

UE Radiofrequency Integrated Circuits



Niveau d'étude
Bac +5



ECTS
6 crédits



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



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

- > **Langue(s) d'enseignement:** Anglais
- > **Forme d'enseignement :** Cours magistral
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX9ICAB

Présentation

Description

The goal of this teaching is to acquire a good understanding of:

- Analog RF integrated circuit design,
- Analog Signal Processing in RF,
- Basic concepts in RF design.
- RF Front End Architectures for integration.
- Technology and modeling of integrated devices for RF.
- Design principles of basic RF blocks (LNA, Mixers, VCO, Power Amplifiers).

This teaching module will be divided into 2 parts

- **Radiofrequency Integrated Circuits (course) – 14 hours – 3 ECTS**

- **Lab work: Design of integrated RF circuits – 24 hours – 3 ECTS**

Heures d'enseignement

UE Radiofrequency Integrated Circuits - CM	CM	14h
UE Radiofrequency Integrated Circuits - TD	TD	14h
UE Radiofrequency Integrated Circuits - TP	TP	24h

Pré-requis recommandés

Basic knowledge on analog integrated circuits design

Période : Semestre 9

Bibliographie

- T. H. Lee, "The design of CMOS Radio-frequency Integrated Circuits", Cambridge University Press, 1998.
- B. Razavi, "RF Microelectronics", Prentice Hall, 1998.

Infos pratiques

Lieu(x) ville

> Grenoble

Campus

> Grenoble - Polygone scientifique