

# Fiber Optic Technician (CFOT) Training



## 2019 Dates and Venue



**25 - 27 June** Available (Tue - Fri)

**23 - 26 July** Available (Mon - Thu)

**27 - 30 Aug** Available (Tue - Fri)



**Dartcom Telecommunications  
Learning Centre**

Corner of 32nd Street and  
Sterkfontein Avenue  
Irene



**Cost:** R 8 600.00 p.p. incl. VAT

**Duration:** 4-days

**Time:** 08h30 to 16h30

**Confirmation:** Registrations cannot be confirmed until payment is made in full

### How to Register for this course

Please complete and email page-4 to:

**registrations@thefibrelab.com**

**Lauren Krüger +27 (0) 82 303 3377**

**...or, go to <http://www.tripleplay.co.za/> to register online**

Should you have any questions about the course content, please feel free to contact:

**Joe Botha**

**Mobile:** +27 (0) 82 464 0386

**Email:** joebotha@telkomsa.net

## GENERAL INFORMATION:

- ◆ The primary focus of this course is to provide a comprehensive coverage of the best practices for the deployment of optical communication networks.
- ◆ Fusion splicing, connectorization, acceptance testing, troubleshooting and much more is taught with lots of hands-on practice.
- ◆ Comprehensive hands-on activities and the underlying theory are combined to provide a firm understanding of the concepts underpinning the deployment of optical communication networks.
- ◆ Also provided is coverage of the major developments in wide-band, optical cross connect, transceiver, and waveguide type devices that lay the foundation for next-generation networks.

## WHO SHOULD ATTEND?

- ◆ No previous experience is necessary. This training program is not limited to installers or technicians, it is an excellent credential for sales and marketing personnel, indicating their comprehensive knowledge of the industry and building confidence in their assistance to their customers.
- ◆ Refresh your knowledge or prepare for the CFOT exam online at: [www.fiberu.org](http://www.fiberu.org)

## THE INSTRUCTORS:

- ◆ Each of the instructors involved with this course have three decades of optical fiber experience (from the early 80s) and, we welcome the opportunity to share our knowledge, insight and experience with you.

## ACCREDITATION:

- ◆ In today's high-tech world, certification is considered proof of professional status and we are a Fiber Optic Association Inc. approved training school # 707

## ACCREDITATION



**mictseta**

**ACC/2012/05/771**

**SAQA ID 246720**

**NQF Level 05**

**Credits 16**



# Course Content - summary

## DAY ONE 08:30 -16:30

- ◆ Introduction to Fiber Optics
- ◆ What is Fiber Optics?
- ◆ Fiber manufacturing methods (video)
- ◆ Fiber advantages
- ◆ Fiber design
- ◆ How fiber works
- ◆ Refraction & Reflection
- ◆ Fiber Types:
  - OM 1, 2, 3, & 4
  - SM G.652, G.655, G.656 & G.657
- ◆ Mixing G.652, G.655, G.656 and G.657
- ◆ Cut-off wavelength
- ◆ Frequency
- ◆ Numerical aperture
- ◆ Mode-field diameter
- ◆ What is an Optical Network?
- ◆ Transmitters and transceivers
- ◆ Optical modulation
- ◆ Optical fiber parameters
- ◆ Transmission bands
- ◆ CWDM, DWDM and TDM
- ◆ Attenuation
- ◆ Scattering and Absorption
- ◆ Inter Modal and Chromatic Dispersion
- ◆ Polarization Mode Dispersion
- ◆ Coefficients and system performance
- ◆ Mode-conditioning
- ◆ Amplifiers and Attenuators
- ◆ Cable Types
- ◆ Loose tube and Tight buffer
- ◆ Choosing a Cable
- ◆ Cable specifications
- ◆ NEC Ratings
- ◆ Cable plant hardware
- ◆ Optical Fiber Cable Color Coding
- ◆ Best practices for installing cable
- ◆ Bonding and grounding
- ◆ Pulling fiber optic cable
- ◆ Air-assisted fiber installations
- ◆ Slack management
- ◆ FTTx
- ◆ Fiber Optic Installation Safety Rules

## DAY TWO 08:30 -16:30

### SPlicing: FUSION and MECHANICAL

- ◆ Choosing a Splice Type
- ◆ Cable and fiber preparation techniques
- ◆ Fusion splicing timesaving techniques
- ◆ Splice Loss - cause and remedy
- ◆ Fusion splicer maintenance and cleaning
- ◆ Connector types
- ◆ Termination procedures

### HANDS-ON Practical Session

- ◆ Fusion splicing
- ◆ Mechanical splicing
- ◆ Connectorization
- ◆ Polishing techniques
- ◆ Fiber optic enclosures

## DAY THREE 08:30 - 16:30

### TESTING, TROUBLESHOOTING & MORE SPlicing

- ◆ OTDR and iOLM characterization
- ◆ Testing at various wavelengths
- ◆ Loss Budget calculations
- ◆ Power Budget calculations
- ◆ Calculate admissible lengths
- ◆ Insertion loss testing
- ◆ System Certification
- ◆ Documenting test results
- ◆ Mandrel wrapping
- ◆ Encircled Flux
- ◆ Gainers
- ◆ Mode-Field Diameter issues
- ◆ Nano-engineered ring issues
- ◆ Troubleshooting procedures
- ◆ Measurement units
- ◆ Cleaning connectors

### HANDS-ON Practical Session

- ◆ Working with the following test instruments: Visual Fault Locators, Fiber Microscopes, Power Sources, Power Meters, Dark Fiber Identifiers, OTDR's, more fusion splicing, etc.

## DAY FOUR 08:30 - 12:00

- ◆ WRAP-UP AND TEST ISSUES
- ◆ Test

Please complete the Registration Form below and submit for invoicing to:  
**registrations@thefibrelab.com**  
**Lauren Krüger +27 (0) 82 303 3377**

**Please enter course date:**

**DELEGATE @ R8 600.00 incl. VAT:**

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Name:

Surname:

Designation:

Telephone:

Mobile:

Email:

Dietary Req:

Name:

Surname:

Designation:

Telephone:

Mobile:

Email:

Dietary Req:

Company Name:

VAT Registration #

Postal Address:

Contact Person:

Telephone:

Email:

Authorised Signatory:

I hereby acknowledge the terms and conditions of this training course and confirm acceptance of the cancellation policy.

Cancellation notice period	Fees payable
7 or more days	No cancellation fee payable
Less than 7 days	A 10% cancellation fee applies