

Examination Mechanical Vibrations 2019

Examination

The examination consists of: **Hand-in examination tasks** and **Written examination**.

Course literature

- (1) Lecture Notes on Mechanical Vibrations, Per Lidström, Division of Mechanics, LTH
- (2) Mechanical Vibrations Exercises, Per Lidström, Division of Mechanics, LTH
- (3) Alternative course literature: Mechanical Vibrations – Theory and Application to Structural Dynamics, Géradin and Rixen

(1) and (2) may be either downloaded at <http://www.mek.lth.se/education/fmen11> as a pdf-document or purchased as a hard copy at the Division of Mechanics, LTH – total cost 200 SEK.

Exercises

Recommended Exercises in (2) are found below.

1:2	2:2	3:3	4:1	5:2	6:5
1:7	2:5	3:7	4:2	5:8	6:7
1:10	2:9	3:8		5:9	6:10

Hand-in examination tasks

Hand-in examination tasks will be available on the homepage <http://www.mek.lth.se>

Students work in pairs with the hand-in examination tasks, handing in one set of solutions per task. Dates for handing in Hand-in examination tasks are found below and they may be handed in at the latest 17:00 in the examination task box on the 4th floor in the M-building. If handed in on time, they will be reviewed by the lecturer for the following Wednesday, except for task 2 which will be handed back on Friday December 13. Reviewed tasks with written feedback will be handed out by the teacher during lectures and exercise sessions. If not correct/complete, the tasks may be corrected/completed by the students. Tasks corrected by the students, handed in after 12:00 December 16, will not be corrected by the teacher until January 2020. However, during the exercise session December 18 it is possible to ask questions and discuss corrections related to the hand-in examination tasks. The deadline for hand-in examination task 3 is January 8 2020, and it may be handed in using e-mail.

1:1	2:2	4:1
1:2	3:1	4:3
2:1	3:3	5:2
November 20	December 4	January 8

Written examination

December 19, 08:00-13:00, in MA:10 A-B. The written examination will consist of five tasks with focus upon the theory covered by the recommended **Exercises** in chapters 1-5 above and Rayleigh-Ritz, as well as **Hand-in examination tasks** 1-4. Maximum score $5 \times 3p = 15p$. A personal **equation sheet** of one A4-page may be prepared by the student. This equation sheet should be handed in no later than 12:00 December 17 for approval (please note – not for correction) by the teacher. The equation sheet should not contain solutions or answers to problems solved during the course.

Final grades

3 Hand-in examination tasks: 4 out of 5 correctly solved. **Written examination:** 7.5p – 9.5p

4 Hand-in examination tasks: 4 out of 5 correctly solved. **Written examination:** 10p - 12p

5 Hand-in examination tasks: 5 out of 5 correctly solved. **Written examination:** 12.5p - 15p

Final deadline for Hand-in examination tasks: January 10 2020!

If the hand-in examination tasks are not correct by this date, the tasks cannot be completed/corrected until the course is given the next time in autumn 2020.

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