

AEROSPACE

SHORT COURSES

DO-254: Airborne Complex Hardware Principles and Practices (AERO0201)

Instructor: George Meier

Course Description

All airborne complex (programmable) hardware (i.e., FPGA's, Gate Arrays, etc.) on commercial aircraft is mandated to follow DO-254 in their development and verification phases. This training will teach students the rules contained within DO-254 and the underlying principles behind them. This class provides for a real-world application of DO-254, teaching the student how to think like the FAA by introducing and describing the goals of DO-254.

This class covers the legal implications of DO-254 and the evolution of the current guidance. Each of the five plans and three standards will be reviewed in-depth, as well as requirements, implementation phases, process assurance and configuration management. By teaching students to “think like the auditor” we can eliminate most of the common pitfalls and extra costs in certifying a product by eliminating expensive repeat audits.

Real-world examples and exercises are provided that ensure passing an audit on the first attempt. Students will learn from examples of common mistakes and pitfalls as well as how to provide traceability, implement appropriate transition criteria and provide for in-house audits prior to engaging in formal Stage-of-Involvement Audits. Tool qualification and the application of DO-330 are also discussed as well as the remaining supplements (DO-331, DO-332 and DO-333).

Students should be fully capable of leading a DO-254 program by the conclusion of class.

Who Should Attend?

Employees of commercial aircraft companies, those who have aircraft modification concerns, and anyone involved in Type Certificate or Supplementary Type Certificate work.

Learning Objectives

- Think like the FAA thinks
- Know and provide evidence the FAA will accept in certifying complex electronic hardware for commercial aircraft
- Know where in DO-254 the objectives can be found and their accompanying process steps

Course Outline

Day 1

- **Introduction**
- **System and Safety Aspects**
- **DO-254 Framework**
- **Planning**
- **HW Development**
- **Test Development**

Day 2

- **Configuration Management**
- **Process Assurance**
- **Certification Liaison**
- **Hardware Lifecycle Data**

Day 3

- **Special Topics**
- **Additional Information**

Classroom hours / CEUs

21 classroom hours

2.1 CEUs

Certificate Tracks

Aerospace Compliance

Avionics and Avionic Components

Course Fees

Early registration course fee: \$1,995 if you register and pay by the early registration deadline (45 days out).

Regular registration course fee: \$2,095 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 and we will work with you on an accessible solution.

Students enrolled in this class should acquire a copy of the textbook(s) listed below.

- Textbook Name: DO-254 – Design Assurance Guidance for Airborne Electronic Hardware

Textbooks may be purchased online at https://my.rtca.org/nc_store

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 your online registration profile. This discount is available for both the early registration and regular registration fees.

Canada Department of National Defence Discount

This course is available to Canada DND employees at 10% off the registration fee. Please contact the DND Procurement Authority (DAP 2-3) for details. Please note that you cannot register using our online system when requesting this discount. This discount is available for both the early registration and regular registration fees.

Instructor Bio

George Meier is an FAA Software DER currently working at Woodward, Inc., and a unit member of the Textron ODA. He began his career as an avionics technician for the USAF working on aircraft during the Vietnam era. Meier holds a BSCS degree from National University, graduating magna cum laude in 1999. He was delegated as a consulting software DER by the FAA in 2006. Meier has worked a wide variety of both fixed wing and rotorcraft avionics systems and brings a wide combination of practical experience, analytical knowledge, and in-depth certification experience with a unique and viable approach to airborne software certification in an uncomplicated yet thorough manner.

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