Course ID
5GSEC
Course Duration
1 day

Course Title
5G Wireless: Federal and Defense Applications and Implications

Course Type
Private Class

Related Courses

- 4G Technologies & Services: For All Audiences (W-4G, half day)
- 4G Enablers - OFDM and MIMO: For Technical Audiences (W-ENB, half day)
- Principles of OFDM and MIMO (3 day(s), OM)
- LTE Explained: For All Audiences (W-LTE1, half day)
- LTE Technology: For Technical Audiences (W-LTE2, 2 half days)
- WiMAX Explained: For All Audiences (W-WMX1, half day)
- WiMAX Technology: For Technical Audiences (W-WMX2, 2 half days)
- LTE: Technology, Business, and Competitive Landscape (2 day(s), LTE-BIZ)
- LTE: A Comprehensive Tutorial (LTE-CT, 3 days)
- LTE: A Comprehensive Three Day Course (LTE-C3DC, 3 days)
- WIMAX: A Comprehensive Three Day Course (WIMAX-C3DC, 3 days)

Aimed At

This course is designed for those with some familiarity with 5G wireless basics who wish to understand the applications and implications of 5G to the federal and defense missions.

Group Size

5-25

Prerequisites

Those wishing to take this course must have taken either of the following two courses or possess equivalent knowledge:

- 5G Wireless: A Fast-Paced Tutorial (5GTUTE, 1 day)
- 5G Wireless: State-of-the-art of Research, Policy, and Standards (5GCOMP, 4 days)

This course is typically offered as an add-on second or fifth day, respectively, to one of the above two courses.

Course in a Nutshell

While researchers are hard at work developing what will become 5G wireless standards, managers/executives and technologists in the Defense, Homeland Security, Intelligence, and Surveillance/Reconnaissance space are trying to come to grips with what 5G means for their professions.

This course, one of several Eogogics courses on 5G wireless, focuses on the US federal and military applications of 5G communications. The course includes a review of the key applications and implications of 5G for its intended audience including tactical military radio, cognitive radar, cognitive jamming, and ISR

(Intelligence, Surveillance, and Reconnaissance). This course is taught by a 5G researcher actively involved in pushing the state-of-the-art and is continually updated to reflect the evolving technology landscape. You will go away from the course having acquired an understanding of the major government/defense applications and implications of 5G.

Customize It!

We can customize the content, duration, and tech level of this course at no additional cost to meet the varying needs of audiences such as R&D personnel, managers/executives, and policy planners/strategists. For those working in the defense and homeland security sectors, the customization can potentially include the inclusion of restricted content, subject to availability of suitable classroom facilities and approval from the cognizant federal authority.

Learn How To

- Characterize the current trends in military and tactical communications
- Describe how 5G wireless technologies can be leveraged in the federal, military, and public safety space

Course Outline

- Tactical Radio
  - DOD Platforms: XG, WNAN, MAINGATE
  - DOD DSA Spectrum Policy
  - Policy-based DSA Systems
- Cognitive Radar
  - Coexistence Issues
  - Comms coexisting with Radar
  - Radar Coexisting with Comms
- Cognitive Jamming
  - Electronic Warfare
  - Adaptive Jammers
  - DARPA BLADE and CommEx Programs
- Intelligence, Surveillance, and Reconnaissance (ISR)
  - Automated Signal Detection
  - Automated Signal Classification
  - Cognitive Signal Analytics
  - Specific Platforms
- Wrap-up
  - Course Recap and Q/A
  - Evaluations

How You Will Learn

- A researcher who is at the forefront of the development of 5G wireless technologies will present this course in interactive lecture format.
- Along with the lecture, we will use discussion and group activities to enrich the classroom environment and convey the important points.
- We will compare and contrast what's already familiar to you with what's new, making the new ideas easier to learn as well as more relevant.
- If your background is less technical, we will use meaningful and ingenious examples and analogies to simplify the complex subject matter.
- You will receive a printed Participant Handbook which will help you remember and retain what you learned in class and apply it on your job.

Revised *Sept 8, 2011*