UE High frequency electronics

ECTS
3 credits

Component
UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)

Semester
Automne

- **Teaching language(s):** English
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX7ECAB

Presentation

Description

The principles of the wave propagation on transmission lines and the main characteristics are introduced in the framework of this course. Different transmission lines such as coaxial cables, or low-profile transmission lines (microstrip lines, coplanar waveguide) will be studied and circuits such as matching networks and filters will be discussed. The design and characterization of two-ports passive RF circuits will be explored in theory and in practical labs.

Content:

S parameters, ABCD, Y & Z matrices. Smith chart, matching networks. Signal-flow diagram. Classical low-profile transmission lines. Filters.

Course parts

UE High frequency electronics - TD	Tutorials (TD)	7,5h
UE High frequency electronics - CM/TD	Lectures (CM) & Teaching Unit (UE)	7,5h
TP	Practical work (TP)	9h

Recommended prerequisites

Basics of electronics and electromagnetism

Useful info

Campus

- Grenoble - Scientific Polygon