

réf. **GNSS-BASIC**

Code OACI 179

ENAC - SINA/EES/ELE

FORMATION EN ANGLAIS

DURÉE

1 jour

PLACES OFFERTES

40

DATES ET LIEUX

No session in 2016, recast in progress

CONDITIONS DE PARTICIPATION

Frais pédagogiques :
Catégorie B
• 2017 : 1890 €

Informations pratiques :
voir en fin de catalogue

CONTACT ADMINISTRATIF ENAC

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Bulletin d'inscription obligatoire :
voir en fin de catalogue

Objectifs

This course provides a basic presentation of GNSS receiver design. The course starts with requirements on signal structure and propagation channel effects, then addresses the receiver signal processing techniques required for acquisition and tracking.

Participants concernés

Engineers and executives.

Contenu

1. Receiver Requirements for Design

Transmitted GPS L1 signal model

Propagation channel model

- Main receiver signal processing blocks : antenna, RF front-end, local oscillator, signal processing
- Budget link for GPS L1
- General multipath and interference model
- General model for signal output by ADC

Application constraints : market, cost, environment, standards Basic GPS L1

2. C/A Signal Processing Architecture

Correlator :

- Definition and general structure
- Signal characteristics at correlator output: signal, noise, multipath, interference

Basic signal Acquisition for GPS L1 C/A in presence of noise

- Acquisition detectors
- Acquisition strategy
- Acquisition performance

Basic Signal Tracking for GPS L1 C/A in presence of noise

- Carrier tracking loops for GPS L1 C/A : PLL, FLL
- Code tracking loop for GPS L1 C/A

For information only : 6 hours

RESPONSABLE(S) DU STAGE

Anaïs MARTINEAU [Systèmes Informatiques]