ETA® International
Fiber Optics and Data Cabling Certifications

Broadband Fiber Installer (BFI)
The Broadband Fiber Installer certification is designed for technicians working in the FTTx field studying the "physical layer" of the OSI model. Broadband Fiber Installers are expected to know the primary comprehension of Passive Optical Networks (PON) and of Optical Time Domain Reflectometer (OTDR) use. A knowledge of the concepts of fiber optics troubleshooting and service applicable to all of the functions is required to safely and completely analyze FTTx signatures, measure reflectance and identify faults in fiber optics communications and transmission cabling. **$155**

Data Cabling Installer (DCI)
ETA Data Cabling Installers are expected to know the basic concepts of copper cabling installation and service—which are then applicable to all the procedures required to safely and competently install communications cabling. Basic electricity and safety; data communications basics; definitions, symbols and abbreviations; cable construction and types; cable performance characteristics; cabling standards; basic network topologies; basic network architectures; National Electrical Code (NEC®); cabling system components; DCIC installation tools; connectors and outlets; cabling system design; cabling installation; connector installation; cabling testing and certification; cabling troubleshooting; documentation. **$155**

Fiber Optics Installer (FOI)
A Fiber Optics Installer has a general understanding of optical fiber installation, connectorization, splicing, and testing, is familiar with optical fiber, connector, and splice performance characteristics described in TIA-568, ITU-T G.671, ITU-T G.652 and Telcordia GR-326 A Fiber Optic Installer can perform connector endface evaluation as described in TIA/EIA-455-57B, is proficient in optical loss testing as described in TIA/EIA-526-14A, and understands the installation requirements described in articles 250 and 770 of the National Electrical Code (NEC®). A Fiber Optic Installer is proficient at the installation of connectors on various types of fiber optic cables using multiple types of connectors, and can perform mechanical and fusion splicing. **$155**

Fiber Optics Technician (FOT)
A Fiber Optics Technician has a full understanding of inside plant optical fiber, connector, and splice performance characteristics as described in TIA-568 and can use these performance characteristics to create a worst case power budget for a fiber optic cable plant. An FOT can proficiently troubleshoot, perform optical loss testing as described in TIA/EIA-526-14A and perform connector endface evaluation as described in TIA-455. Using an OTDR an FOT can effectively locate faults in a fiber optic cable, mated connector pair, or splice as well as evaluate optical fiber performance, mated connector pair performance, or splice performance for compliance with TIA-568. **$155**

Fiber Optics Technician-Inside Plant (FOT-ISP)
A Fiber Optics Technician – Inside Plant must be able to accurately install, terminate, test, and troubleshoot fiber optic communication systems used in premises, LANs, enterprise and data center installations. Included are various techniques applicable to gigabit multimode and single-mode systems consisting of unique test requirements in Ethernet and Fibre Channel, but also pertinent to FTTx, security systems, and CATV networks. As many inside plant installations use multimode fiber, the FOT-ISP technician must recognize the various types - IEC defined OM2, 3, 4 & 5 multimode - and OS2 single-mode fibers along with the various proper launch conditions used when testing fiber spans as also defined by the TIA-568 and TIA-942 standards. Technicians must similarly comprehend various fiber optic cable connector types and termination used in these networks, using best practices for installing and testing fiber links. The FOT-ISP should have a basic understanding of the National Electrical Code (NEC®) and all safety conditions specific to the inside plant and campus applications. **$155**

Fiber Optics Technician-Outside Plant (FOT-OSP)
A Fiber Optics Technician – Outside Plant must be able to properly terminate, test and troubleshoot single-mode fiber optic communication systems. This includes various types of termination techniques applicable to high speed laser based systems including SONET, DWDM, FTTx, CATV networks using ITU-T G.652 and G.655 single-mode fibers. Disciplines include mechanical and fusion splicing per the TIA-758, GR-765 and GR-20 standards, and the preparation of fiber optical cables and cable management products. Testing and troubleshooting roles of each element and span of the fiber optic communication system(s) include optical loss testing of transmission equipment per the TIA-526-7 standard along with an understanding of OTDR theory and skills required including acceptance testing. **$155**

ICAC
International Certification Accreditation Council

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Fiber To Any Antenna (FTAA)
The Fiber To Any Antenna standalone certification is for individuals who have been trained in the practice of installing fiber optic cabling at wireless and cellular facilities. These disciplines are applicable to all the functions required to safely and competently install pre-terminated fiber optic transmission cable assemblies and connection devices onto equipment and antenna(s), wherever the antenna system may be located. Included are how to inspect, clean and test the fiber plant along with how to identify and troubleshoot problems during and after installation. **$155**

