

Field of study **Sciences and engineering**

Training available in

Initial training

Recognition of prior learning

**How to apply :**

<https://www.univ-gustave-eiffel.fr/en/formation/applications-and-enrolment/applications>

**Course venue :**

Campus Marne la Vallée - Champs sur Marne - Bâtiment  
Clément Ader Boulevard Descartes 77420 Champs-sur-Marne

**Calendar :**

Classes and exams take place from September to July. Optional work placements must take place outside of class periods (during holidays).

**Contacts :**

MALAVERGNE Valérie

GRUBER Raymond  
Academic coordinator (L3)

RICHARD Veronique (L3)  
Academic secretary  
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Building : Clément Ader  
Office : 120

**More information :**

For further details :

<https://www.univ-gustave-eiffel.fr/international/etudiants-internationaux>

Service Information,

Orientation et Insertion Professionnelle (SIO-IP) :

[sio@univ-eiffel.fr](mailto:sio@univ-eiffel.fr) / Tel : +33 1 60 95 76 76



## Bachelor's degree Physics and Chemistry

## Physics and Chemistry for Secondary Education



Institut Francilien des Sciences Appliquées (IFSA)

Bachelor's degree L3

### TO GET THERE

180 higher education credits earned post-high school diploma. Either a Licence degree in music or arts, a degree from a conservatory or art school equivalent to three years of higher education, or a Master's degree in similar fields. Students must already have an existing musical and/or sound art practice.

### ACQUIRED SKILLS

Develop your creativity and personal aesthetic as a sound artist or composer. Pursue and develop a creative approach using technological tools in an optimised and justified way. Acquire, develop and adapt creative techniques and concepts. Consolidate knowledge of history, theory and practice of music technology, musicology, musical composition and digital art, in relation with other forms of art and literature. Promote an analytical and critical perspective of their history and aesthetic evolution. Contextualise your own practice in this history and timeline of musical evolution. Understand the complex interactions between this history and the evolution of science and technology. Prepare future candidates for practice-based research PhDs.

### YOUR FUTURE CAREER

Job opportunities: composer of instrumental, computer or electroacoustic music, composer of music for specific applications (cinema, theatre, dance), sound designer for radio, sound landscapes, video games, sound installations, museums, etc., sound design programmer and developer using music technology, sound engineer, artistic director, team leader in audio engineering or music technology, music advisor or consultant for film and television, sound technician, sound mixer, digital artist and website creator, music teacher, researcher.

### BENEFITS OF THE PROGRAM

Development of students' personal creative practice, through a project-based approach and strong emphasis on research and creation. Many partners are involved in the programme, at the regional, national and international levels, which allows students to take part in the creative sector and contemporary music research. This involvement mainly takes the form of specific classes and masterclasses. Composers and artists are invited to teach in the programme, specifically as part of a partnership with the Musical Research Group at INA (INA GRM). The Master's also results in the creation of a personal creative portfolio, with complementary work placements.

More information



# PROGRAM

## SEMESTER 5

**Mathématiques - 5** (ECTS:4)  
**Initiation aux méthodes numériques** (ECTS:3)  
**Anglais-5** (ECTS:2)  
**Electromagnétisme et ondes électromagnétiques** (ECTS:6)  
**Traitement du signal analogique** (ECTS:3)  
**Electronique analogique 2** (ECTS:3)  
**Mécanique quantique** (ECTS:4)  
**Méthodes d'Analyse chimique 1** (ECTS:2)  
**Introduction aux transferts thermiques** (ECTS:3)  
**Introduction aux transferts convectifs et radiatifs** (ECTS:3)  
**Electronique analogique 3** (ECTS:3)  
**Electronique de puissance** (ECTS:3)  
**Electronique numérique 3** (ECTS:3)  
**Méthodes d'Analyse chimique 2** (ECTS:3)  
**Electrochimie** (ECTS:3)  
**Chimie organique 2** (ECTS:3)  
**Approche énergétique et équations de Lagrange** (ECTS:3)  
**Mécanique des systèmes de solides rigides et CAO** (ECTS:3)  
**Mécanique des systèmes déformables** (ECTS:3)  
**Expériences de physique** (ECTS:3)  
**Particules, noyaux, atomes** (ECTS:3)  
**Référentiels et champs centraux** (ECTS:3)

## SEMESTER 6

**Anglais 6** (ECTS:2)  
**Projet scientifique** (ECTS:3)  
**Matériaux inorganiques et minéraux** (ECTS:4)  
**Traitement du signal numérique** (ECTS:4)  
**Stage** (ECTS:3)  
**Introduction à la science des matériaux** (ECTS:3)  
**Capteurs** (ECTS:3)  
**UE libre** (ECTS:3)  
**Automatique** (ECTS:6)  
**Dynamique des fluides** (ECTS:4)  
**Initiation aux différences et éléments finis 1** (ECTS:2)  
**Spectroscopie atomique et moléculaire** (ECTS:6)  
**Physique statistique** (ECTS:4)  
**Ondes acoustiques** (ECTS:2)  
**CAO en électronique** (ECTS:3)  
**Introduction aux systèmes embarqués** (ECTS:3)  
**Physique relativiste** (ECTS:3)  
**Optique ondulatoire 2** (ECTS:3)  
**Initiation aux éléments et différences finis 2** (ECTS:2)  
**Mécanique des poutres** (ECTS:4)  
**Chimie orbitale** (ECTS:3)  
**Chimie de coordination** (ECTS:3)