

Fiber Optic Technician (CFOT) Training



2019 Schedule and Venues

Pinnacle Micro Johannesburg 269 16th Road Randjespark Midrand	Datanet Cape Town 7 Pepper Place Rainbow Park 2 Omuramba Road Montague Gardens	Datanet Durban 42 Brickworks Road Briardene
12 - 15 Mar Available 09 - 12 Apr Available	21 - 24 May Available	28 - 31 May Available

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

For Bookings please contact

Sarona du Toit

Tel: 021 550 0109

Email: saronadt@pinnacle.co.za

...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

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



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ACC/2012/05/771

SAQA ID 246720

Credits 16

NQF 05



Course Content - summary

DAY ONE – Tuesday 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 – Wednesday 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 – Thursday 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 – Friday 08:30 - 12:00

- ◆ WRAP-UP AND TEST ISSUES
- ◆ Test

Please complete the Registration Form below and submit for invoicing to:
saronadt@pinnacle.co.za

Next to your venue of your choice, please enter the date of the course			
JHB		CT	
		DBN	

DELEGATE @ R8 600.00 incl. VAT:

DELEGATE @ R8 600.00 incl. VAT:

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