

# UE High frequency electronics



Niveau d'étude  
Bac +4



ECTS  
3 crédits



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



Période de  
l'année  
Automne (sept.  
à dec./janv.)

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX7ECAB

## Présentation

### 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.

### Heures d'enseignement

UE High frequency electronics - TD	TD	7,5h
UE High frequency electronics - CM/TD	Cours magistral - Travaux dirigés	7,5h
TP	TP	9h

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## Pré-requis recommandés

Basics of electronics and electromagnetism

**Période** : Semestre 7

## Infos pratiques

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### Campus

› Grenoble - Polygone scientifique