conscious and unconscious casualty from a simulated Wind Turbine Generator Ladder
4.	Be able to demonstrate safe self evacuation techniques	4.1	Demonstrate a passive and active mode with a WTG rescue device evacuation from height
		4.2	Demonstrate disconnecting from the evacuation device
		4.3	Demonstrate the safe attachment of equipment during evacuation

e) Marine Safety and Sea Survival in the Wind Turbine Environment

Learning outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1	Understand how to react to incidents at sea	1.1	Describe hazards during maritime operations
		1.2	Describe the terms: ● cold shock ● drowning ● hypothermia ● secondary drowning ● sea sickness
		1.3	Describe the sources and effects of shipborne marine pollution
2	Be able/Know how to use the life saving appliances and personal protective equipment required for safe marine transfer	2.1	Describe search and rescue communication coordination equipment
		2.2	Describe the procedure for rescuing an individual who has fallen overboard
		2.3	Compare the features of life saving appliances (LSA's)
		2.4	Demonstrate the actions of an individual that is overboard for an effective rescue to occur
		2.5	Demonstrate the procedures during emergencies when using a life raft.
3	Be able to apply the principles of marine transfer and sea survival	3.1	Demonstrate safe transfer between vessel and WTG
		3.2	Select and use appropriate personal protective equipment (PPE)
		3.3	Select and use appropriate personal fall protection equipment for transfer and evacuation (PFPE)
		3.4	Put on a transit suit,
		3.5	Perform Controlled entry into water from transition piece ladder: descent by ladder to waist entry into water, Using Twin fall arrest lanyards,
		3.6	Don and Inflate a Life jacket in water
		3.7	Adopt a heat escape lessening position (HELP) in the water
		3.8	Demo individual and collective swimming techniques
		3.9	Assemble in a survival circle as part of a team
		3.10	Observe a life raft being righted
		3.11	Enter a righted life raft from water level
		3.12	Perform an emergency evacuation using an auto-descender Perform an emergency Double evacuation using auto descender
		3.13	Perform the preparation of a Helicopter rescue strop being used to

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			lift a casualty

Unit Title	**Working with Mechanical Systems in the Wind Turbine Environment**	
Mandatory Unit (Yes/No)	**Yes**	
Learning outcomes *The learner will:*	**Assessment criteria** *The learner can:*	
1. Understand the mechanical components of a wind turbine	1.1	Describe the function and location of the main components of a wind turbine
	1.2	Describe the function of key mechanical systems
	1.3	Describe the operation of a wind turbine
2. Understand safety when working with mechanical elements of a wind turbine Assessment guidance. observation form, add to. encompass	2.1	Describe the safety risks and hazards of mechanical systems
	2.2	Evaluate the importance of safe working practices
	2.3	Explain the meaning of different safety signs
	2.4	Explain the importance of adhering to safety signs
	2.5	Describe appropriate Personal Protective Equipment (PPE) for working with mechanical systems
	2.6	Explain the importance of isolation and locking techniques when working with mechanical systems
	2.7	Explain the importance of maintaining records of damage
3. Understand bolted and welded connections and their inspection	3.1	Describe the principles of bolted connections
	3.2	Describe the location of key bolted and welded connections
	3.3	Explain how to visually inspect a welded connection
	3.4	Describe how to make bolted connections
4. Be able to use manual tightening and measuring tools	4.1	Describe the basic units of the metric system
	4.2	Select and use appropriate manual tools
5. Understand braking systems in the wind turbine	5.1	Describe the function and operation of the braking systems
	5.2	Perform an inspection of the mechanical brake system
6. Understand yaw systems in the wind turbine	6.1	Describe the function and operation of the yaw system
	6.2	Describe how to perform an inspection of the yaw system
7. Understand cooling systems in the wind turbine	7.1	State the components of a wind turbine generator that are cooled
	7.2	Explain the importance of checking the cooling liquid and heat exchanger
	7.3	Perform a visual inspection of a cooling system
8. Understand lubrication systems in the wind turbine	8.1	State the components of a wind turbine generator that are lubricated
	8.2	Describe the effect of inadequate lubrication
	8.3	Perform a visual inspection of the lubrication system

