



Institut Francilien de Sciences Appliquées (IFSA)

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

- Academic coordinator : GRUBER Raymond

- Academic coordinator : DESCELIERS Christophe

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For further details :

Information, Career guidance and Professional integration

Department

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BACHELOR PHYSICS AND CHEMISTRY



Mécanique

BACHELOR L3

ENTRY REQUIREMENTS

Third year accessible after 2 years of general training in the field of mechanics, 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 mechanics and its applications; 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 "Civil Engineering" or "Mechanics", or the "Mechanics" pathway of the École Supérieure d'Ingénieurs Paris Est (ESIPE). It also leads to mechanics-focused Master's in other universities or in engineering schools.

BENEFITS OF THE PROGRAM

The Degree addresses the different fields of mechanics and offers students the opportunity to choose any specialization after. Students choose a subsidiary in Physics, Chemistry 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, a TU introducing digital methods on computer and, during the second semester, a mechanics 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).

• APPRENDRE • INVENTER • COMPRENDRE

STUDY PROGRAM

Semester 5

Mathematics - 5
Introduction to numerical methods
English - 5
Introduction to thermal transfer
Introduction to convective and radiative transfer
Energy approach and Lagrange equations
Rigid solid system mechanics and CAD
Deformable system mechanics
Optional TUs
Analog signal processing
Analog electronics 2
Electromagnetism and electromagnetic waves
Quantum mechanics
Chemical analysis 1

Semester 6

English 6
Digital signal processing
Fluid dynamics
Introduction to finite elements and differences 1
Introduction to finite elements and differences 2
Beam mechanics
Mechanics course project
Les éléments ci-dessous sont à choix :

Introduction to material science
Sensors
Placement
Optional subject
Choice of 6 ECTS
Automation
Statistical physics
Acoustic waves
Atomic and molecular spectroscopy