

Bachelor's degree in acoustics and vibration **ACOUSTICS AND MUSIC** course

Do you love science? Are you a musician?
The Acoustics and Music Enhanced Pathway (PAM) is for you!

16 PLACES AVAILABLE

PUBLIC

- Terminale students specializing in mathematics with scientific options
- Non-beginner musicians.
- Scientific students in L1 or L2 who are reorienting.

ACCESS CONDITIONS

Admission is via Parcoursup on application and interview.

Selection is based on scientific level and background of the candidate's music.

TRAINING ADDRESS

Le Mans University, on the Le Mans campus of the Institut d'Acoustique Graduate School (IA-GS).

PRESENTATION

The Acoustics and Music pathway enables you to combine scientific studies and musical practice in a training program in acoustics that is unique in France, while evolving in a stimulating musical environment. This program will enable students who are both scientists and musicians to pursue advanced studies in these two fields, and to enlighten their musical practice with the science of sound that is acoustics.

ORGANIZATION & ASSESSMENT

A typical week is around 25h/week, apart from personal scientific and musical work.

Students will be able to take instrumental lessons at the Conservatoire à Rayonnement Départemental in Le Mans and at the University's Cultural Service.

The courses offered in the reinforced acoustics and music course are divided into 5 blocks, each of which must be individually validated.

- **The science base:** math, physics, algorithms.
- **Les spécialités:** acoustics, mechanics, vibrations.
- **Scientific complements:** instrumentation, signal, digital methods, etc.
- **Socio-economic and cultural awareness:** English, communication, etc.
- **Acoustics and music:** courses in acoustics for music and musical practice.

KNOW-HOW AND SKILLS

In addition to the skills acquired in the "acoustics" track of the Acoustics and Vibration degree, students will :

- acquire a scientific grounding in music-related acoustics: music perception, the physics of musical instruments and the playing environment (halls), lutherie, sound recording and sound design,
- develop advanced individual and group musical skills,
- synergize acoustics and musical practice.

TRAINING ADVANTAGES

- A unique license in France.
- Acoustics courses dedicated to music.
- Adaptation of study conditions for musical practice (possibility of validating amateur or professional diplomas).
- A real synergy between acoustics and musical practice.



THE PROGRAM

The acoustics and vibration license

The Acoustics and Vibration bachelor's degree is a scientific and technical course that trains scientists in the many fields of acoustics (transport...), construction, health, industry, environment) and particularly in audio, arts and entertainment. In addition to scientific skills, the Acoustics and Music Pathway (PAM) provides a link between the science of sound and music.

PAM's spécifiques courses

- Acoustics for musicians
- Group music practice
- Instrumental practice*
- Theoretical discipline*: writing, composition, analysis, musical culture
- Thematic Masterclass*

(*) Choice of courses

Acoustics for musicians

- Semester 1: perception
- Semester 2: room acoustics
- Semester 3: Physics of musical instruments
- Semester 4: professional violin making (the Semester 4 project (40h) will be dedicated to wild violin making and the physical characterization of musical instruments).
- Semester 5: musical sound design
- Semester 6: sound recording



Courses are taught by teacher-researchers from Le Mans University's Acoustics Laboratory (UMR CNRS 6613), in partnership with :

- Institut Technologique Européen des Métiers de la Music (ITEMM),
- École Supérieure d'Art et de Design - Tours Angers Le Mans (ESAD-TALM),
- with professional musicians.

Music lessons and practice

You choose to practice music at the conservatory or in the cultural department's workshops in classical, jazz or amplified contemporary music (MAA).

You can enter the Conservatoire du Mans with the aim of obtaining the Certificat d'Etudes Musicales (CEM, a non-professional diploma) or the Diplôme d'Etudes Musicales (DEM, a professional diploma).

If you're not planning to take the DEM or CEM, you can join the Conservatoire in Cycle 2.

Classes are taught by professional musicians (Conservatory teachers and guest artists).

Acoustics and music

Each acoustics course for musicians will benefit from specific time with a professional musician to understand and highlight the link between these two worlds.

OPERATIONS

- Master's degree in acoustics at the University of Le Mans or elsewhere in France and abroad.
- Master's degree in sound design from the École des Beaux Arts in Le Mans, or Master's degree in sound engineering (Image et Son course, Université de Brest, etc).
- Competitive entrance exams for sound engineering schools (Conservatoire National Supérieur de Musique et de Danse de Paris, ENS Louis Lumière, etc.).
- Superior music hubs.

TEACHING TEAMS & CONTACTS

Administrative contact

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