Parcours Wireless Integrated Circuits and Systems (WICS)

Présentation

The WICS (Wireless Integrated Circuits and Systems) Master is a Master degree focusing in integrated circuit and system design for Analog/Mixed/RF & millimeterwave applications. It gives students the opportunity to learn advanced skill sets with projects led by high-level research units; the techniques and methodologies they will need to promote their research on an international level will be studied.

With a curriculum focusing on theoretical knowledge supported by practical applications, the WICS Master prepares students for a career in both the international research community and the professional applications. As they finish their training, graduate students are fully ready to pursue a career in thriving fields such as the Internet of Things, future wireless communication systems, sensor networks, or medical applications.

Grenoble (and more generally the French Alps area) is an exceptional research environment for nano & microelectronics (with the Minatec innovation campus). Thus the WICS master is supported by leading research laboratories and companies specialized in radiofrequency and microelectronics. Most students consequently choose to stay in the research field with a thesis, and our partners laboratories (TIMA, RFIC-Lab, CEA-Leti, LCIS, IMEP-LAHC) hire about 10 doctoral students each year in the field of radiofrequencies.

A double degree with Politecnico di Torino has been created. It concerns the WICS Master in France (at the UGA and Grenoble INP) and the Laurea magistrale in Ingegneria elettronica in Italy (at Politecnico di Torino). Courses are taught in English. The first year of this program is taught at PoliTo, the second year at UGA/Grenoble INP.

Admission

- 1st year of Master WICS degree:
The prospective student should have completed at least three full years of University studies (180 ECTS)

- 2nd year of Master WICS degree:
The prospective student should have completed at least four full years of University studies (a first year of Master's degree, bachelor or equivalent degree with 240 ECTS), have followed basic classes in Electronics and Radio Frequency and prove an English proficiency with CEFR (B2), TOEFL (IBT 87-109), IELTS (5.5-6.5), TOEIC (785-945) or equivalent. Students coming from English-speaking countries or/and who had a University curriculum in English are considered proficient enough. If you don't have the opportunity to take the test in your home University, an English test is organized during the first week of the classes, to check the level of everyone.

- Double degree program:
The prospective student should have completed at least three full years of University studies (180 ECTS) in the fields of Electronics or Applied physics and prove an English proficiency with CEFR (B1), IELTS (5.0), or equivalent as a minimum. Both certificates from an accredited institution and/or statements from the home institution are accepted

For applicants whose country of residence does not fall under the "Study Portal in France" (PEF), the schedule of the application campaigns for the eCandidat application is available [here](#).

Public continuing education: You are in charge of continuing education:
- if you resume your studies after 2 years of interruption of studies,
Poursuite d'études

PhD

Infos pratiques :

> **Composante** : UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)
> **Durée** : 2 ans
> **Type de formation** : Formation initiale / continue
> **Lieu** : Grenoble - Polygone scientifique
> **Contacts** :

**Responsable(s) pédagogique(s)**

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**Secrétariat de scolarité**

Gestionnaire
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Demande de candidature
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Programme

**Master Systèmes électroniques (SE) 1re année**

**Semestre 7**

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<td>24h</td>
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**UE Systèmes d'exploitation (C,C++)**

3 ECTS 25,5h

**Semestre 8**

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1 élément(s) au choix parmi 2
UE Anglais 3 ECTS

UET

Master 2e année

Semestre 9

UE Radiofrequency Communication Systems 6 ECTS 62h
UE Radiofrequency Integrated Circuits 6 ECTS 52h
UE Microwave Circuits 6 ECTS 48h
UE Antennas and Electromagnetic Compatibility 3 ECTS 26h
UE Integrated technologies & process of fabrication 3 ECTS 28h
UE Specialty courses 3 ECTS 32h
UE Research lab work 3 ECTS 48h

Semestre 10

UE Research internship 24 ECTS
UE Research lab work 3 ECTS 48h

1 élément(s) au choix parmi 2
UE FLE 3 ECTS
UE Anglais 3 ECTS 22h