Unit Title	**Working with Electrical Systems in the Wind Turbine Environment**	
Mandatory Unit (Yes/No)	**Yes**	
Learning outcomes *The learner will:*	**Assessment criteria** *The learner can:*	
1. Understand electrical theory	1.1	Describe the relationship between current, voltage and resistance
	1.2	Apply Ohm's law
	1.3	Compare direct (DC) and alternating (AC) current
2. Understand safety when working with electrical equipment	2.1	Explain the dangers of electricity
	2.2	Describe the types of potential injury associated with working with electricity

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	2.3	Compare the hazards of low and high voltage electricity
	2.4	Explain the function and importance of ground fault circuit interrupter/residual-current circuit (GFCI/RCD) and protective earth (PE) in tools and equipment
	2.5	Recognise safety signs associated with high voltage
	2.6	Describe the risks and hazards of stored energy
	2.7	Explain the importance of proper isolation when working with electrical systems
3. Understand electrical components in the wind turbine	3.1	Explain the function of resistors
	3.2	Explain the function of batteries
	3.3	Explain the function of switches
	3.4	Explain the function of contactors
	3.5	Explain the function of relays
	3.6	Explain the function of diodes
	3.7	Explain the function of bridge rectifiers
	3.8	Explain the function of capacitors
	3.9	Explain the function of transformers
	3.10	Explain the function of generators and motors
	3.11	Explain the function of fuses and circuit breakers
	3.12	Explain the function of the processor control system
4. Understand sensors in the wind turbine	4.1	Explain the general function of sensors
	4.2	Explain the function of wind sensors
	4.3	Explain the function of a temperature sensor
	4.4	Explain the function of position sensors
5. Be able to apply electrical knowledge to simple electric circuits	5.1	Identify resistors on a diagram
	5.2	Identify batteries on a diagram
	5.3	Identify switches on a diagram
	5.4	Identify contactors on a diagram
	5.5	Identify relays on a diagram
	5.6	Identify diodes on a diagram
	5.7	Identify bridge rectifiers on a diagram
	5.8	Identify capacitors on a diagram
	5.9	Identify transformers on a diagram
	5.10	Identify generators and motors on a diagram
	5.11	Identify fuses and circuit breakers on a diagram
	5.12	Identify the processor control system on a diagram
	5.13	Identify a temperature sensor on a diagram
	5.14	Perform the assembly of a simple electrical circuit
6. Understand how to use electrical measuring instruments	6.1	Recognise symbols associated with electrical measuring instruments
	6.2	Describe how to identify the validity of measuring tools
	6.3	Identify measuring points on a diagram
	6.4	Demonstrate how to measure: ● Current ● Voltage ● Resistance ● PT100 ● Continuity ● Diodes ● Bridge rectifiers ● Capacitance

Unit Title	**Working with Hydraulic Systems in the wind turbine environment**
Mandatory Unit (Yes/No)	**Yes**
Learning outcomes *The learner will:*	**Assessment criteria** *The learner can:*

