

Introduction to Military Communications

Course Syllabus Overview

Duration – 2.5 days

01. Tactical Communications Systems Overview

- Introduction
- Link 11
- MIDS / Link 16
- Link 22
- Variable Message Format
- Other data links and systems

02. Future Military Communications

- Information-Centric Warfare
- Technology Development and C2 Functionality

03. Scenario-Based Capability Planning

- Definitions
- Network-centric warfare
- Planning
- Key operational definitions
- Joint capability areas

04. Communications Systems

- Requirements
- Communications system

05. Situational and Context Awareness

- Situational awareness
- Context awareness
- Interaction with smart objects
- Augmented Reality applications

06. Radio Wave Propagation

- Propagation Concepts
- Selection of propagation models

07. Wireless Sensor Networks (WSN)

- Wireless sensor networks
- Sensor
- Examples of sensor phenomena
- Management and analysis of sensor data
- Example: enemy vehicle detection

- Example: data collection in a distributed WSN
- Wireless sensor and actuator network
- WSN Trade-offs
- Internet of Things
- Characteristics of IoT
- Building blocks of IoT
- Energy issues in IoT networks
- Military procurement of IoT type technologies

08. Unmanned Aerial Systems

- Introduction
- Communication requirements of unmanned vehicles
- UAV communications applications
- Interoperable Command and Control Data Link
- Standard Interfaces of UAV Control System for NATO UAV Interoperability

09. Software-Defined Radio / Cognitive Radio

- Spectrum management
- Software Defined Radio
- System On Chip
- Cognitive Radio
- Software defined radio interoperability challenges
- SDR and CR research directions
- Military SDR
- Military CR

About SyntheSys

SyntheSys provides defence systems, training, systems and software engineering and technical management services over a spectrum of different industry sectors. Along with distinct support and consultancy services, our innovative product range makes us first choice provider for both large and small organisations. Established in 1988, the company focus is on fusing technical expertise with intuitive software applications to solve common industry challenges.