Aalto University

Course info
ELEC-E5640 - Noise Control D

Valtteri Hongisto

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Adjunct professor in Noise Control in Aalto University

Espoo, Finland, 1st Nov 2021

Course

Responsible teacher
- Docent Valtteri Hongisto

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

Registration
- The second monday is the deadline for registration.

- **Necessary materials**
  - Presentations
  - Assignments

- **Interface:**
  - mycourses.aalto.fi

Lectures 1-6 and contents

Lectures 1-5: 08:15 – 09:45 and 10:00−11:30

1. Monday 1st Nov at 08:15 – 11:30
- Course info (½ h)
- Foundations (1 h)
- Sound absorption (2½ h)

2. Monday 8th Nov at 08:15 – 11:30
- Assignments 1 (1 h)
- Room acoustics (2 h)
- Airborne sound insulation (1)

3. Monday 15th Nov at 08:15 – 11:30
- Assignments 2 (1 h)
- Airborne sound insulation (2 h)
- Impact sound insulation (1 h)

4. Monday 22 Nov at 08:15 – 11:30
- Assignments 3 (1 h)
- Ventilation noise (2 h)
- Environmental noise (1)

5. Monday 29 Nov at 08:15 – 11:30
- Assignments 4 (1 h)
- Sound insulation in buildings (1.5 h)
- Hearing protection (½ h)
- Industrial noise control (½ h)
- Vibration and shock (1 h)

6 Tuesday 7th Dec at 12:15 – 15.45
- Active noise control (2 h)
  - prof. Vesa Välimäki: 12.15 – 14:00
- Assignments 5 (1 h)
  - 14.15-15.00
- Noise annoyance (1 h)
  - 15.00-15.45

Assignments: delivery and points

- Altogether 32 assignments are given
  - 5-7 assignments per time
- 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 in lectures 2-6.
- 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 22:30). Late submissions by email are not considered.

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How to do the PDF of returned assignments

- Filename: Surname1.pdf, Surname2.pdf, etc.
- File size at most 2 MB.
- Name and student number in first page.
- Collect all assignments on a single PDF file.
- Read the assignment carefully and entirely.
- Answer consistently with logical flow.
  - The applied equations must be shown.
- Present the assignments in original order.
- Set figures and tables right after the assignment.
- Preferably use word processor.
- Pen and paper is also possible: 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 shown in Tables, not just using the code.
- 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.

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

- **ONLINE**
- **13ᵗʰ Dec 2021 at 09.00-12.00**

- **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