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1. Understand the principles of hydraulics	1.1	Explain the function of basic hydraulic systems
	1.2	Explain the principles of basic hydraulic systems
	1.3	Describe Pascal's Law
2. Understand safety when working with hydraulics in the wind turbine	2.1	Describe the importance of checking and relieving system pressure
	2.2	Explain the risks and hazards of working with hydraulic systems
	2.3	Identify safety signs associated with hydraulic systems
	2.4	Explain environmental safety when handling oil
	2.5	Select appropriate Personal Protective Equipment (PPE) when working with hydraulic systems
	2.6	Explain the importance of isolation when working with hydraulic systems
3. Understand pumps and actuators in hydraulic systems in the wind turbine	3.1	Explain the function of pumps
	3.2	Explain how pumps are operated
	3.3	Perform checks of start and stop pressure of a hydraulic pump
	3.4	Explain the function of actuators
4. Understand valves in hydraulic systems in the wind turbine	4.1	Explain the function of valves
	4.2	Explain the function and operation of different types of directional control valves
	4.3	Explain the function and operation of a pressure relief valve
	4.4	Adjust a pressure relief valve
	4.5	Explain the function and operation of a pressure reduction valve
	4.6	Explain the function and operation of a needle valve
	4.7	Demonstrate the depressurizing of a system using a needle valve
	4.8	Explain the function and operation of non-return valves
	4.9	Explain the function and operation of throttle valves
	4.10	Explain the function and operation of restrictor valves
5. Understand accumulators in hydraulic systems in the wind turbine	5.1	Explain the function of accumulators
	5.2	Perform a pre-charge pressure check and refill the accumulator
6. Understand sensors in hydraulic systems in the wind turbine	6.1	Explain the function of pressure sensors in hydraulic systems
7. Understand oil transfer components in hydraulic systems in the wind turbine	7.1	Explain the function of oil transfer components
	7.2	Explain the inspection of oil transfer components
	7.3	Describe the use of different types of fittings to make a hydraulic connection
8. Understand procedures for handling of hydraulic oil in the wind turbine	8.1	Explain the procedure for handling oil
	8.2	Explain the importance of taking an oil sample
	8.3	Perform oil level checks
	8.4	Explain the function of oil filters
	8.5	Explain the maintenance of filters
9. Be able to use a hydraulic diagram	9.1	Identify pumps on a diagram
	9.2	Identify actuators on a diagram
	9.3	Identify directional control valves on a diagram
	9.4	Identify a pressure relief valve on a diagram
	9.5	Identify a pressure reduction valve on a diagram
	9.6	Identify a needle valve on a diagram
	9.7	Identify non-return valves on a diagram
	9.8	Identify a throttle valve on a diagram
	9.9	Identify a restrictor valve on a diagram
	9.10	Identify accumulators on a diagram
	9.11	Identify pressure sensors on a diagram

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	9.12	Identify oil transfer components on a diagram
	9.13	Identify a quick release coupling on a diagram
	9.14	Identify oil filters on a diagram

Unit Title	**Installation of wind turbine generators (not included in this qualification)**	
Mandatory Unit (Yes/No)	**N**	
Learning outcomes *The learner will:*	**Assessment criteria** *The learner can:*	
1. Understand the principles of installing a wind turbine generator	1.1	Describe the key installation activities
	1.2	Explain the hazards and risks associated with installation activities
	1.3	Explain how to reduce exposure to hazards to acceptable limits
	1.4	Explain safety signs during installation
	1.5	Describe Personal Protective Equipment (PPE) requirements
	1.6	Evaluate the importance of isolation in an installation environment
	1.7	Explain the consequences of incomplete and incorrect work for commissioning
2. Understand how to work safely when installing a wind turbine generator	2.1	Describe the checklist system
	2.2	Explain the importance of following approved working practices
	2.3	Explain the importance of regular toolbox talks/pre-work communications
	2.4	Explain the importance of maintaining good housekeeping
3. Understand the installation environment	3.1	Describe the characteristics of the installation environment
	3.2	Compare onshore and offshore installation sites
4. Understand the principles of handling and storing goods and components	4.1	Explain the importance of inspection prior to unloading
	4.2	Explain the importance of ensuring damage to goods or components is reported
	4.3	Perform reception and inspection of goods and components
	4.4	Explain the storage requirements of: ● Blades ● Tower bolts ● Tools/Equipment
	4.5	Explain the consequences of poor unloading, storage and maintenance practices
	4.6	Complete a goods return form
5. Understand lifting operations in the installation environment	5.1	Compare lifting operations
	5.2	Describe local legislation and requirements for lifting operations
6. Understand main component preparation, pre-assembly and assembly of wind turbine generators	6.1	Compare onshore and offshore approaches to preparation and pre-installation of main components
	6.2	Describe the operational challenges of assembling main components
	6.3	Describe how operational challenges are mitigated
7. Understand the principles of mechanical completion	7.1	Complete a mechanical completion checklist
	7.2	Describe how to document problems
8. Be able to apply the principles of electrical completion	8.1	Describe key stages of electrical completion
	8.2	Explain the function of different cable types
	8.3	Perform the installation of electrical cables
	8.4	Perform cutting and crimping of small signal cables
	8.5	Perform cutting and crimping of main power (LV) cables
	8.6	Explain typical faults during termination
	8.7	Make mounting markings in accordance with an electrical diagram
	8.8	Route all typical cable types
	8.9	Terminate signal cables
	8.10	Terminate main power cables
9. Understand the principles of	9.1	Explain the hydraulic tasks to be completed following main

