

LICENCE

Acoustics and Vibration

Acoustics course
CMI Acoustics course Acoustics
and Music course

<https://short.univ-lemans.fr/licence-acoustique-lemans>



How do I register?

- 1 - **January:** applications entered on the "Parcoursup" website www.parcoursup.fr
- 2 - **End of May:** amchage of admission proposals and selection of candidates.
- 3 - **July:** register as soon as you have obtained your baccalaureate results, according to the procedures on the "Parcoursup" website and/or on the Le Mans Université website: www.univ-lemans.fr section FORMATION > CANDIDATURES ET INSCRIPTIONS

Registration fee :

For information, the cost of enrolling in a bachelor's degree for the start of the 2023-2024 academic year is €170, payable after payment of the €100 CVEC. Go to cvec.etudiant.gouv.fr

Scholarship holders are exempt from paying the CVEC and registration fees. Students who have received a conditional grant are automatically detected on the site and can download their CVEC payment certificate once they have completed the online procedure.

Please note: to apply for a grant and accommodation (DSE) for the start of the new school year in September, you need to fill in the form from mid-January on the CROUS website: www.crous-nantes.fr/bourses/

The information contained in this document is given for guidance only and may be subject to change. It should not be considered as contractual.



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The acoustician's job

The acoustician's job is to develop solutions to limit the noise of radiating structures and ensure their health, protect users from these disturbances, improve their listening quality, even shape their sound environment, or optimize energy efficiency...

Acoustics experts work as technicians, engineers or researchers in design offices, SMEs, large companies or research centers, in a wide range of fields:

- ✓ transport: land, sea, air and aerospace,
- ✓ building: housing, civil engineering,
- ✓ healthcare: medical acoustics (ultrasound, hearing aids, sound protection, etc.),
- ✓ industry: manufactured products, structural vibration, materials, renewable energies, non-destructive testing, etc.
- ✓ environment: transport noise, industry, wind power, natural environments, etc.
- ✓ audio, arts and entertainment: rooms, instruments, electro-acoustics, 3D sound, sound design.

Training objectives

The Bachelor's degree in Acoustics and Vibration is a unique scientific and technical training program in France. Its aim is to provide the theoretical and practical foundations required for further study in a Master's degree in Acoustics or Physics (level Bac+5), or even a Doctorate (level Bac+8). For students who cannot or do not wish to go beyond the Bachelor's degree, the courses offered enable them to apply for a Professional Bachelor's degree (on application) at the end of the second year.

At the end of L3, graduates have the following skills (among others):

- ✓ theoretical: physical modeling of complex acoustic and vibratory phenomena,
- ✓ digital: mastery of professional software and implementation of digital methods,
- ✓ experimental: setting up measurement chains, data acquisition and post-processing,
- ✓ analytical: interpret results with a critical eye,
- ✓ synthetic: multi-media presentation in French and English.

The Acoustics and Vibration bachelor's degree offers three courses:

- ✓ Acoustics (non-selective),
- ✓ Master of Engineering (CMI) Acoustics (selective),
- ✓ Acoustics and Music PAM (selective).

Study conditions

The Acoustics Department offers study conditions conducive to students' success and personal development:

- ✓ **work in small groups:** 40 in lectures and tutorials, 16 in practical work,
- ✓ **weekly tutoring** for students identified as being in potential difficulty; this tutoring is carried out by 3rd year bachelor or 1st year master students, supervised by teachers; the tutoring is cross-disciplinary (organization and work methods) and subject-specific (subjects),
- ✓ a **close relationship with the teaching and research staff**, facilitated by the proximity of the acoustics laboratory,
- ✓ **experimental facilities unique in France**, with experimental rooms dedicated to acoustics,
- ✓ a **FabLab:** a freely accessible experimentation room for students, equipped with tools for making prototypes, experimental equipment for taking measurements, and computer workstations with software,
- ✓ an **active network of acousticians** (students, teachers, alumni, etc.),
- ✓ a **link with the professional world** right from the first year (presentations on the professions by former students with professional experience, recommended or compulsory internships depending on the course).

Admission, organization, validation

Admission

The first year of the Bachelor's degree is open to students holding a Baccalauréat via Parcoursup, or on the basis of a portfolio, after examination by a validation commission for holders of any other diploma (French or foreign) of equivalent or higher level. For admission to the 2nd or 3rd year, registration details are available on the University website and from the Registrar's Office of the Faculty of Science and Technology.

Validation

Each semester is validated by the award of 30 ECTS credits (European Credit Transfer and Accumulation System), with the bachelor's degree being awarded on the basis of 180 credits. A semester is obtained by capitalizing or offsetting the UEs that make it up (average $\geq 10/20$). Passage to the following year is conditional on obtaining the average for the year.

Acoustics pathway

This course is open to all students with a baccalaureate. However, a baccalaureate with a scientific specialization (maths, physics-chemistry, engineering sciences) is highly recommended.

The Bachelor's degree is made up of 6 semesters organized into teaching units (UE), also known as modules. Each UE comprises lectures, tutorials and practical work. The hourly volume is around 20 hours per week, plus an equivalent amount of personal work.

The aim of the first year of the bachelor's degree is to reinforce the fundamentals of mathematics and physics. However, acoustics is introduced in the first semester. From the second year onwards, the course progressively specializes in acoustics, providing a solid scientific foundation for further study in a Master's degree (Bac+5) or a Licence Professionnelle (Bac+3) in acoustics or other fields of physics.

Acoustics & Music pathway (PAM)

The Acoustics and Music program 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 enables students who are both scientists and musicians to pursue advanced studies in both fields, and to illuminate their musical practice with the science of sound that is acoustics.

This course is aimed at highly motivated students with a good level of academic achievement. Admission is via Parcoursup, followed by an interview.

Course advantages

- acoustics courses dedicated to music,
- improved study conditions for music practice (classical, jazz, modern amplified music), at the conservatory (possibility of validating amateur or professional diplomas) or in music workshops at the University of Le Mans,
- synergy between acoustics and musical practice.

Cursus Master en Ingénierie (CMI) course Acoustics

The Cursus de Master en Ingénierie (CMI) is a top-quality university training program for engineering professions, inspired by the international Master of Engineering model. The aim of the CMI is to train specialists in the engineering professions, in addition to engineers (who are more generalists), based on research. It's a 5-year university program, based on the Bachelor's degree (acoustic pathway) and the Master's degree in the specialization, reinforced by additional teaching units (20% in addition to the standard pathway). It leads to national Bachelor's and Master's degrees, as well as the national CMI-FIGURE label supported by the French Ministry of Education.

This course is aimed at highly motivated students with a good level of academic achievement. Admission is via Parcoursup, followed by an interview.

The Acoustics CMI at the University of Le Mans is the first - and only - acoustics CMI in France. It is based on the Acoustics and Vibration bachelor's degree, the University of Le Mans Master's degree in acoustics and Europe's leading acoustics research laboratory (LAUM).

Course advantages

- opening up to research: CMI café and visit to laboratory experiments (weekly meeting with laboratory staff), 1st year project on a research or scientific mediation theme,
- Introduction to the world of business: courses on the workings of the company, discovery internships in 1st year and technician internships in 3rd year,
- additional scientific, socio-economic and cultural courses.

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