ENSEIRB-MATMECA

SCIENCES, TECHNOLOGIES, SANTÉ

Radio and Telecommunication Systems Certfied Diploma

École / Prépa
ENSEIRB-MATMECA

Niveau d'étude visé
Bac + 5

Langue(s) d'enseignement
Anglais

Présentation

Objectifs

It provides advanced training in Technologies, Circuits and Systems for Radio and Telecommunications:

- From antenna to base-band: Analog circuits - RF - Digital
- From Circuit to System: interaction between Circuits and Systems
- Signal processing for electronics: Signal transmission, Spectrum management
- Analog and digital design at circuit and system level
- Circuits and systems characterization
- Quality and security analysis methods for transmission links

Les + de la formation

Speakers

Professors and associate professors from ENSEIRB-MATMECA and IMS laboratory.

Invited speakers are international experts coming from :

- Academics: EPFL, Ecole Polytechnique Montréal, UQAM, ETS Montréal, University of Limoges, ISEP, SupCom Tunis, University of Saint-Etienne, LAAS-CNRS, Monash University, University of Calgary
- Industrials: STMicroelectronics, THALES ALENIA SPACE, THALES SYSTEMES AEROPORTES, CEA-Leti, Orange, Keysight

Research professors

- Y. Deval
- N. Deltimple
- A. Ghiotto
- G. Ferré
- E. Kerhervé
- G. Morizet
- C. Leroux
- F. Rivet
- T. Taris
- D. Dallet

Admission

Conditions d'admission

The Certified Diploma « Radio and Telecommunication Systems » can welcome up to 24 students.

Application process is monitored by the responsible of electronics departement.

Deadline : 15th of september

Modalités d'inscription

Enroll on line : https://inpb.moveonfr.com/locallogin/5704efbfef189dc519000000/eng

Droits de scolarité

Cost : 7300 € - fees are waived for partners

Pré-requis obligatoires

Good knowledge and skills in digital and analog electronics.

Programme

Organisation

Les enseignements ont lieu d'octobre à janvier dans les locaux de l'ENSEIRB-MATMECA et seront suivis d'un stage en laboratoire ou en entreprise pendant 5 mois, en France ou à l'international.

Prerequisites:

- Analog and digital electronics basis
- English (at least B2 level)

Description:

- UE A - RF and mmW circuits (74h - 6cr) : Antenna, Power amplifier, RF measurement, RF circuits design
- UE B - Communication systems (50h - 5cr) : Advanced Design System CAD project, Optoelectronics, RF Systems
- UE C - Signal processing and power management (52h - 5cr) : DAC/ADC, base-band signal processing, Power management, System on chip/co-design
- UE D - Radio-communications (54h - 5cr) : Advanced digital communications, Hardware security, Software-defined radio, Cognitive radio
- UE E - Microelectronics (56h - 4cr) : Integrated technologies, ICBM conference, RADAR project
- UE F - Language and Management for Engineers (5cr) : English or French based on student choice

RADAR project:

- Helicopter RADAR: Groups of 4-5 students
- Workpackages:
  - WP0 : Management (system level)
  - WP1 : Tx/Rx simulation
  - WP2 : Digital circuit implementation
  - WP3 : RF front-end
  - WP4 : Graphic interface

Technical report + oral defense