

Fiber Optic Technician (CFOT) Training



2013 Schedule and Venues

Datanet Johannesburg	Datanet / Axiz Cape Town	Datanet Durban	Datanet Port Elizabeth
704 16th Road Randjespark Midrand	No.18 Edison Way Century Gate Business Park Century City	Queensmead Stadium 44 Teighnmouth Road	59 Newton Street Newton Park Port Elizabeth
09 - 12 Apr 14 - 17 May 11 - 14 June 09 - 12 July	16 - 19 Apr 25 - 28 June	28 - 31 May	30 July - 2 Aug

- Cost:** R 7 400.00 p.p. incl. VAT
- Duration:** 4-days
- Time:** 08h30 to 16h00
- Bookings:** Please complete and submit page-4 to: berylm@datanet.co.za
- Confirmation:** Registrations cannot be confirmed until payment is received in full

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



This event has been validated by the SAIEE as per ECSA policy and granted 3 CPD credits under validation no. SAIEE-0999-V

Fiber Optic Technician (CFOT) Training

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.
- ◆ Optical fiber installation, fusion & mechanical 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 nearly three decades (i.e. from the early 80s) of optical fiber experience... and we welcome the opportunity to share our knowledge, insight and skills 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 www.thefoa.org



The Fiber Optic Association, Inc.
*the non-profit professional
society of fiber optics*



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Event ID: OV-TRIP-SA-0313-1

BICSI ITS CECs Awarded: 22

Fiber Optic Technician (CFOT) Training

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:
 - OM1, 2, 3, & 4
 - SM G.652, G.655 G.656 & G.657
- ◆ Mixing G.652, G.655, G.656 and G.657
- ◆ Cutoff Wavelength
- ◆ Frequency
- ◆ Numerical Aperture
- ◆ Mode-Field Diameter
- ◆ What is an Optical Network?
- ◆ Transmitters and Transceivers
- ◆ Optical Modulation
- ◆ Optical Fiber Parameters
- ◆ Transmission Bands
- ◆ CWDM and DWDM
- ◆ Time Domain Multiplexing
- ◆ 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-blown fiber
- ◆ Design considerations for aerial cables
- ◆ Slack Management
- ◆ FTTx
- ◆ Fiber Optic Installation Safety Rules

DAY TWO – Wednesday 08:30 - 16:30

SPLICING: FUSION, MECHANICAL & TERMINATION METHODS

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

HANDS-ON Practical Session

- ◆ Fusion splicing - using a variety of machines
- ◆ Mechanical splicing
- ◆ Connectorization
- ◆ Polishing techniques
- ◆ Fiber optic enclosures: Outdoor, Indoor, Wall mount and Rack mount types

DAY THREE – Thursday 08:30 - 16:30

TESTING, TROUBLESHOOTING AND MORE SPLICING

- ◆ OTDR Link 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, Live Fiber Identifiers, OTDR's, more fusion splicing, etc.

DAY FOUR – Friday 08:30 - 12:00

WRAP-UP AND TEST ISSUES

Test

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

Next to the venue of choice - please enter the date you interested in							
JHB		CT		DBN		PE	

DELEGATE @ R 7 400.00 incl. VAT:

DELEGATE @ R 7 400.00 incl. VAT:

Name:

Name:

Surname:

Surname:

Designation:

Designation:

Telephone:

Telephone:

Mobile:

Mobile:

Email:

Email:

Dietary Req:

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.

Please refer all registration queries to:

Beryl Makosholo

Tel: + 27 (0) 011 990 6234

Email: berylm@datanet.co.za

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

Joe Botha

Mobile: +27 (0) 82 464 0386

E-mail: joebotha@telkomsa.net