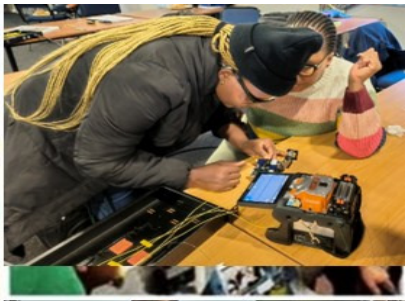
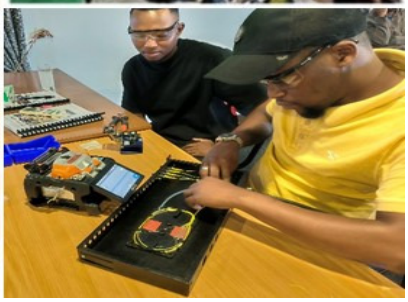
# Fiber Optic Technician (CFOT) Training

mictseta
ACC/2012/05/771
SAQA ID 246720
NQF Level 05
Credits 16

| 2026 Date/s |
| --- |
| **14 - 17 April** - Available |
| **Venue** |
| **The Venue at Midrand**<br>128 Richards Drive<br>Halfway House<br>Midrand |



**Cost:** R 9 450.00 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:**
**register@tripleplay.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:** joe@tripleplay.co.za

## 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, acceptance testing, troubleshooting and much more are 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.

## 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:

Students will also receive a barcoded certificate from the FOA along with a digital badge, read more about this here https://www.foa.org/Badge_FO.html
Additionally, students will receive a SoR from MICT SETA.

## ACCREDITATION

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The Fiber Optic Association, Inc.
FOA
Approved Fiber Optic Training

# Course Content - summary

## DAY ONE 08:30 - 16:30

- Introduction to Fiber Optics
- What is Fiber Optics?
- Fiber manufacturing methods (video)
- Fiber advantages
- 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 and DWDM
- Attenuation, Scattering and Absorption
- Inter Modal and Chromatic Dispersion
- Polarization Mode Dispersion
- Coefficients and system performance
- 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
- Mid spanning / Loop Joint
- Fiber optic panels, enclosures and termination boxes

## DAY THREE 08:30 - 16:30

**TESTING, TROUBLESHOOTING & MORE SPLICING**

- OTDR and iOLM characterization
- Testing at various wavelengths
- Troubleshooting procedures
- Acceptance testing
- Loss and Power Budget calculations
- Calculate admissible lengths
- Insertion loss testing
- System Certification
- Documenting test results
- Gainers and Mode-Field Diameter issues
- Nano-engineered ring issues
- 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, iOLM and more fusion splicing, etc.

## DAY FOUR 08:30 - 12:00

- WRAP-UP AND TEST

**Please complete the Registration Form below and submit for invoicing to: register@tripleplay.co.za**

**DELEGATE @ R9 450.00 incl. VAT:** **DELEGATE @ R9 450.00 incl. VAT:**

| | | | |
|---|---|---|---|
| Name: | | Name: | |
| Surname: | | Surname: | |
| Telephone: | | Telephone: | |
| Mobile: | | Mobile: | |
| Email: | | Email: | |

| | |
|---|---|
| Company Name: | |
| VAT Registration # | |
| Postal Address: | |
| Contact Person: | |
| Telephone: | |
| Email: | |