



00 Course info

ELEC-E5640 - Noise Control D

ELEC-E5640_aalto-CUR-172114-3090631

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Lecturer in Noise Control in Aalto University

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Course

Responsible teacher

- Docent Valtteri Hongisto

Language

- All materials needed to pass the course are available in English.

Registration

- The second Monday lecture is the deadline for registration.

Teaching mode

- Physical lectures
- Online or hybrid is not available

- **Necessary materials**

- Presentations
- Assignments

- **Course material interface:**

- mycourses.aalto.fi

- **Supporting study book**

- The lecture numbers follows the chapters of a study book that is available in MyCourses.
- English translation is made by Word. Unfortunately, it still contains numerous minor editorial flaws and major terminological errors. Despite of that, the book should be useful rather than the opposite since lecture material is difficult to adopt outside the lectures.

Lecture room address:

Luentosali 1

Otakaari 3, Espoo

<https://www.aalto.fi/fi/toimipisteet/terveysteknologian-talo>

1. Monday 23 Oct at 08:45 – 12:00

- Course info (½ h)
- 1 Foundations (1 h)
- 2 Sound absorption (2½ h)

2. Monday 30 Oct at 08:45 – 12:00

- Assignments 1 (1 h)
- 3 Environmental noise (1.5 h)
- 4 Room acoustics (1.5 h)

3. Monday 6 Nov at 08:45 – 12:00

- Assignments 2 (1 h)
- 4 Room acoustics (1 h)
- 5 Airborne sound insulation (2 h)

Lectures 1-6 and contents

4. Monday 13 Nov at 08:45 – 12:00

- Assignments 3 (1 h)
- 6 Impact sound insulation (1 h)
- 7 Ventilation noise (½ h)

5. Monday 20 Nov at 08:45 – 12:00

- Assignments 4 (1 h)
- 7 Ventilation noise (1 h)
- 8 Sound insulation in buildings (1.5 h)
- 9 Hearing protection (½ h)
- 11 Vibration and shock (1 h)

6 Monday 27 Nov at 08:45 – 12:00

- Assignments 5 (1 h)
- 13 Noise annoyance (½ h)
- Active noise control (2 h)
 - prof. Vesa Välimäki: 10:15 – 12:00

Assignments: delivery and points

- Altogether 32 assignments are involved
 - 5-7 assignments per five Mondays
- Returned assignments are graded by the teacher:
 - 0.5 or 1.0 points per assignment
 - A point is earned when the assignment is correctly understood obviously the student has put efforts to solve it using an alternative feasible approach (although incorrect).
- Solutions are presented by the students during Mondays 2-6
- Correct solutions are not distributed in MyCourses.

Return options of assignments:

1. A single PDF file at most 2 MB is returned via MyCourses until the deadline mentioned in the assignment (Sunday 20:45). Late submissions by email are not considered.

How to prepare the PDF of returned assignments

- File naming: For five times, use file names Surname1.pdf, Surname2.pdf, ... Surname5.pdf
- Single PDF file, size at most 2 MB.
- Name and student number in first page.
- Read the assignment carefully and entirely.
- Answer consistently with logical flow.
 - The applied equations must be shown.
- Present the assignments in original order.
- Set the figure and table right after the current assignment.
- You can use word processor or take photos of written papers.
- Take photos with low resolution and compress by, e.g., <https://tinyjpg.com/>
- Matlab or Python code can be used to replace the written equations. However, the results must be presented in Tables (or Graphs if so instructed), not just showing data on the line.
- Use at most three significant digits in answers, such as 0.000542 or 5.42E-4.
- Bold the result and present it in the end.
- NOTE: Think about the layout in the presentation mode as well. Other students must be able to read the answers from video screen.

Examination right and ja assignment bonus

- **Examination right is achieved when 16 assignment points have been reached out of 32.**
 - Points are given by the teacher.
- The right is valid until the beginning of the next course
 - this course is an annually given
- Assignment bonus is given to the course evaluation:
 - 16-21: Bonus 0
 - 22-28: Bonus 1
 - 29-32: Bonus 2

Examination

Course examination

- 4.12.2023
- Otakaari 3, Lecture room 1

Additional examinations

- 29.1.2024
- 6.5.2024
- **Execution of the course requires:**
 - Examination right (≥ 16 assignments done)
 - Examination accepted (≥ 15 points)
- Examination includes 5 tasks.
- Maximum is 6 points per task. Maximum number of points is 30.
- Bottom points of examination grades:
 - Not accepted: under 15 p
 - 1: 15 p
 - 2: 18 p
 - 3: 21 p
 - 4: 24 p
 - 5: 27 p.

- Examination content.
 - 2-3 tasks directly from home assignments
 - 0-1 tasks are other assignments
 - 1-2 tasks are verbal definitions
- Full points can be achieved in the examination by studying and understanding the following materials
 - Presentations
 - Assignments
- All equations presented in the course, that are needed in the exam, are given in the exam paper. However, basic mathematical equations (log rules etc.) are not given.
- **Permitted instruments:** Lead pencil, eraser, mathematical handbook, and scientific calculator with deleted memory. Laptops, computers, smart phones, and similar devices are not allowed. Materials given during the course are not allowed.