SCIENCES, TECHNOLOGIES, SANTÉ, INGÉNIERIE

Parcours Electrical Engineering and Control Systems / CompSEE 2e année

Master Electronique, énergie électrique, automatique

Composante
UFR Physique, Ingénierie, Terre, Environnement, Mécanique (PhITEM)

Langue(s) d'enseignement
Anglais

Présentation

The R&D sector into electrical energy is booming worldwide, both because sustained energy requirements and environmental constraints increasingly strong. Technological developments are many and generate an important call for engineers and researchers high-level able to support their development. To meet these needs, the EECS/CompSEE Master program will give you the opportunity to learn advanced skill sets with projects led by high-level research units.

The EECS/CompSEE courses is designed as the convergence of three training areas: Electrical Engineering, Applied Mathematics and Computer Science and emphasize the use of multiscale and multiphysics techniques to aid in the understanding and development of complex physical behaviors and electrical systems. With advanced theoretical knowledge and challenging practical applications, it will teach you the techniques and methodologies you will need to enhance your research and innovation capabilities at the international level.

The EECS/CompSEE program is supported by leading laboratories and companies in electrical engineering. Whether you look for a career in the international research community or high-level research and development industrial departments, when you graduate you are competent to work in many engineering and industrial fields: distribution networks, electric power systems, electromagnetic modeling and computation, etc. You can also choose to pursue a career in research field with a Ph.D thesis in the exceptional scientific environment that is Grenoble and the French Alps, in one of our partner laboratories (G2Elab, GIPSA-Lab, G-Scop, CEA), which hire a large number of doctoral students every year.

Formation internationale : Formation tournée vers l'international

Dimension internationale

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.

Informations non contractuelles.
Dernière mise à jour le 28 mai 2026

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

Conditions d'admission

This two-semester program is a specialty (second and last year, master 2nd year in the French system) of the master Electrical Engineering and Control Systems (EECS). The French master is 2 year, but if you have the appropriate background, the first year may be validated as equivalent and at the end of the one-year CompSEE program you obtain a diploma corresponding to 2 years of studies (master EECS, CompSEE specialty diploma). We welcome students who obtained (by the end of spring at the latest) :

- at least 180 ECTS for the students in an exchange program who wish to join CompSEE for one semester in order to validate specific classes in their home institution
- at least 240 ECTS (typically 4 years of University studies) for students wishing to validate the master 2nd level

For students from foreign countries who completed a full Bachelor program of 4 years or more, your application will be evaluated by a specific jury (called the Commission de Validation des Acquis).

Requirements. In order to apply to this master program, the prospective student should:

- hold a master 1, bachelor or equivalent degree completed after f**our full years of University** studies
- have followed basic classes and obtained top grades in classical electromagnetism, electrical engineering (power grids, operating modes and control of power electronic converters,...), numerical methods (numerical derivation and integration, interpolation, linear and non-linear solver, matrix algebra,...), scientific programming (python, java, C ++, ...).
- 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.

Public continuing education. Your application is handled by the "continuing education" office:

- 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

Candidature

You want to apply and register?

Simply follow this link to get started

Droits de scolarité

Consulter le montant des frais d'inscription

Et après

Métiers visés

Engineer in R&D industrial department, Ph.D Thesis, Doctor-Engineer, Assistant Professor, Researcher in a public institution or private company.

Infos pratiques

Informations non contractuelles.
Dernière mise à jour le 28 mai 2026

Contacts

Responsable pédagogique

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Secrétariat de scolarité

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Responsable formation continue

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Lieu(x) ville

Grenoble

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Programme

Organisation

The classes are given in English and organized in two semesters:

- September to January: theoretical classes and project;
- February to July: 5-6 months of industrial or research internship.

Master 2e année

Semestre 9

	Nature	CM	TD	TP	Crédits
UE Power Systems Modeling and Analysis	UE	10h		40h	6 crédits
UE Optimization of Energy Systems	UE	8h	12h		3 crédits
UE Optimization Methods for Components and Systems	UE			12h	3 crédits
UE Theory and Computation of Electromagnetic Fields	UE			15h	6 crédits
UE Advanced techniques for computational electromagnetics	UE	21h		25h	6 crédits
UE Research Project	UE				3 crédits
UE Modeling and learning dynamics	UE			36h	6 crédits
UE Numercial Analysis of Circuit Equations	UE				3 crédits

Semestre 10

	Nature	CM	TD	TP	Crédits
UE Humanities and engineering	UE			18h	3 crédits
UE Internship - Master Compsee	UE				24 crédits
UE English or French as a foreign language	UE				3 crédits

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