FETAC Optic Fibre Installation Technician Course Description

Awards

Learners can earn - The FETAC Level 6 minor award Optic Fibre Installation
A component certificate of the FETAC level 6 major award Telecommunication Access Network Technology.

Duration

The FETAC points value for this award is 15. This equates to 150 learning hours. For learners who have no experience of the communications industry this programme will be completed in upto 150 learning hours.

However learners from a background of working within the communications industry or learners who have had an interest in communications or have had contact, would be expected to complete this course in a substantially shorter time.

Bespoke courses delivered for communication company employees and the skillnets will most certainly reflect this and be completed in a much shorter time.

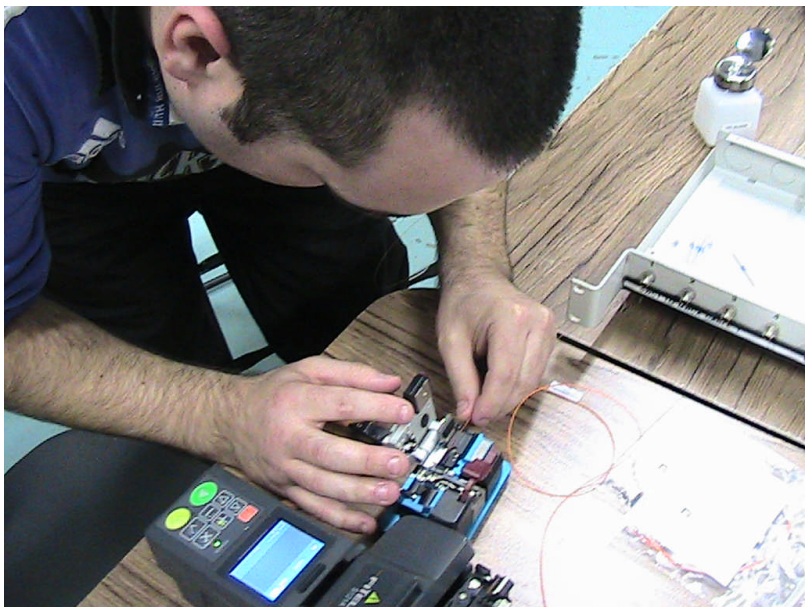
Before attending the training facility to complete classroom and practical activities. Learners will be briefed and provided with home study material.

Learners are given up to five weeks to complete the home study element of the course material The vast majority of learners should easily be able to cover this in substantially less time than five weeks. We allow so much time so that those with busy lives can take part.

All learners will then attend the training facility for up to 100 learning hours of full time study to complete class room activities, practical demonstrations assignments and to complete the course assessments.

Course Aims

The purpose of this qualification is to meet the wide ranging needs of the communications fibre optic cabling industry which is part of the communication technologies sector and provides the skills and knowledge required to carry out the installation and connectorisaton of fibre optics. Commonly described in conversation as fibre splicing.



Objectives learning outcomes

After learners that meet the course entrance criteria, have completed a mix of distance, classroom and practical learning.

In order for learners to work as a Fibre Optic Cabling Installation Technician. They must be able to understand and will complete the following..

- Recognise the hazards associated with optic fibre systems
- Describe the electromagnetic spectrum and the transmission of optical waves
- Explain the principles of light transmission in optical fibres
- Describe the structure of optical fibre and fibre cables and the range of services provided via fibre networks.
- Describe the basic principles of communications systems - Describe the basic principles of data communication.
- Demonstrate the range of skills required to install fibre cables.
- Demonstrate the skills and procedures involved with identifying and recording the identity of cables and fibres.
- Perform a range of fibre splicing techniques including mechanical fusion and connectorised joints.
- Use standardised techniques for the management of fibres and cables in enclosures
- Perform and record a range of network measurements employing standardized procedures.
- Apply fibre installation techniques in a range of network contexts
- Interpret and implement technical instructions
- Exercise substantial personal autonomy in variety of service provision environments.

This is the exact same training content that is used to train the staff employed by Telecommunications providers such as Eircom.

Content and Outcomes

Section 1 Recognise the hazards associated with optic fibre systems

Health and Safety legislation – Earthing – Electrical Safety – risk assessment – manual handling - Identify safe working practices in communications systems in an internal data communications environment and an external telecommunications situation. Chemicals. CPE

Section 2 Describe the electromagnetic spectrum and the transmission of optical waves

Describe the basic principles of SI Units and symbols – Signal transmission - Radio

Section 3 Explain the principles of light transmission in optical fibres
An Introduction Optical Fibres – Recognise how and why fibre optic cabling is. Used for communications systems.

Section 4 Describe the structure of optical fibre and fibre cables and the range of services provided via fibre networks.
Understand how singlemode and multimode optical fibres work and the issues that can affect performance - Identify typical components and explain their uses.

Section 5 Describe the basic principles of communications systems - Describe the basic principles of data communication.
Identify telecommunication link components and explain their uses - Recognise and use the correct terminology and current standards.

Section 6 Demonstrate the range of skills required to install fibre cables.
Prepare fibre optic cable for fibre connectorisation and splicing - Follow recommended installation procedures.

