

Scientific Foundation Semester at EPF

(admission with a Bachelor's degree)

EPF integrates students with a bachelor's degree who wish to complete their studies by a graduate program. They can join the EPF curriculum for a Foundation semester and will be able to earn their EPF degree in 2 years and a half. Applicants must have a solid background either in Mechanics, Physics, or in Mathematics and Computer sciences to be enrolled into the program.

The Foundation Semester allows students to smoothly integrate into the regular EPF curriculum. The semester allows them to update or acquire the basic tools and skills required to enter EPF at the Master's level.

Courses are organized in distinct teaching units:

- 'Cross-Cultural Training and Entering the job market', with French and English languages courses and an introduction to the different EPF major's curriculum proposed at Master level. Some cultural visits are also organized. In order to prepare students to the compulsory internship in the following semester, students will be coached on several company-oriented topics and soft skills.
- 'From Data Acquisition to Data Treatment' will introduce students to the different steps needed from measures to data analysis. Several courses from measures (data to acquire), through information transmission (data to transmit) and finally data treatment (data to store, organize and analyze) will be studied. Students will use Python as development language.
- 'Systems Engineering' deals with Project Management, Automatics, Energy conversion and Heat Transfer. This unit is focused on complex systems. How to organize and manage the design of a complex system? How to control a system? How energy can be converted inside a complex system?
- 'Modeling/Validation' will give students an introduction to Applied Mathematics, Computer Aided Design and Structural Analysis and Fluid Mechanics. More precisely, students will be introduced on best practices to design. Starting from theory, and using numerical modeling then finally experimental tests, students will be taught on how a complete design with different steps should be made.

All courses are taught in English and in complement, French language courses are offered.

Students participating in the Spring Foundation Semester will find themselves in small classes and groups. It helps to tailor projects and courses to specific student needs in the preparation to their future specialization.

The Scientific Foundation Semester is taught on the Troyes Campus; once the student has completed this semester, he/she will continue with an internship either in a research laboratory or a company. He/She will have to choose a Major and depending on that choice will stay in Troyes or move to our campus in Montpellier or Paris Cachan.

Curriculum organization

		Scientific Foundation Semester
Master 1 / EPF 4th year	Internship (lab or company)	Major – 1st semester
Master 2 / EPF 5th year	Major – 2nd semester	Internship
September	End of January	February
		End of June

IMPORTANT INFORMATION

Semester starts: February 1st, 2022 / Semester ends: June 30th, 2022

Tuition Fees : 4 260 €

Online applications: <https://epf.moveonfr.com/locallogin/5b8fe9ac8b811b24127db147/eng>

More information: Incoming.Students@epf.fr

Graduation prerequisites: in order to obtain the EPF French engineering degree, it is compulsory to validate the following points:

- 3 academic semesters – Foundation semester + Major (90 ECTS)
- The engineering student internship- beginning of the 4th year (16 weeks – 30 ECTS)
- The final project internship – end of the 5th year (26 weeks – 26 ECTS)
- B2 level in English (815 points TOEIC test)
- B2 level in French (605 points TFI test) or B1 level if most of the curriculum has been taught in English

CONTENT OF THE PROGRAMME

UE1-Cross-Cultural Training & Entering the job market	6
French Language (FLE)	x
Entering the job market	1
English Language	2
Introduction to EPF majors	1
Cultural visits	2

UE2 - From Data Acquisition to Data Treatment	8
From measure to data	2
Information Transmission	2
Python	2
Introduction to Big Data and Machine Learning	x
Databases	2

UE3- Systems Engineering	8
Project Management	2
Automatics	2
Electrical.energy, conversion and management	2
Heat Transfer	2

UE4 - Modeling/Validation	8
Numerical Analysis	2
CATIA	2
Introduction to Structures Modeling	2
Introduction to Fluid Mechanics	2