

Satellite Communication Systems Planning & Coordination

Brussels

1 - 5 September 2025

UK Training

PARTNER



Satellite Communication Systems Planning & Coordination

Code: GC28 From: 1 - 5 September 2025 City: Brussels Fees: 5100 Pound

Introduction

As satellite communication systems continue to evolve, we are witnessing a revolution that is poised to reshape the industry in the near future. From basic satellite communication systems to the latest advancements in satellite technology, the industry is rapidly transforming. This course is designed to cover the most recent developments in satellite communication systems, providing participants with an in-depth understanding of key concepts such as satellite coordinate systems, network topologies, and VSAT technologies. Whether you're looking to understand what a satellite communication system entails, or you're aiming to enhance your skills in satellite communication systems design, this course is tailored to equip you with the necessary tools for success.

Course Objectives

By the end of this Satellite Communication Systems course, participants will be able to:

- Introduction to Satellite Communication Systems: Gain a fundamental understanding of satellite communication systems, their components, and how they operate within modern communication networks.
- Explore Satellite Band Frequencies: Learn about the different satellite communication bands e.g., L-band, Ku-band, Ka-band, their applications, and importance in satellite communication.
- Examine Security Risks in Satellite Systems: Understand the potential security risks involved in satellite communications, focusing on AAA Authentication, Authorization, Accounting and measures to mitigate them.
- Learn About Wireless LAN & Other Access Technologies: Delve into the relationship between wireless LAN technologies and satellite systems, and explore emerging access methods for satellite communications.
- Understand Link Budgeting for Satellite Communication: Learn how to calculate link budgets for satellite communication systems to optimize signal strength and communication quality.

Course Outlines

Day 1: Introduction to Satellite Communication Systems

- Introduction to Satellite Communication: Understand the foundations of satellite communication systems, and the role they play in global connectivity.
- Advanced Satellite Communication Systems: Explore cutting-edge developments in satellite technology training, and their implications for communication systems.
- Multiple Access Techniques: Study various access methods such as FDMA, TDMA, CDMA, and random access, and how they impact satellite network operations.
- Digital Modulation Techniques: Understand amplitude shift keying ASK, frequency shift keying FSK, binary phase shift keying BPSK, and quadrature phase shift keying QPSK in satellite communication systems.
- Data Rate vs Baud Rate: Learn the differences between data rate and baud rate, and how these affect satellite communication performance.



Day 2: Earth Station Antennas

- Earth Station Antennas: Study the key components of earth station antennas and their function in satellite communication systems design.
- Types of Antennas: Explore different types of satellite antennas, including SNG antennas, flyaway antennas, and maritime antennas.
- Pointing/Tracking: Learn the techniques used for antenna pointing and tracking, which are essential for maintaining a stable satellite connection.

Day 3: Satellite Band Frequencies

- Understanding Satellite Frequencies: Gain insight into satellite frequency bands like L-band, C-band, Ku-band, and Ka-band, and their specific uses in satellite communication systems.
- Small Antennas at Ku Band: Study the application of small antennas operating at the Ku-band and understand their role in modern satellite communications.
- Electromagnetic Spectrum: Learn about the broader electromagnetic spectrum, the radio spectrum, and how they are allocated for satellite systems.
- EIRP Density Limitations: Understand EIRP Effective Isotropic Radiated Power density limitations as defined by organizations such as FCC, Intelsat, and ITU.

Day 4: Satellite Communications System Design

- Satellite System Design: Dive into the process of satellite systems design, focusing on key components like payloads, spacecraft, and earth station engineering.
- Link Budgets: Master the concept of link budgets for satellite systems, ensuring proper signal strength and communication efficiency.
- Propagation Interference and Regulation: Understand how propagation interference impacts satellite communication and the regulatory environment surrounding satellite systems.
- Satellite Network Coordination: Learn how frequency sharing works between GSO FSS satellite networks, and how to manage coordination in both planned and unplanned bands.

Day 5: Orbit Types & Spectrum Allocations for Satellite Systems

- Orbit Types: Understand the different orbit types GEO, LEO, MEO, HEO, and how they influence satellite link budgets and system design.
- Link Budgets for Multiple Links: Learn how to calculate and optimize link budgets for both single and multiple satellite communication links.
- Effects of Propagation Delay: Explore the impact of propagation delay on satellite communication, especially for long-distance satellite links.
- Spectrum Allocations: Understand the principles of spectrum allocation for satellite systems, ensuring the efficient use of radio frequencies.

Why Attend This Course: Wins & Losses!

- Comprehensive Satellite Communication Training: This Satellite Communication Systems course covers everything from basic theory to advanced system design, making it a comprehensive training program for professionals looking to excel in the satellite industry.
- Gain a Deep Understanding of Satellite Technologies: By participating in this course, you'll be well-equipped to tackle complex challenges in satellite communication systems, including link budget

PARTNER



calculations and understanding satellite coordinate systems.

- **Enhance Your Career with Certification:** Upon completing the course, you'll have the opportunity to earn a satellite communication certification, which will enhance your credibility and open up new career opportunities in satellite management systems and satellite communication systems design.
- **Practical, Hands-on Knowledge:** Learn through practical applications and real-world case studies, including topics like Activity-Based Intelligence ABI and payload technology evolution, to ensure you're prepared for the future of satellite communication systems.

Conclusion

This satellite communication training course is your gateway to mastering the intricacies of satellite communication systems. From understanding the basics of satellite communication systems to advanced concepts like link budgeting for satellite communication and satellite network coordination, this course provides the tools you need to succeed. Whether you're an engineer, network planner, or telecommunications professional, you'll leave this course with valuable, actionable knowledge to enhance your expertise in satellite systems.

Take the next step in your career and ensure you're at the forefront of satellite technology and communications innovations. Don't miss this opportunity to expand your skill set and become a certified expert in satellite communication systems.



Blackbird Training Cities

Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Annecy (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)
(Switzerland)



Paris (France)



Athens (Greece)



Barcelona (Spain)



Munich (Germany)



Geneva



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich



Manchester (UK)



Milan (Italy)



Blackbird Training Cities

USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

ASIA



Baku (Azerbaijan)
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Melbourne (Australia)
Korea



Phuket (Thailand)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Seoul (South)



Pulau Ujong (Singapore)



Irbid (Jordan)



Jakarta (Indonesia)



Amman (Jordan)



Beirut



Blackbird Training Cities

AFRICA



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



Blackbird Training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior,
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for

UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Entertainment & Leisure
Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation

Technical Courses

Artificial Intelligence (AI)
Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training



International House 185 Tower Bridge
Road London SE1 2UF United Kingdom



+44 7401 1773 35
+44 7480 775526



Sales@blackbird-training.com



www.blackbird-training.com

UK Training

PARTNER