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hydraulic completion		component installation
	9.2	Explain the importance of reporting and cleaning oil spillages
10. Understand the application of external power generation during installation	10.1	Connect auxiliary power to an electrical system
	10.2	Explain the local and legislative requirements for operating, installing and certifying lifts.
	10.3	Explain the local and legislative requirements for operating, installing and certifying internal cranes.
	10.4	Explain the importance of ground connections and GFCI/RCDs
	10.5	Explain the importance of qualified individuals

Unit Title	**Enhanced First Aid in the Wind Turbine Environment**
Mandatory Unit (Yes/No)	**Yes**

Learning Outcomes *The learner will:*		**Assessment criteria** *The learner can:*	
1	Understand the principles of first aid applied to the offshore and onshore wind turbine workplace	1.1	Identify factors that affect first aid incident management decisions
		1.2	Explain supplementary first aid equipment required for the workplace
		1.3	Outline components of an initial scene assessment
		1.4	Outline how to manage an emergency incident involving advanced first aid interventions
2	Be able to assess a casualty in the offshore and onshore wind turbine workplace	2.1	Record and interpret vital signs
		2.2	Conduct a primary survey including Catastrophic bleed C-ABC
		2.3	Conduct a secondary survey on a casualty wearing personal protective equipment
		2.4	Outline the information to be collected when: • gathering a casualty history • monitoring a casualty
3	Be able to manage a casualty with a potential breathing problem in the offshore and onshore wind turbine workplace	3.1	Clear the airway of an unresponsive casualty using postural drainage
		3.2	Explain the terms, head tilt, chin lift, jaw thrust
		3.3	Recognise the need to commence cardiopulmonary resuscitation
		3.4	Demonstrate cardiopulmonary resuscitation on a manikin according to current guidelines
		3.6	Describe the accepted modification in the cardiopulmonary resuscitation sequence for drowning
		3.7	Describe how to identify a casualty with a: • partially blocked airway • completely blocked airway
		3.8	Administer first aid to a casualty who is choking
4	Be able to apply aids and equipment to basic life support in the offshore and onshore wind turbine workplace	4.1	Select and insert an airway management adjunct
		4.2	Use an aspiration device
		4.3	Use a bag, valve and mask
		4.4	Interpret pulse oximeter readings
		4.5	Explain the limitations of pulse oximetry in the
		4.6	Describe considerations for oxygen administration
5	Be able to manage a casualty with blood loss in the offshore and onshore wind turbine workplace	5.1	Identify types and severity of external bleeding
		5.2	Control external bleeding
		5.3	Recognise and administer first aid to casualty with the signs of shock
		5.4	Describe considerations for the management of an injury that may require the use of tourniquets

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6	Be able to manage an injured casualty in the offshore and onshore wind turbine workplace	6.1	Describe how to recognise and manage a casualty with a suspected limb injury
		6.2	Describe how to recognize and manage a casualty with head, neck, spinal and torso injuries
		6.3	Outline procedures for the management of pain in a casualty
		6.4	Remove personal protective equipment (PPE), clothing and other work equipment from a potentially injured casualty
7	Be able to administer first aid to a casualty with a medical emergency in the offshore and onshore wind turbine workplace	7.1	Describe how to recognise and manage medical conditions and serious illness
8	Recognise and manage temperature related incidents requiring first aid in the offshore and onshore wind turbine workplace	8.1	Identify the early and late signs of the effects of temperature on an and the treatment for associated conditions
		8.2	Administer first aid for burns

Unit Title	**Advanced Rescue in the Wind Turbine Environment**	
Mandatory Unit (Yes/No)	**Yes**	
Learning outcomes *The learner will:*	**Assessment criteria** *The learner can:*	
1. Be able to apply Emergency Response Planning in the Wind Turbine Environment	1.1	Explain the considerations for planning an evacuation strategy both onshore and offshore.
	1.2	Describe risks and hazards associated with performing an emergency evacuation strategy for: ● Nacelle /Tower ● Hub /Inside Blade ● Crawl Space ● Basement ● Helicopter/Aerial rescue
	1.3	Select and use appropriate Personal Protective Equipment (PPE) for self and casualty
2. Be able to rescue an injured individual from the wind turbine	2.1	Explain how to prepare a simulated casualty for safe transportation
	2.2	Select appropriate anchor points both in situ and improvised
	2.3	Demonstrate appropriate lift angle/s
	2.4	Demonstrate rigging a lowering/raising rescue system
	2.5	Demonstrate Use of a lowering/raising rescue system as intended
	2.6	Demonstrate safe rescue of casualty using appropriate equipment in: ● Daylight ● Dark conditions
	2.7	Demonstrate Applying a harness and effective head support to a casualty and relevant PPE
	2.8	Demonstrate Transferring a simulated casualty on to a rescue

