

🕒 Notre offre de formation évolue ! Les programmes pour l'année 2027-2028 sont en cours de mise à jour et peuvent évoluer jusqu'au 28 novembre 2026. Les programmes de l'année universitaire 2026-2027 restent consultables en cas de besoin.

SCIENCES, TECHNOLOGIES, SANTÉ, INGÉNIERIE

Parcours Electrical Engineering and Control Systems / WICS 2e année

Master Electronique, énergie électrique, automatique

Université
Grenoble Alpes



Composante
UFR Physique,
Ingénierie,
Terre,
Environnement,
Mécanique
(PhITEM),
Grenoble
INP - Phelma
(Physique,
électronique
et matériaux),
UGA



**Langue(s)
d'enseignement**
Anglais

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.

Formation internationale : Doubles diplômes, diplômes conjoints, Erasmus Mundus, Formation tournée vers l'international

Dimension internationale

The WICS master is taught in English by French and foreign teachers and/or researchers from universities and companies. It will allow preparing students for a career in both the international research community and the professional applications.

A double degree with Politecnico di Torino has been created. It concerns:

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- Master WICS in France (at the UGA and Grenoble INP)
- Laurea magistrale in Ingegneria elettronica in Italy (at Politecnico di Torino)

The first year of this program is taught at PoliTo, the second year at UGA/Grenoble INP



Conditions d'admission

- **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.

Public continuing education : You are in charge of continuing education :

- if you resume your studies after 2 years of interruption of studies
- or if you followed training under the continuous training regime one of the previous 2 years
- or if you are an employee, job seeker, self-employed

If you do not have the diploma required to integrate the training, you can undertake a [🔗](#) validation of personal and professional achievements (VAPP)

Candidature

You want to apply and register?

Simply follow this [🔗](#) link to get started

Droits de scolarité

[🔗](#) Consulter le montant des frais d'inscription

Les + de la formation

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.

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Et après

Métiers visés

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Assistant Professor, researcher, doctor-engineer, R & D

Infos pratiques



Responsable pédagogique

Lauga-Larroze Estelle

✉ estelle.lauga-larroze@univ-grenoble-alpes.fr

Secrétariat de scolarité

Gestionnaire

✉ phitem-master-eea@univ-grenoble-alpes.fr

Responsable formation continue

Laura DI RUZZA

✉ fc-phitem@univ-grenoble-alpes.fr

Établissement(s) partenaire(s)

This program can be followed as part of a double degree in partnership with Politecnico di Torino (Italy). Professor in charge of the Double Degree: Mr. Jean-Marc DUCHAMP

Laboratoire(s) partenaire(s)

IMEP-LAHC

🔗 <http://www.imep-lahc.grenoble-inp.fr>

TIMA

🔗 <http://tima.univ-grenoble-alpes.fr/tima/fr/index.html>

LCIS

🔗 <http://www.lcis.grenoble-inp.fr/>

Autre(s) structure(s) partenaire(s)

CEA-Leti

🔗 <http://www-leti.cea.fr/>

Lieu(x) ville

📍 Grenoble

Campus

🏠 Grenoble - Polygone scientifique

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Programme

Master 2e année



	Nature	CM	TD	TP	Crédits
UE Radiofrequency Communication Systems	UE	14h	4h		6 crédits
UE Radiofrequency Integrated Circuits	UE	14h	14h	24h	6 crédits
UE Microwave Circuits	UE			38h	6 crédits
UE Antennas and Electromagnetic Compatibility	UE	16h	10h		3 crédits
UE Integrated technologies & process of fabrication	UE			8h	3 crédits
UE Specialty courses	UE				3 crédits
UE Research lab work	UE			48h	3 crédits

Semestre 10

	Nature	CM	TD	TP	Crédits
UE Research internship	UE				24 crédits
UE Research lab work	UE				3 crédits
UE FLE	UE				3 crédits
UE Anglais - Master 2 - Semestre 10	UE				3 crédits