Fiber Optic Technician (CFOT) Training

ACC/2012/05/771

SAQA ID 246720
NQF Level 05
Credits 16

ACCREDITATION

Regarding the accreditation, we issue students on the final day of training, with a certificate containing The Fiber Optic Association, Inc. (FOA) (internationally recognised) and MICT SETA credentials.

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

Cost: R 9 450.00 p.p. incl. VAT
Duration: 4-days
Time: 08:30 to 16:30

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