Counter-Uncrewed Aerial Systems [C-UAS] Course

Introduction

This course is designed for delegates seeking a robust technical and analytical understanding of uncrewed aerial threats and the systems used to counter them. The course establishes a strong foundation in UAS architectures, operational concepts and threat methodologies, before progressing through communications, RF fundamentals, waveforms, observables and exploitation techniques relevant to modern C-UAS environments. From this base, the training expands into detection, classification and response methodologies, highlighting the strengths, limitations and trade-offs of different C-UAS approaches.

The learning journey culminates in realistic, scenario driven analysis, where delegates apply structured threat assessment, sensor selection and response decision making within operational constraints. Practical activities are embedded to reinforce theory and develop analytical confidence. On completion, participants will have developed both a deep technical understanding of C-UAS concepts and the analytical skills required to support operations, system design, capability development and informed decision making in complex environments.

What you will learn:

- UAS Terminology, components and system architectures
- How UAS function as integrated operational systems.
- Emerging UAS threats and employment methodologies
- UAS communications and control link concepts
- RF fundamentals relevant to C-UAS environments
- Waveforms and signal characteristics associated with UAS
- Observable signatures across RF, radar, EO/IR and acoustic domains
- Detection, tracking and layered C-UAS architectures
- CEMA and EW concepts applied to C-UAS
- Kinetic and non-kinetic C-UAS response methodologies
- Limitations, trade-offs and constraints in C-UAS solutions
- Application of C-UAS principles to realistic operational scenarios
- How emerging UAS employment concepts are driving changes in C-UAS design
- Identification of likely failure modes and fallback behaviours in UAS
- How threat dependencies and system design affect C-UAS effectiveness

Who should attend?

Military CEMA Operators.

Civilian EW Practitioners.

Systems and Capability Engineers.

Programme and Project Managers.

Technical staff supporting UAS and C-UAS activities.

Key Organisations

Ministry of Defence

Defence Science and Technology Agencies

All Government agencies, industries and organisations interested in development and employment of C-UAS capabilities

Course Duration
1 Week

Location
Mercury EW Ltd – Training Facility