Section 7 Demonstrate the skills and procedures involved with identifying and recording the identity of cables and fibres.
Identify the colour codes and tube bundle order. Labelling cable in splice tray's, Optical Distribution frames (ODF),

Section 8 Perform a range of fibre splicing techniques including mechanical fusion and connectorised joints.
Terminate fibre optic cabling by fusion and mechanical splicing - Prepare fibre optic cabling for splicing within a joint enclosure and ODF - Fusion splice and manage fibres in a cable joint enclosure - Joint a customer drop cable into a main network cable - Terminate fibre optic cables by splicing on pre-terminated pigtails.

Section 9 Use standardised techniques for the management of fibres and cables in enclosures
Fibre optic cabling in an external environment - Fibre optic cabling in an internal data communications environment.

Section 10 Perform and record a range of network measurements employing standardized procedures.
Test and record fibre optic data communications and telecommunication links using recognised procedures. Record splice losses at fusion splicing and with Otdr.

Section 11 Apply fibre installation techniques in a range of network contexts
Network Topologies, Network components Understand how and why fibre optic cabling is used in a telecoms environment for core, metro and access networks.

Section 12 Interpret and implement technical instructions
Terminate fibre optic cables by fitting connectors to EN50173 Standards. Identify and put together network components, Complete Link budget calculations.

Section13 Exercise substantial personal autonomy in variety of service provision environments.
Complete installation splicing task from start to finish following instructions without intervention. - Trouble shoot fibre optic cabling.

Course Profile

The communications industry around the world is changing its communications infrastructure from copper based systems to fibre optic based networks.

In Ireland in particular there is a shortage of skilled fibre optic cable splicing technicians. There are companies in Ireland that have the ambition and capabilities to win contracts around the world associated with these upgrade activities.

The tenders for these projects require companies to specify the qualifications of the employees who are to work for them on what is specified in the tender.

This industries biggest issue is that it cannot source Irishmen with qualifications to enable them to successfully tender for work in this expanding area. The purpose of this course is to help correct that.

This programme is designed to produce technicians with the capability to install the most commonly used fibre optic cables that are used internally within a data communications environment such as a Local area network within business office environments.

On completion of the course the learners will also be able to install fibre optic cables of the type used in a Telecommunications environment. Which are almost always outside on a network such as Eircom, BT, UPC, Duetsche Telekom, etc.

The fibre counts that they will be dealing with will be from 1 fibre up to 500 fibres.

Learners will be able to joint fibre optic cables using fusion and mechanical methods. Splicing into splice trays used internally in communication racks or externally in waterproof closures.

Learner profile

The qualification is aimed at new entrants to the communications industry such as adults looking for a change of careers such as former plumbers, electricians, Bricklayers etc, or school leavers.

This course is also for existing engineers working in the cable and communications industry who have had no contact with fibre optics who wish to upskill.

It may also serve as an introduction to subjects for those employed in the industry as installation managers and network designers.

Entry Criteria

It would be expected that new entrants would have at least leaving cert. However those who already have skills from a previous industry for example an electrician. The cert would not be required.
Entrants must be able to write neatly, be reasonably numerate and meticulous about their work.
Learners MUST NOT BE COLOUR BLIND

Once this centre has completed the FETAC approval process for the recognition of prior learning. Learners that hold the City & Guilds Level 2 Certificate in Communications Cabling MAY! be exempted from completing some elements of the learning (Not the assessments, these must all be completed) Dependent on the requirements of the FETAC RPL.

At this time all learners must complete all learning and assessment elements of this course.

Delivery mode and methodologies

This course will require learners to attend our training centre full time to complete learning activities, theory tests and practical assignments.

A number of deliver methodologies are to be employed during this course.
Learners will complete an element of self-directed learning at home. Completing a number of review assignments before attending the training centre. Learners will have workbook, and online study elements and video for this learning element.

PowerPoint presentations, Practical demonstrations and exercises, video will be employed while the learners are at the training centre.

In some situations it may be requested by a company that the whole course be delivered in the classroom with no home study. This is an acceptable possibility.

Transfer and Progression

Once learners have completed this training they can go on to build on their portfolio of skills with the other programmes such as.

The remaining components of the FETAC Level 6 Advanced Certificate in Telecommunications Networks Technology.
City & Guilds Awards In communications cabling (copper structured wiring)
Cisco & Microsoft Certifications.
City & Guilds or Fetac level 5 module award in CCTV.
City & Guilds 7540 Diploma in ICT Professional competence
City & Guilds or FETAC module awards in Telecommunications.
City & Guilds Security Cabling

Cost of courses

Course costs Vary. Arrangements have been made through the skillnets for discounted rates for companies trying to upskill their staff. Satellite, Aerial, CCTV, Cable, Installation industries in particular.

Some free places “may” be made available for the unemployed. These will be very few. We can advise learners who are unemployed and have no money as to the process to source funding and you should contact us directly.

You should provide us with your contact details so that we can phone you to discuss your circumstances and the training rates.