

Global Navigation per Satellite Systems professional training course

Basics on GNSS systems and receiver technology



Synoptic table

Ref.:	GNSS/TC001
Title:	Basics on GNSS systems and GNSS receiver technology
Duration:	1 day (7 hours)
Prerequisites:	None
Targeted audience:	This course is suitable for professionals making use of GNSS receivers or GNSS measurements in the field of their activities, and who wish to have a better idea of the concepts that operate in order to be fully aware of contributions and limits of the GNSS technologies in their own operation context.
Training goals:	<ul style="list-style-type: none"> - To understand and acquire the basics on GNSS systems and technologies; - To enforce the control of the trainee on its usage of the GNSS technologies by a better understanding of the key parameters, the observables, the vulnerabilities and limits of the system.
Content overview:	<ul style="list-style-type: none"> - History and introduction on the major GNSS and augmentation systems (GPS, GLONASS, GALILEO, BEIDOU, SBAS); - Physical principles that operate in GNSS; - GNSS signal structures and properties; - GNSS signal processing techniques; - GNSS receiver architectures; - Key measurements performed by a GNSS receiver; - Key performance parameters of a GNSS receiver; - Main vulnerabilities of a GNSS receiver; - Use cases and associated level of performance and confidence. <p>The course ends with a free question-and-answer session where the trainees can submit to the instructor their questions concerning their own use cases.</p>

Please turn the page for details...

Detailed agenda

	9h00 - 12h30		Lunch break	14h00 - 17h30	
Day 1	Welcome and course introduction	<ul style="list-style-type: none"> – GNSS signal structures and properties 		<ul style="list-style-type: none"> – GNSS receiver architectures 	<ul style="list-style-type: none"> – Main vulnerabilities of a GNSS receiver
	<ul style="list-style-type: none"> – History and introduction on the major GNSS and augmentation systems (GPS, GLONASS, GALILEO, BEIDOU, SBAS) 	<ul style="list-style-type: none"> – GNSS signal processing techniques 		<ul style="list-style-type: none"> – Key measurements performed by a GNSS receiver – Key performance parameters of a GNSS receiver 	<ul style="list-style-type: none"> – Use cases and associated level of performance and confidence
	<ul style="list-style-type: none"> – Physical principles that operate in GNSS 				Conclusion and open discussions

About the instructor

This training has been designed and is delivered by Fabrice Legrand, who is working on GNSS signal processing issues since 1998. He obtained his PhD in 2002 for his works dealing with models and properties of GPS signal digital tracking loops. During the last 20 years, his main fields of interest were the research, development and characterization of GNSS signal processing techniques, and the development of receiver prototypes on versatile technologies.

Watch his detailed references at https://gnssip.tech/en/team_faleg.php



Contact and information

Should you need additional information, please contact us at contact.info@gnssip.tech

Please visit our web page to get informed about our latest available training courses at <https://gnssip.tech/trainings>