



FLYON AERO

AVIATION TRAINING CENTER

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By OXYGEN LABS Srl Unipersonale

SYLLABUS

Advanced Avionics System Design

(FLY Course code: 020-C)

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Advanced Avionics System Design

Days Theoretical	3
Days Pratical & Exercises	3

Course Overview

This Course provides a comprehensive presentation of the process, methods and techniques for the system design of state of the art avionic systems. All aspects are covered, including the description of avionic systems, subsystems and equipment. Main topics include:

- Basic Systems Engineering concepts
- Operational and Mission Requirements
- Avionic Systems Architectures
- Functional partitioning, computing and internal communications
- Integrated Modular Avionic (IMA)
- Safety and mission critical functions
- Typical avionic subsystems and equipment
- Software architectures and design process
- Redundancy management techniques and challenges
- Fault tolerant design
- Human factors/flight deck design: automation, function allocation trades, design guidelines, modern examples
- Avionic Systems design process
- Avionic System development methods and tools
- Quality and Safety aspects
- Qualification and certification requirements
- Certification guidelines/process, software criticality, Fault Hazard Analysis (FHA), Failure Modes and Effects Analysis (FMEA)