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		stretcher
	2.9	Effectively communicate to rescue team members Via a range of methods
3. Be able to rescue an individual from complex situations	3.1	Demonstrate how to balance a simulated casualty for horizontal to vertical progress
	3.2	Demonstrate how to transport casualty to escape hatch using a tensioned line (zip line)
	3.3	Demonstrate how to perform a rescue up with a rescue device using: ● Passive setup ● Active setup

2.5 Qualification Assessment

The units in this qualification are assessed by a portfolio/workbook of evidence developed by each learner from a range of Centre devised tasks. (Templates are provided.) After assessment and quality assurance by the Centre, evidence of achievement will be made available for moderation by ITC.

Each learner has to produce evidence to meet all the assessment criteria of each unit and this evidence must be authentic, reliable, valid and sufficient.

ITC template documents for assessment planning and recording are available in the support resources section of the ITC Website. (Generic and specific)

2.6 Awarding

After moderation a list of outcomes [pass or not yet meeting standard] will be forwarded to the Centre along with any certificates.

The assessment result is pass, or not yet meeting standard, there is no grading.

ITC will award certificates according to the timescales in the ITC Customer Charter. Awarding can only occur within the qualification lifespan.

Unit certificates may be awarded upon learner request, for any unit completed, moderated and passed.

Replacement Certificates are available. Learners must apply using certificate request form 05. There is a small fee payable for replacement certificates issued.

3. Centre Approval to Deliver ITC Qualifications

3.1 Centre Approval

Centres wishing to offer the ITC Level 3 Diploma in Safe Working Practice in the Wind Turbine Industry qualification will need to complete:

a) Online Centre application – www.itcfirst.org.uk/centres;
b) Centre agreement (C9).

Centres will need to consider:

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a) sufficient resources for the delivery the qualification – physical and staffing, listed in this document – section 3.6;
b) learner access to sufficient resources for the qualification – learning centre, visual aids, textbooks, physical resources (e.g., working at height, in confined space and aquatic facilities);
c) quality assurance procedures – internal assessment and internal quality assurance.

3.2 Teaching Programme

The content of the teaching programme is the responsibility of the Centre and is developed by the staff team of the Centre. ITC has guidance and advice documents to assist in the development of a teaching programme that can be supplied to Centres upon request.

The course programme is developed from the learning outcomes and assessment criteria for the qualification. A Centre scheme of work containing lesson plans for each session is to be available for scrutiny by ITC External Quality Assurance activity.

3.3 Internal Quality Assurance

Centres offering these qualifications must provide internal quality assurance that is standardised across individual assessors, assessment locations and learners.

The Centre must maintain evidence of all meetings, CPD events, standardisation activity in a Central File readily accessible at any time by an ITC representative. ITC has various assessment and moderation template documents available to assist all Centres.
There should be a risk-based quality assurance plan that monitors the skills of tutors at least annually, with evidence of standardisation maintained for external moderation.

The quality assurance plan should describe the internal quality assurance procedures and the evidence to be maintained for external quality assurance.

See section 4.1 for qualifications of staff involved with assessment and internal quality assurance.

3.4 Learner Evaluation

An end of course evaluation form is to be completed by each candidate and the data collected used to inform Centre quality procedures. The results of this evaluation review are to be available for scrutiny by ITC External Quality Assurance procedures.

3.5 Protecting the Interests of Learners

Centres will protect the interests of learners and the integrity of the qualification by implementing a coherent series of documents, policies and procedures. ITC can provide various template documents upon request.

A Centre complaints and appeals policy is to be made available to every learner upon registration.

3.6 Resource Requirements

Centres delivering this qualification will be expected to have the physical training resources including premises, equipment and facilities, required to deliver the qualification. The resource requirements for this qualification are aligned with the Global Wind Organisation (GWO) standards for delivery of similar industry standard qualifications and courses. A comprehensive list of the resource requirements can be provided upon request.