Fiber Optics Designer (FOD)
The ETA 40—hour certified Fiber Optics Designer training program is an optical designer certification that will provide an indepth knowledge of optical local area networks. This certification covers all aspects of a successful fiber optic system design from network protocols, network configurations, optical cabling, industry communications standards, determination of fiber count, hardware selection, splicing/termination methods, and cable system testing and documentation. All that is learned in class is put into practice through multiple and intensive case studies. The ETA certified Fiber Optics Designer program provides detailed instruction and practice of Local Area Network fiber optic design. **$155**

Termination and Testing Technician (TTT)
This certification is directed towards the education to properly, terminate, connect, test and troubleshoot IP-enabled voice/data/video cable and devices to each other. One of the key advantages to using Cat 5e/6/6A and fiber optic cables and connectors for electronic security and voice/video/data installations is that these cable connections can be readily built using the proper tools and techniques, which will be taught in the required course. This part of the training will emphasize the ETA challenge of being vendor-neutral and applying industry standards for terminations and cable performance. The knowledge gained by the examinees will be applicable to any vendor's products within the scope of the technology studied.

One of the primary principles of the network cabling standards is that if a cable is properly terminated and tests satisfactory, that cable can be used to connect any proper device from any manufacturer. There are hundreds of vendors making thousands of different IP network devices, any and all of which can be readily connected to a network if the cable to be used is properly terminated and tested. **$105**

ETA Aerospace-based Fiber Optics Certifications

ARINC Fiber Optics Fundamentals Professional (AFOF)
ARINC recognizes ETA International as the industry trained fiber optics certification entity in regards to the aerospace industry. The ARINC certifications are based on the ARINC 807-4 report and SAE International-recognized standards. The ARINC Aerospace Fiber Optic Fundamentals Professional is the aerospace fiber and connector identification and characteristics certification. Per ARINC, Fiber Optics Fundamentals is essential to provide familiarization training for buyers, planners, and management personnel working with aerospace fiber optic components. **$130**

ARINC Fiber Optics Installer (AFI)
ARINC recognizes ETA International as the industry trained fiber optics certification entity in regards to the aerospace industry. The ARINC certifications are based on the ARINC 807-4 report and SAE International-recognized standards. Per 807-4, "In order to maintain their proficiency, it is essential that individuals involved in the use and implementation of fiber optic technology are properly trained and kept current". The ARINC Installer is the aerospace fiber and connector installation certification. **$180**

ARINC Fiber Optics Technician (AFT)
ARINC recognizes ETA International as the industry trained fiber optics certification entity in regards to the aerospace industry. The ARINC certifications are based on the ARINC 807-4 report and SAE International-recognized standards. Per 807-4, "In order to maintain their proficiency, it is essential that individuals involved in the use and implementation of fiber optic technology are properly trained and kept current". The ARINC technician includes the more advanced aerospace troubleshooting and repairing than the installer. **$180**

Fiber Optics Evaluation & Endface Cleaning (FEEC)
ARINC organizes aviation industry committees and participates in related industry activities that benefit aviation at large by providing technical leadership and guidance. These activities directly support aviation industry goals: promote safety, efficiency, regularity, and cost-effectiveness in aircraft operations. ARINC recognizes ETA International as the fiber optics industry training certification entity in regards to the aerospace industry. This ARINC FEEC certification is based mainly on the ARINC REPORT 805-5, with aspects of 803-3, 806-7.2.1, and 807-4 of the SAE International-recognized standards. **$130**

SAE Fiber Optics Fabricator (SFF) and SAE-ARINC Fiber Optics Fabricator (SAFF)
For individuals involved in the manufacturing, installation, support, integration and testing of fiber optics systems. Intended for managers, engineers, technicians, trainers/instructors, third party maintenance organizations, quality assurance and personal production. Both the SAE and ARINC certifications are based on the SAE International standards.

The Aerospace industry has always required the highest standards of workmanship to be maintained. This certification is universally recognized for competency, ability, and knowledge as an Aerospace Fiber Optics Fabricator (FAB). ETA worked with the SAE International's Fiber Optics and Applied Photonics Committee to develop the certification. To be recognized for this honor, practicing fabricators must demonstrate the necessary skills and knowledge verifying their proficiency in Aerospace Fiber Optics Fabrication procedures and technology as defined in the SAE International Aerospace ARP5602/3 and ARP5602/4 competencies. Additional SAE documentation in addition to the prior "slash sheets" is the ARP5602/14 recertification guideline. **$180**