

AEROSPACE

SHORT COURSES

FAA Type Certification Process (AERO0551)

Instructors: Travis L. Dahna, Scott West (This course may be taught by either instructor.)

Course Description

The course will focus on how to successfully complete an FAA type certificate project based on the published process outlined by the FAA, including a review of all required FAA forms, and when to use them. You'll take a deep dive into the type certification process outlined in FAA Order 8110.4, specifically focusing on chapters 1-5 (chapters 6 and 7 will also be discussed, but not in great detail.) The instructors will draw from hundreds of real-world type certificate and supplemental type certificate projects – distilling years of information to provide insight into this lengthy and potentially complex process.

Before you register: Before registering for this course, it is strongly recommended that you 1) complete one of the following courses and/or 2) have sufficient knowledge of the FAA, including direct involvement in the type certification process:

- FAA Aircraft Certification and Airworthiness Approvals **OR**
FAA Functions and Requirements Leading to Airworthiness Approval (*retired course*)

Who Should Attend?

Those involved in product or article certification (aircraft/equipment OEM, aircraft modifiers, suppliers and ODA personnel) including design engineers, airworthiness engineers, consultants, certification specialists, project managers, quality assurance managers, FAA designees (engineering/manufacturing), and FAA Organization Designation Authorization (ODA) unit and support personnel.

Learning Objectives

- Understand the structure of the FAA associated with product or article certification and airworthiness.
- Review FAA orders, guidance, and policies required to properly support a successful type certification project.
- Gain a high-level understanding of the FAA type certification process to support new product or article development activities.
- Understand the certification flow and when certain activities are required in the process, both for standard certification and ODA projects.

- Understand the use of the change product rule to determine the proposed certification basis for the project.

Course Outline

Day One

- Introductions
- Overview of Title 14 Code of Federal Regulations, FAA Orders, Advisory Circulars, and Memorandums
- Overview of Title 14 Code of Feral Regulations, Parts 1, 21, 23, 25, 26, 27, 29, 33, and 183
- Introduction of guidance material to assist in the FAA Type Certification Process
- Types of Change: Major design, major alteration, major repair, minor
- Overview of Organization Designation Authorization types and how they relate to the type certification process
- FAA Order 8110.4C Chg 6 Chapter Overview

Day Two

- Chapter 1 (FAA Order 8110-4C Chg 6) – General data on the type certificate process
- Chapter 2 (FAA Order 8110-4C Chg 6) – Understanding the type certificate process

Day Three

- Chapter 2 (FAA Order 8110-4C Chg 6) – Understanding the type certificate process
- FAA Advisory Circular 21.101-1B – Change Product Rule overview and class activities
- Chapter 3 (FAA Order 8110.4C Chg 6) – What is a Type Certificate Data Sheet or Supplemental Type Certificate

Day Four

- Chapter 4 (FAA Order 8110.4C Chg 6) – Development and understanding on when changes in type design may be required and how to effectively address the changes
- Chapter 5 (FAA Order 8110.4C Chg 6) – Engineering and testing requirements to support changes in type design
- Chapter 6 (FAA Order 8110.4C Chg 6) – Uses of provisional and restricted type certificates
- Chapter 7 (FAA Order 8110.4C Chg 6) – Noise certification requirements
- Understanding the requirements of being a type design holder

Classroom hours / CEUs

28 classroom hours

2.8 CEUs

Certificate Track

Aerospace Compliance

Course Fees

Early registration course fee: \$2,295 if you register and pay by the early registration deadline (45 days out).

Regular registration course fee: \$2,495 if you register and pay after the early registration deadline.

U.S. Federal Employee Discount

This course is available to U. S. federal employees at 10% off the registration fee. To receive the federal employee discount, you must enter the code FGVT116 during the checkout process. Please note that you must validate your eligibility to receive this discount by entering your U.S. government email address (ending in .gov or .mil) when creating y

Instructor Bios**Travis L. Dahna**

Travis Dahna is the Principal member and Electrical Systems and Equipment DER for TD Aerospace, LLC, a professional aerospace engineering design and certification company based in Kansas. He started his career over 25 years ago as an avionics technician and troubleshooter in the United States Navy where he served with distinction and was honorably discharged. As a Gulf War Veteran, Mr. Dahna joined the civilian aviation sector where he has worked on, designed, and certified a wide variety of new products and articles for the last 20 years. He has held positions as a senior electrical engineer for a large aircraft manufacturer and served as the Certification Coordinator for all the factory owned service / modification centers in the United States providing all interface with the geographic FAA Aircraft Certification Offices for all standard certification STC projects. Following his time at the aircraft manufacturer, he assisted in the development of an STC ODA for a consulting company and held the position as the Principal Certification Engineer, while also training as an alternate ODA administrator.

Travis has been actively involved in several hundred certification projects, ranging from TC, STC, PMA, and Major Alterations. In addition to duties as a consultant DER (14 CFR Part 23 and 25), including major alterations, he holds positions as a unit member on several TC and STC Organization Designation Authorizations (ODA).

Scott West

Scott West is the principal engineer for Aeronautix, a professional aerospace engineering and aircraft certification company that holds multiple Federal Aviation Administration (FAA) Supplemental Type Certificates (STC) as well as FAA Parts Manufacturer Approvals (PMA).

Mr. West spent eight years with the FAA Wichita Aircraft Certification Office as a program manager, flight test engineer and propulsion engineer. Since 2004, he has been active as an FAA Designated Engineering Representative (DER) utilizing multiple delegated authorizations as a Management, Powerplant Installations and Flight Analyst DER for both Part 23 and Part 25 aircraft. Between his experience with the FAA and his roles as an FAA DER since then, Mr. West has successfully managed and technically supported hundreds of FAA Type Certificate (TC), amended TC, STC and PMA programs.

He holds a Bachelor of Science in Aerospace Engineering as well as a private pilot certificate.

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CONTACT US:

KU Jayhawk Global
Aerospace Short Course Program
1515 St. Andrews Dr.
Lawrence, KS 66047
Email: jayhawkglobal@ku.edu
Phone: 785-864-6779 (Registration)