Institut d'Acoustique Graduate School
Le Mans Université

Faculté des Sciences & Techniques
Le Mans Université

MASTER in Acoustics

Specialisation
Research in Applied Acoustics

PRESENTATION

The Applied Acoustics (AA) research specialisation, part of Le Mans Université's Acoustics Master's program (offered by the Institut d'Acoustique - Graduate School (IA-GS) in conjunction with the Faculty of Science & Technology), provides in-depth training in acoustics in fluids and solids, with particular emphasis on aeroacoustics, nonlinear acoustics, vibroacoustics, acoustics in periodic and porous media, and signal processing for acoustics.

The acoustics professions have undergone radical transformations over the last few decades, and are set to undergo just as many in the decades to come. The main aim of the program is to prepare future researchers, research and design engineers (and all high-level professionals in the acoustics field) to adapt to these changes, by providing them with the right basic training.

FURTHER STUDIES

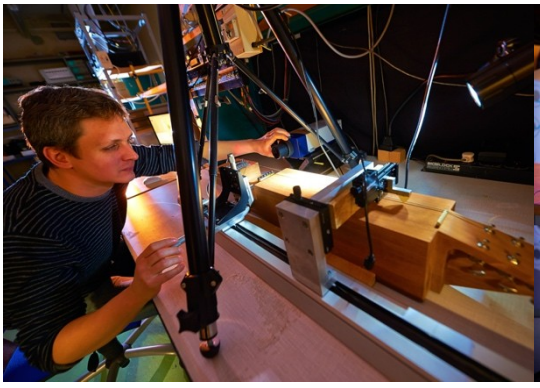
Many students go on to study for a doctorate after completing the Master's program (around 15 per year) in Le Mans, but also throughout France in other major acoustics centers (Lyon, Paris, Marseille, Bordeaux, etc.), or in Europe.

CAREER OPPORTUNITIES AND PROSPECTS

The applications of acoustics cover a wide range of domains, including:

- audible problems (with all their attendant areas of expertise in terms of annoyance and sound quality),
- infrasounds (and its applications on a planetary scale, for example),
- ultrasounds and hypersounds (and their industrial and medical applications for assessment and control).

The professional aim of the AA specialisation is to enable students to enter the design, research and development departments of companies in the transport, energy production, building and public works, aerospace domains, etc., as well as those of public engineering research establishments (University, CNRS, etc.).



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SPECIFIC COURSES IN 2ND YEAR

The AA specialisation consists of a set of fundamental courses in acoustics. It also offers a choice of 2 options, enabling students to add a specialisation in fluid acoustics (FLUID option) and/or solid acoustics (SOLID option). The AA program ends with a 5-6 month internship in a research laboratory.

Common courses

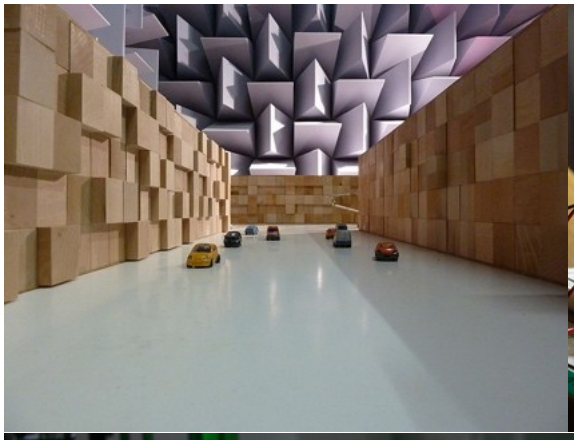
- Waveguide and modal approach (2.5 ECTS)
- Psychoacoustics (2.5 ECTS)
- Nonlinear Acoustics (2.5 ECTS)
- Acoustics in Solids (2.5 ECTS)
- Acoustics in Viscous Fluids (2.5 ECTS)
- Vibroacoustics (2.5 ECTS)
- Signal analysis (2.5 ECTS)
- Numerical methods (2.5 ECTS)
- Experimental methods (2.5 ECTS)
- Professional internship (30 ECTS)

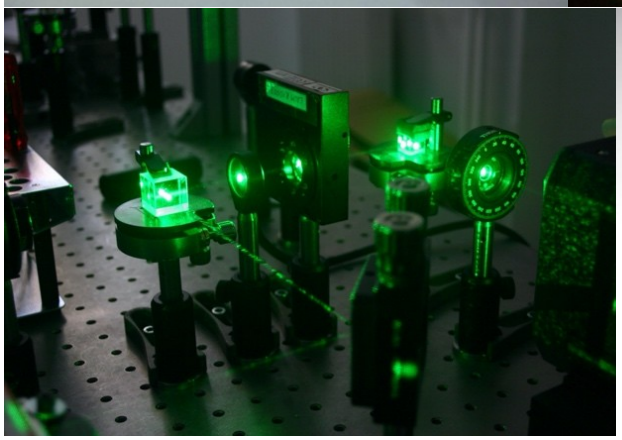
Fluid Option (7.5 ECTS)

- Porous materials
- Periodic media
- Aeroacoustics

Solid Option (7.5 ECTS)

- Optoacoustics
- Ultrasonic NDT
- Digital NDT






CONTACTS

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For further informations: https://iags.univ-lemans.fr/fr/nos-formations/bac-1-a-bac-8-en-acoustique.html