UNIVERSITÉ PARIS-EST MARNE-LA-VALLÉE becomes université Gustave Eiffel

Institut Francilien de Sciences Appliquées (IFSA)

BACHELOR PHYSICS AND CHEMISTRY

Physique et applications

DIPLÔME NATIONAL DE LICENCE CONTRÔLÉ PAR L'ÉTAT

BACHELOR L3

FIELD Sciences, technologies, santé

Course suitable for

Initial Education

Continuing Education

Recognition of prior learning

- How to apply :

eCandidat et Etudes en France

- Course venue :

Champs-sur-Marne

- Calendar :

Placement in-company or in a research laboratory is proposed as an option.

- Contacts :

- Coordinator of the degree program : ROUYER Florence
- Academic coordinator : MALAVERGNE Valerie
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- Academic coordinator : FAUTRAT Sylvain
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For further details :
Information, Career guidance and Professional integration Department
(SIO-IP) : sio@u-pem.fr / +33 1 60 95 76 76

ENTRY REQUIREMENTS

Third year accessible after 2 years of general training in the field of Physics, E-applicant application.

ACQUIRED SKILLS

Acquiring sound general scientific training on theoretical, experimental and digital levels; ability to solve theoretical problems in the field of Physics and its applications (materials, energy, environment); ability to roll out an experimental approach; ability to collect, manage and present results, ability to explain and present - orally and in writing, a project approach, knowledge brought into play, results obtained.

YOUR FUTURE CAREER

Most students pursue their studies with a Master's or enrol in an engineering school.

This Degree, in particular, offers access to UPEM's Master's in Risks and Environment or Material Sciences and Engineering.

It also leads to Master's in Physics in other universities and to generalist Engineering schools.

BENEFITS OF THE PROGRAM

The Degree addresses the different fields of Physics and offers students the opportunity to choose any specialization after. Students choose a subsidiary in Chemistry, Mechanics or 3EA (6 ECTS per semester), based on their personal professional project and training. The 3rd year of the Degree comprises, during the first semester, an in-laboratory experimental TU and a TU introducing Digital methods on computer and, during the second semester, a Physics project TU where students, working in pairs, carry out a theoretical, digital and/or experimental personal study. In the second semester, depending on the project, students may choose an option focusing on materials, another based on sensors or in-company placement (or in a research laboratory).

STUDY PROGRAM

Semester 5

Mathematics - 5
Introduction to numerical methods
English - 5
Electromagnetism and electromagnetic waves
Physics experiments
Particles, nuclei, atoms
Frames of reference and core fields
Choice of 6 ECTS
Analog signal processing
Analog electronics 2
Quantum mechanics
Chemical analysis methods 1
Introduction to thermal transfer
Introduction to convective and radiative transfer

Semester 6

English 6
Inorganic materials and minerals
Statistical physics
Acoustic waves
Relative physics
Wave optics 2
Physics course project
Choice of 6 ECTS
Introduction to material science
Sensors
Placement
Optional subject
Les éléments ci-dessous sont à choix :

Automation
Fluid dynamics
Introduction to finite elements and differences 1
Atomic and molecular spectroscopy