

# AEROSPACE

## SHORT COURSES

## FAA Type Certification Process (AERO0552)

Instructor: Travis L. Dahna

### 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 processes outlined in FAA Order 8110.4 and Order 8100.101. The instructor 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 as it relates to civil and military commercial derivative certification of products. This course requires background knowledge of the FAA organizational structure and is the second course in the following three-part FAA course series:

1. Introduction to FAA Airworthiness Approval Requirements
- 2. FAA Type Certification Process**
3. FAA Type Certification Plan Development

**Prerequisite:** Before registering for this course, it is required you have completed Introduction to FAA Airworthiness Approval Requirements or have significant experience working with the FAA.

### Highlights

- The type certification process - from start to finish
- FAA orders, guidance and policies to properly support a successful type certification project
- How the certification process flows
- The change product rule
- The differences between minor change, major design change, major alteration and major repair
- Required forms and when to use them
- Real-world examples of completed type certification projects - including mistakes made/lessons learned
- Class interaction to further enhance your understanding
- Unique challenge and requirements for military commercial derivate aircraft certification projects

## **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 members and support personnel.

## **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 Federal 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 7 Chapter Overview

### **Day Two**

- Chapter 1 (FAA Order 8110-4C Chg 7) – General data on the type certificate process
- Chapter 2 (FAA Order 8110-4C Chg 7) – Understanding the type certificate process

### **Day Three**

- Chapter 2 (FAA Order 8110-4C Chg 7) – 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 7) – What is a Type Certificate Data Sheet or Supplemental Type Certificate

### **Day Four**

- Chapter 4 (FAA Order 8110.4C Chg 7) – 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 7) – Engineering and testing requirements to support changes in type design
- Chapter 6 (FAA Order 8110.4C Chg 7) – Uses of provisional and restricted type certificates
- Chapter 7 (FAA Order 8110.4C Chg 7) – Noise certification requirements
- Understanding the requirements of being a type design holder

## **Day Five**

Understanding the specific differences between type certification for civil versus military commercial derivative aircraft.

### **Classroom hours / CEUs**

31.5 classroom hours

3.15 CEUs

### **Certificate Track**

Aerospace Compliance

### **Course Fees**

Early registration course fee: \$2,595 if you register and pay by the early registration deadline (45 days out).

Regular registration course fee: \$2,795 if you register and pay after the early registration deadline.

### **Course Materials**

Course materials, including outlines, presentation copies, and supplementary materials, will be accessible through Canvas, KU's online learning system. Instructions to access Canvas will be provided upon completed registration. Students are required to bring a computer or other electronic device with PDF-viewing capabilities with them to class each day. If you require accommodation contact us at [professionalprograms@ku.edu](mailto:professionalprograms@ku.edu) and we will work with you on an accessible solution.

### **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 Bio**

Travis L. Dahna is the founder and principal engineer for TD Aerospace LLC, a service-disabled veteran owned small business. He started his career 30 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 25 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 required interface with the geographic FAA offices. Following his time at the

aircraft manufacturer, he assisted in the development and management of multiple Supplemental Type Certification (STC) Organization Designation Authorizations (ODA), holding positions as Principal Certification Engineer, Director of Engineering, and ODA administrator.

He has been actively involved in several hundred certification projects, ranging from TC, STC, PMA, TSO, major alterations, and major repairs. In addition to duties as a consultant DER (14 CFR Part 23 and 25), he holds positions as a unit member on several TC and STC Organization Designation Authorizations (ODA). Mr. Dahna's combination of practical experience, analytical knowledge, and in-depth certification experience brings a unique and viable approach to aircraft certification in an uncomplicated yet thorough manner.

**This class is available for delivery at your company.**

Your company can realize substantial savings by bringing an aerospace short course to your workplace. On-site delivery is ideal for organizations that need to train 10 or more employees on a specific topic. For more information on on-site course delivery, or to request a cost proposal, please contact us at [ProfessionalPrograms@ku.edu](mailto:ProfessionalPrograms@ku.edu).

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