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4. Centre Staffing

4.1 Tutor Credentials

Centres are expected to have an appropriate number of suitable tutors with experience and a clear understanding of renewable energy and wind turbine content, who hold or are working towards a relevant teaching, assessing, quality assurance qualification appropriate for the course they are delivering.

Tutors
For the Level 3 Certificate in Safe Working Practice in the Wind Turbine Industry, tutors are required to:

a) Hold a teaching qualification eg. minimum of Level 3 PTLLS or Level 3 Award in Education and Training or higher;
b) Should have up-to-date working knowledge and sector specific experience of current practice, evidenced by supplying a current CV.

ITC require Centres to identify:

a) A nominated individual to lead the qualification delivery team in the Centre.

Assessors
In addition to **Tutor** requirements**, Assessors:**

a) should hold the qualification (or an equivalent) they are assessing and have assessed learners;
b) should have up-to-date working knowledge and experience of best practice in assessment and quality assurance;
c) should show current evidence of CPD in assessment and quality assurance; d) should hold one of the following qualifications or their recognised equivalent: i. Level 3 Assessing Qualification eg., Level 3 Award in Assessing Vocationally Related Achievement, Level 3 Award in Assessing Competence in the Workplace Environment or Level 3 Certificate in Assessing Vocational Achievement etc.
ii. A1, A2;
iii. D32 & D33.

Internal Quality Assurance Staff:

a) should have up-to-date working knowledge and experience of best practice in assessment and quality assurance.;
b) should hold an appropriate assessor qualification [see above];
c) should show current evidence of CPD in assessment and quality assurance; d) should hold one of the following qualifications or their recognised equivalent: i. Level 4 Award in Internal Quality Assurance of Assessment Processes and Practice, or Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice;
ii. V1;
iii. D34.

Staff must maintain evidence of continuing professional development in contemporary issues in education, assessment and quality assurance.

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5. Learner Registration

5.1 Selection of Learners

It is the responsibility of the Centre to provide guidance and advice to learners prior to the commencement of the programme.
The entry requirements for these qualifications are stated in section 2.2.
Prospective learners should be interviewed – to confirm suitability of the programme.

5.2 Information to Learners

Pre-course information should be provided to learners containing:

a) joining details;
b) literacy, numeracy, ICT requirements;
c) ID requirements;
d) expectations of course members;
e) outline of assessment assignment timelines;
f) link to relevant ITC policies and procedures on homepage of ITC website, including Appeals (P5) and Complaints (P16) procedures;
g) information on how to request reasonable adjustment to assessment so that learners have a fair assessment opportunity. See the ITC Website for further detail;
h) contact details for their course tutor or mentor.

5.3 Registration of Learners

Centres must meet the following requirements:

a) learners must be registered with ITC immediately on the start of the course and names uploaded to the ITC WebOffice within 10 days of course start date;
b) learner registration details must be entered into ITC WebOffice database within 10 working days of course start date;
c) Centres are to keep a copy of learner registration data;
d) Centres must have procedures in place to confirm the identity of each learner before they undertake an assessment.

Individual learning plans should be developed between the mentor and each learner with information to allow the learner to complete the assessment portfolios. The plan should identify learning needs and a written plan to address these needs, where appropriate.

5.4 Learner Identity

Learners must be informed of the requirement to bring suitable photographic identification to the training course.

5.5 Learner Progression

Learning routes include:

- progression to industry and/or trade specific qualifications;
- employment opportunities.

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6. Assessment

6.1 Assessment of Each Unit

Centre devised assessment tasks must provide sufficient evidence for all of the assessment criteria in the unit selected. These assessment tasks must be scrutinized and agreed by the Centre IQA or Centre Manager before implementation.

The Centre must provide:
- a description of the task set for each learner mapped to the assessment criteria;
- a declaration by the learner stating that all evidence is their own work;
- a complete portfolio for each learner for Internal Assessment, IQA and EQA purposes.

Template assessment documents are available to approved Centres.

6.2 Assessment Tasks

Evidence for meeting all assessment criteria must be produced by the learner when completing the assessment tasks.

