

UE Radiofrequency Integrated Circuits



Level
Baccalaureate
+5



ECTS
6 credits



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



Semester
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX9ICAB

Presentation

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**

Course parts

UE Radiofrequency Integrated Circuits - TP	Practical work (TP)	24h
UE Radiofrequency Integrated Circuits - CM	Lectures (CM)	14h
UE Radiofrequency Integrated Circuits - TD	Tutorials (TD)	14h

Recommended prerequisites

Basic knowledge on analog integrated circuits design

Period : Semester 9

Bibliography

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

Useful info

Place

› Grenoble

Campus

› Grenoble - Scientific Polygon