



## COURSE SYLLABUS

# Akustik för ljud- och musikproduktion

## Acoustics for Sound and Music Production

7,5 ECTS credit points (7,5 högskolepoäng)

**Course code:** ET1492

**Educational level:** First cycle

**Course level:** G1N

**Field of education:** Technology

**Subject group:** Electrical Engineering

**Subject area:** Electrical Engineering

**Version:** 7

**Applies from:** 2014-01-01

**Approved:** 2013-12-18

**Replaces course syllabus approved:** 2009-11-01

### 1 Course title and credit points

The course is titled Acoustics for Sound and Music Production/Akustik för ljud- och musikproduktion and awards 7,5 ECTS credits. One credit point (högskolepoäng) corresponds to one credit point in the European Credit Transfer System (ECTS).

### 2 Decision and approval

This course is established by Department for Electrical Engineering 2013-12-18. The course syllabus was revised by School of Engineering and applies from 2014-01-01. The course is replaced with ET1108, Akustik för ljud- och musikproduktion.

### 3 Objectives

The student will receive an introduction to basic acoustics. The student also receives knowledge of the characteristics of sound and a survey of practical room acoustics.

### 4 Content

Key elements in the course are:

- Basic concepts in acoustics:

Definitions, conceptual orientation

- Sound and man:

The ear and hearing

- Sound and frequency characteristics

- Room acoustics

- Sound absorbents

- sound-generating mechanisms

- Acoustic measuring methods:

Spectrum analyzers, sound pressure meters, microphones

- Electro-acoustic installations in rooms

- Introduction to acoustic signal processing.

### 5 Aims and learning outcomes

After completion of the course the student will:

- understand the basic theory of acoustics

- have an understanding of sound and the room affects various sound qualities such as timbre,

reflections, echo, etc.

- have basic knowledge of sound absorbers

- have an insight into the measurement of sound characteristics, and of the measuring of a room's acoustic properties.

- have knowledge of how these measurements can be used practically.

### 6 Generic skills

### 7 Learning and teaching

The teaching consists of lectures and practical project assignment. In the projects, the students work practically with the theories discussed during the lectures. The project assignments can be solved individually or in groups.

Teaching is in Swedish.

Swedish

### 8 Assessment and grading

#### Examination of the course

Code	Module	Credit	Grade
	Theory	1.5 ECTS	G-U
	Project Work	6 ECTS	G-U

The course will be graded G Pass, UX Fail, supplementation required, U Fail. If grade UX are given, the student may after consultation with the course coordinator / examiner get an opportunity to within 6 weeks complement to grade G for the specific course element.

Examination Written exam and presentation of the required project tasks. Project information is presented through oral presentation and/or by written report. For the final grade for the course requires that all components of the course is approved.

### 9 Course evaluation

The course coordinator is responsible for systematically gathering feedback from the students

in course evaluations and making sure that the results of these feed back into the development of the course.

#### **10 Prerequisites**

General requirements for university studies.

#### **11 Field of education and subject area**

The course is part of the field of education and is included in the subject area Electrical Engineering.

#### **12 Restrictions regarding degree**

The course cannot form part of a degree with another course, the content of which completely or partly corresponds with the contents of this course. The course may not be included in a degree with other courses, whose content in whole or in part, are consistent with the content of this course.

#### **13 Course literature and other teaching material**

Everest, Alton F., Master Handbook of Acoustics. McGraw-Hill Education, 2000. ISBN 978007130975. The literature is supplemented with handouts.