- Written work may be handwritten or generated digitally.
- Questioning must include question asked and learner response, recorded by audio, video recording or handwriting.
- Practical work must generate evidence for each learner that can be recorded by witness statement, annotated photograph, video or peer observation report.
- Product evidence must either be kept for the IQA & EQA or video evidence or annotated photograph.

6.3 Internal Assessment

Centres must have verification/moderation systems to ensure all assessment evidence is authentic, reliable, valid and sufficient and standardization systems to ensure all staff can make consistent and fair assessment decisions.

Assignments and portfolios are to be marked by any appropriately qualified Centre Internal Assessor following the quality assurance procedures of the Centre, using documents and procedures either developed by the Centre and endorsed by the ITC External Quality Assurer or based upon documents provided by ITC.

Assessment results are to be recorded upon ITC documents listed below [or similar document approved by ITC EQA].

To assist in collecting authentic, reliable, valid and sufficient evidence ITC has developed and is continually updating evidence recording documents. The updated version will always be available from Support Resources on the Centre Web-Office. Including:

- ACET2.103 Wind Turbine 2 Unit Tracking Document;
- ACET2S.103 Wind Turbine 2 Unit Tracking Summary Document;
- PT1 Individual Learning Plan Template;
- PT2 Tutorial Template;
- PT3 Reflective Journal Entry Template;

- PT4 Personal Summative Review Template;
- PT6 Professional Discussion Record Template;
- PT10 Expert Witness Template

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Specific Unit Assessment Documents available.

Centres must keep assessment evidence for all units for each learner until the EQA visit. As stated in the signed ITC Centre agreement (C9) all learner assessment evidence must be made available to ITC upon request.

6.4 Internal Quality Assurance

Assignment evidence is to be internally quality assured following ITC centrally produced procedures [Appendix document listing of this document] or procedures agreed with an ITC External Quality Assurer.

To assist Centres in this function, the following documents are available on the ITC Web-Office.

- IQA1: Internal Quality Assurance Process
- IQA2: Centre Standardisation Records
- IQA3: Assessment Sampling Record
- IQA4: Assessor Sampling Report Record
- IQA5: Internal Quality Assurance Record Form

All IQA evidence must be maintained and archived for at least 3 years.

7. Supporting Resources for Delivery

7.1 Reading List

Useful Web Resources:
https://www.globalwindsafety.org/
https://www.renewableuk.com/
http://www.itcfirst.org.uk
https://www.gplusoffshorewind.com/

8. External Quality Assurance

8.1 Procedures

An External Quality Assurance event may include some or all of the following methods:

a) initial Centre visit;
b) ongoing Centre visit;
c) desktop research;
d) internet research;
e) telephone or video meeting;
f) unannounced visit to training event;
g) action plan evidence review;
h) remote moderation;
i) attendance at standardisation events.

The nature of the activity will depend upon the risk rated track record of the Centre.

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Centres will be notified of proposed external quality assurance events. During the Centre visit all the completed learner assessment evidence will be made available for moderation. Moderation of learner assessment evidence will be on a sampling basis.

As well as sampling the external quality assurance event may include the following specific requests: a) confirmation of all policies and documented procedures;
b) a review of evidence of implementation of Centre policies and documented procedures; c) a review of the evidence of Centre internal quality assurance and staff development events; d) a review of the evidence generated from previous external moderations events including action plan evidence;
e) a review of documented draft assignment feedback by tutors;
f) a review of assessment evidence from any registered learner;
g) any guidance to deliver the qualification.

8.2 Visit Details

Centres will be allocated a named External Quality Assurer who may contact the Centre prior to a visit. For each announced visit:

a) the Centre will be notified in advance to allow time to make suitable arrangements. Normally planned at the previous visit;
b) the agenda for the meeting will be forwarded to the Centre;
c) the meeting will occur on the planned date;
d) preliminary action plans will be drafted for agreement and review at the time of the Centre visit;
e) action plan evidence will be generated according to the specified timescale by the Centre and approved or referred by ITC;
f) risk rating will be applied to each Centre and risk managed on an individual Centre basis.

8.3 Qualification Standardisation

Centres must provide samples of assessment evidence from units, assessment materials or learner evidence upon request from ITC. The results of any standardisation activity will be provided to all ITC Centres delivering the units. All Centre confidential material will remain confidential.

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