SCIENCES, TECHNOLOGIES AND HEALTH

Electrical Engineering and Control Systems 1st year

Master in Electronics, electrical energy, automation

Target level
Baccalaureate +5

ECTS
120 credits

Duration
2 years

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

Language(s) of instruction
English

Presentation

The Electrical Engineering and Control Systems (EECS) program is intended for English-speaking students who want to obtain a solid training in the fields of Electronics, Electrical Energy and Automation and who wish to pursue a PhD thesis in one of the laboratories in Grenoble or elsewhere in the world.

The program consists of a common core in semesters 7 and 8 which correspond to the first year of the Masters degree. In semesters 9 and 10, students will choose to pursue their studies in one of the following areas:

- Computational Sciences for Electrical Engineering (CompSEE)
- Master in Systems, Control and Information Technologies (MISCIT)
- Wireless Integrated Circuits and Systems (WICS)

International education : Internationally-oriented programmes

International dimension

Study abroad as an exchange student

As part of this track, you have the opportunity to study for a semester or a year at a UGA partner University abroad.

The International Relations Officers of your faculty will be able to provide you with more information.

More information on : https://international.univ-grenoble-alpes.fr/partir-a-l-international/partir-etudier-a-l-etranger-dans-le-cadre-d-un-programme-d-echanges/

Admission

Access conditions

See the section "Candidater et s'inscrire" (opposite)

Admission to the first year of Masters: prospective students should:

- have completed at least three full years of University studies (an L3, bachelor or equivalent degree with 180 ECTS),
- have followed a basic class in Automatic Control, or Electrical Engineering, or Applied Physics and succeeded with top grades,
- have fluency in English.

Continuing education: You are eligible for continuing education:

- if you are resuming your studies after a two-year interruption,
- or if you were following a training under the continuing education system during one of the 2 previous years
- or if you are an employee, a job seeker or a self-employed person.

If you do not have the required diploma to enter the program, you can undertake a validation of your personal and professional experience (VAPP in French).

For more information, you can look up the web page of Direction de la formation continue et de l'appréntissage.

For applicants whose country of residence is not part of the "Portail Etudes en France" (PEF) system, the application campaign schedule for the eCandidat application is available here.

Candidature / Application

Do you want to apply?
Please note that the procedure differs according to the degree you are considering, the degree you have obtained, or your place of residence for foreign students. Simply follow this link to get started

Fees

Tuition fees 2023-2024: 243 € + 100€ CVEC

Useful info

Contacts

Program director

Innocent Niyonzima

innocent.niyonzima@univ-grenoble-alpes.fr

Program administration

Application

phitem.candidature.etudiant@univ-grenoble-alpes.fr

Program administration

Registrar's Office for the Master in Electronics, electrical energy, automation

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

Continuing education manager

Laura DI RUZZA

fc-phitem@univ-grenoble-alpes.fr

Course location(s) - City

Grenoble

Campus

Grenoble - Scientific Polygon

Program

Master 1st year

Semester 7

	Nature	CM	TD	TP	Crédits
UE Signals and systems	Teaching Unit (UE)	7,5h	7,5h	12h	3 credits
UE High frequency electronics	Teaching Unit (UE)		7,5h	9h	3 credits
UE Linear dynamical system	Teaching Unit (UE)				3 credits
UE State space representation	Teaching Unit (UE)		9h	4h	3 credits
UE Scientific programming in Python	Teaching Unit (UE)			16h	3 credits
UE Numerical methods	Teaching Unit (UE)			12h	3 credits
UE Analog and digital transmission	Teaching Unit (UE)		7h	12h	3 credits
English	Teaching Unit (UE)			24h	3 credits
French as a foreign language	Teaching Unit (UE)				3 credits
UE Linear optimal control	Teaching Unit (UE)			12h	3 credits
UE Numerical analysis of circuits equations	Teaching Unit (UE)				3 credits
UE Analog electronics	Teaching Unit (UE)	8h		8h	3 credits

Semester 8

	Nature	CM	TD	TP	Crédits
UE SISO Feedback control	Teaching Unit (UE)	15h	9h	15h	3 credits

UE Initiation to research methodologies	Teaching Unit (UE)		35h	6 credits
UE Embedded systems and internet of things (IOT)	Teaching Unit (UE)		18h	3 credits
UE Electromagnetism	Teaching Unit (UE)	10h		3 credits
UE Introduction to numerical field computation	Teaching Unit (UE)		12h	3 credits
UE Communication systems	Teaching Unit (UE)		8h	3 credits
UE Introduction to RF electronic design	Teaching Unit (UE)	2h	20h	3 credits
UE Internship	Teaching Unit (UE)			6 credits