

## Sound and vibration

*As we have a very high reputation for research and development, our MSc program in Engineering Acoustics attracts students from all over the world resulting in a truly international study and research environment.*

## Career opportunities

Engineering Acoustics is an exciting area with multi-disciplinary studies of sound and vibration phenomena. The rapidly developing research includes theoretical, numerical and experimental aspects of sound and vibration and acoustic technology.

Our graduates are employed world-wide by companies, research centres and authorities involved in: Hearing science, hearing aid systems, telephones, transducer manufacturing, audio-system engineering, sound and vibration measurement equipment, architectural design, and engineering consulting in noise and vibration control.

Technical University of Denmark



# Engineering Acoustics MSc program

### Program coordinator

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www.dtu.dk/acoustics

### DTU Career Center

The DTU Career Center provides counsellor service to help you choose between job possibilities in Denmark. The companies are very eager to welcome you.  
Contact: Karriere@dtu.dk

[www.dtu.dk/acoustics](http://www.dtu.dk/acoustics)

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DTU is a world class  
university in acoustics

# MSc in Engineering Acoustics

The MSc program in Engineering Acoustics is offered to students specializing in sound and vibration. The program covers topics within human hearing and human response to sound, acoustic measurement techniques and electroacoustic systems, sound fields, architectural acoustics as well as environmental acoustics. The latter includes the many aspects of engineering noise and vibration control.

The Engineering Acoustics program aims at providing the conceptual framework and training in research required for advanced professional work in:

- Human hearing science and audiology
- Transducer technology and systems
- Sound recording and reproduction systems
- Acoustic design of rooms and auditoria
- Outdoor sound and noise abatement
- Noise control & sound quality in buildings
- Vibration and noise control in transportation vehicles, machinery and industrial plants.

## Scholarships and sponsorships

DTU and the Danish sound technology industry offer full scholarships to non-EU students and student sponsorships to EU students.

Contact: Vice-Dean Hans Henrik Saxild, International Affairs, e-mail: [hhs@adm.dtu.dk](mailto:hhs@adm.dtu.dk)

# Study program

## Program characteristics

- The program covers a wide range of acoustic subjects.
- All courses are given in English on an advanced scientific and technical level.
- The teaching is founded on world-leading research in acoustics and sound technology.
- The student has a high degree of freedom to design his/her own individual academic profile.

## Prerequisites

The prerequisite for admission to the Engineering Acoustics program is a BSc degree in engineering, physics or mathematics or equivalent.

## Program requirements

To obtain an MSc degree in Engineering Acoustics, you must obtain at least 120 ECTS points:

- **General competence courses** adding up to 25 ECTS points
- **Technology specialization courses** adding up to at least 30 ECTS points by passing at least three advanced 10 ECTS point courses
- **Master's thesis** of 30 to 35 ECTS points on a subject in Engineering Acoustics
- The remaining minimum of 30 to 35 ECTS points may be chosen freely from the list of **Technology specialization courses** or from **Elective courses**.

Find information about all courses on [www.dtu.dk/acoustics](http://www.dtu.dk/acoustics)

# Courses

## General competence courses

Fundamental of Acoustics and Noise Control • Acoustic Communication • Partial Differential Equations – Applied Mathematics.

## Technology specialization courses

Electroacoustic Transducers and Systems • Advanced Loudspeaker Models • Technical Audiology • Auditory Signal Processing and Perception • Architectural Acoustics • Advanced Acoustics • Sound and Vibration • Environmental Acoustics.

## Elective courses

The students may choose between the following courses:

Advanced Modelling–Applied Mathematics • Multivariate Statistics • Statistical Design and Analysis of Experiments • Time Series Analysis • Digital Signal Processing • Finite Element Methods for Partial Differential Equations • Linear Control Design 2 • Robust and Fault-tolerant Control • Signals and Linear Systems in Discrete Time • From Biology to Technical Neural Systems • Microtechnology and Micro Systems • Basic Fluid Dynamics • FEM Heavy • FEM-Light – Applied Finite Element Modelling • Other courses of special interest.

## Master's thesis

The students usually specialize in subjects chosen within Physical Acoustics, or Audiological Acoustics, or Architectural Acoustics.

