# Ground Tactical TFOCA Course

## 5 Day Tactical Fiber Optic Cable Assembly Course

Available to U.S. Military and civilian personnel with proof of U.S. citizenship

**COURSE INTRODUCTION:** Our Five Day Tactical Fiber Optics Course is designed for personnel that are responsible for maintaining tactical fiber optic cable reel assemblies. This is a similar course to the one we developed for the U.S. Army's Patriot System Fiber Optic Repair course taught at USAOMEMS in Ft Bliss, TX. The TFOCA course is taught in strict adherence to MIL-STD-2042B(SH). All our instructors have real world experience having spent literally thousands of hours terminating, splicing and testing fiber optic cable systems.

**COURSE OVERVIEW:** Students who successfully complete this training course will have the experience and confidence to terminate Single Terminus (ST) and Multiple Terminus (MT) 4-channel M83526 connectors. Students will also learn to properly inspect, test, troubleshoot and repair tactical fiber optic cable reel assemblies in accordance with MIL-STD-2042B (SH) using Optical Time Domain Reflectometers, Light Source and Power Meters and Visual Fault Locators. Students will also learn to repair damaged cable by removing the bad cable, fusion splice the cable together and protect it with a splice protection sleeve and splice enclosure.

**WHO SHOULD ATTEND:** Anyone who is concerned with the installation of fiber optic components, testing, and troubleshooting harsh environment tactical fiber optic cable assemblies.

**CERTIFICATIONS:** At KITCO, we understand the need to provide you with recognized industry certified training. Successful completion of the five day course and test qualifies you to receive:

**ETA FOI** (optional) - students are offered the option of taking the Electronics Technicians Association (ETA) Certified Fiber Optic Installer (CFOI) exam for a fee of $150. Upon successful completion, you will be certified as an ETA Certified Fiber Optics Installer
**KITCO** - Completion Certificate

**COURSE OUTLINE**

**DAY 1: FIBER OPTICS, THE PHYSICAL LAYER**

- Introduction to fiber optics
- Advantages of fiber optics over copper
- Fiber optic theory & the properties of light
- Applications and principles
- Fiber optic safety precautions
- Reflection and Refraction
- Propagation of a fiber optic light wave
- Attenuation in fiber cables
- F iber optic cable construction and identification
- Mil-Spec Connectors (M83526/12 & M83526/16 connectors)
- Stripping and scoring of the fiber optic cable

**DAY 2: CONNECTORIZATION AND TESTING LAB**

- Demonstration of ST epoxy, termination & polishing procedures
- Students terminate & polish two ST-ST cable assemblies
- Loss Budget Calculations
- Testing procedures IAW MIL-STD-2042 6C

• Demonstration of Light Source & Power Meter
• Students test cable assemblies
• Demonstration of terminating a ST single mode epoxy connector

**DAY 3: ADVANCED TOPICS AND EVALUATION**

• Students terminate & polish a ST single mode cable (cont'd)
• Students test cable assemblies
• Evaluation of hands-on performance
• Evaluation of cable reel assembly
• Demonstration of building SC and LC connectors
• Students terminate & polish SC and LC connectors
• Demonstration building an M83526 4-channel connector
• Students build M83526 connector

**DAY 4: OPTICAL TIME DOMAIN REFLECTOMETER LECTURE & LAB**

• Students build M83526 connector
• Students test M83526 connector assembly
• Evaluation of students' termination skills
• Evaluation of hands-on performance
• OTDR Theory
• Fusion Splicing Theory
• Cable Restoration and Fusion Splicing

**DAY 5: FUSION SPLICING LECTURE & HANDS-ON LAB**

• Cable Restoration and Fusion Splicing
• Troubleshooting cable reel assemblies
• Summary Review

**PRICE:** Please contact us for current pricing. Send an e-mail to: training@kitcofo.com or call 866-643-5220 or 757-216-2222.

**Dates:** upon request. Call us at 1-866-643-5220 or 757-216-2222