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Registration information

Advanced multi-global navigation satellite systems: technical foundations and economic applications

Organized by:

Training details

Modality: Online instructor led
Dates: *19 Oct 2026 - 30 Oct 2026*
Training fees: $150.00
Language: English
Application deadline: 10 Oct 2026
Payment methods: bank_transfer, credit_card, Bank transfer, Credit card
Training code: 26OI500426MUL-E-D
Contact: pougwoke@dbi.edu.ng

Training description

This advanced training course equips participants with in-depth knowledge of how Multi-Global Navigation Satellite Systems (GNSS) Constellation Systems can be leveraged to enhance the robustness, accuracy, and resilience of telecommunication networks in the digital economy era.

Today, most base stations and telecom infrastructures depend primarily on the Global Positioning System (GPS) for synchronization and timing. While GPS has been the backbone of network timing, its limitations are increasingly evident in the 5G era and the transition toward 6G, where ultra-reliability, high precision, and low latency are critical. Sole reliance on GPS exposes networks to vulnerabilities such as outages, interference, jamming, and spoofing, with potential disruptions to critical services including finance, IoT, emergency response, and broadband connectivity.

Multi-GNSS, incorporating systems such as Galileo, GLONASS, BeiDou, and regional constellations like QZSS and NavIC (IRNSS)- augmented by technologies such as SBAS, GBAS, PPP, and RTK - offers enhanced accuracy, integrity, and resilience. These capabilities create opportunities to develop secure, future-ready telecom infrastructure.

Through this training, participants will:

- Explore the technical foundations and applications of multi-GNSS for telecom synchronization.
- Analyze resilience strategies for protecting networks against GNSS-related threats and vulnerabilities.
- Learn about solutions such as augmentation, redundancy, and integrity monitoring for GNSS-dependent telecom systems.
- Understand the role of multi-GNSS in strengthening critical sectors such as IoT, smart cities, financial services, network resilience, disaster response, and rural broadband access.

The course also examines regulatory and policy frameworks, including international coordination, spectrum management, and space sustainability. In addition, participants will gain exposure to emerging innovations such as AI/ML-driven GNSS data correction, quantum timing, and next-generation resilient Positioning, Navigation, and Timing (PNT) solutions.

By the end of the program, participants will have both the technical expertise and strategic perspective required to design, implement, and manage resilient GNSS-based synchronization frameworks for 5G, 6G, and beyond, ensuring telecommunication systems remain secure, reliable, and capable of supporting the demands of the digital economy.

For more information about the training objectives, target population, entry requirements, methodology, evaluation and content, consult the page here.

How to apply

In order to register for the training, applicants should:

1. Create an ITU Academy account here
2. Apply for the course here
3. The selection of participants for the course will be made by the course coordinators, based on

the course's entry requirements, selection criteria and available number of seats. If selected, you will receive a notification by email.

How to pay for the training

This course is organized by Digital Bridge Institute (DBI), an ITU Academy Training Centre, which will collect the training fees directly.

You will find details about the payment process of this Centre at the following link or alternatively in your ITU Academy account under My courses.

Kindly note that payment must be made by 12 Oct 2026

Group registration and payment

Registration and payment for multiple people from an organization is possible through institutional contacts.

To become an institutional contact:

1. Go to your profile page by clicking on the “My account” button in the user menu and click on the “Apply to be an Institutional Contact” button
2. Fill in the required information and click “continue”, a request will be created.
3. An ITU Academy manager will manually review this request and accept or deny it accordingly.
4. If accepted, you will find a new menu tab “Institutional Contact” appearing in the top bar. You can now request multiple seats in a course and assign them to people from your group. Kindly note, each individual must create an ITU Academy account.

The ITU Academy is the International Telecommunication Union leading platform for capacity development initiatives.

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