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**MWL**

The Marcus Wallenberg Laboratory  
for Sound and Vibration Research

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## **COURSE EVALUATION AND ANALYSIS – NON-LINEAR VIBRATIONS 2020**

**Code:** SD3180

**Credits:** 7.5

**Lecturer and examiner:** Leif Kari                      070-798 7974                      leifkari@kth.se

**Prerequisites:** Undergraduate courses in mechanics and mathematics.

**Grading scale:**

P, F

**Examination:** No final examination.

- Approved home assignments handed-in in time (INL1)
- Approved scientific paper review seminar and report (PRO1)

INL1 - Assignment, 6.0 credits, Grading scale: G

PRO1 - Project work, 1.5 credits, Grading scale: G

**Number of students:**

1

**Grade of achievement:**

100%

**Grade of examination:**

100%; P.

**Form of course evaluation and analysis:**

The course evaluation and analysis is performed during the last lesson with all students present (that want to participate) and the responsible teacher. This year it was 1 doctoral student plus 4 master course students that were following a similar course SD2180. The specific questions raised are given in appendix (Course\_Evaluation\_Questionary\_SD3180.doc). More questions were naturally brought up during the dialogue.

**Date of course evaluation and analysis:**

3 November 2020

**Results of course evaluation and analysis:**

- The previous studies for the students are sufficient to follow this course
- The prerequisites containing more specific math courses were appreciated.
- The home assignments help the students to meet the learning objectives.
- The lecture notes help the students to meet the learning objectives.
- The lessons help the students to meet the learning objectives.
- The students prefer home assignments instead of a regular, final written examination. A final written examination is not suitable for a course like this was the common opinion from the students. Home assignments are much better.
- The extra written assignment helps the students to meet the high level learning objectives.
- The seminar gives help to the students to meet the high level learning objectives.
- The students appreciate the flexibility to adapt the lesson schedule according to their overall schedule. There were a number of lesson clashes that were avoided and most of the students could, after the re-schedule, participate at all lessons. The re-schedule was done during the first lesson together with the students.
- The students like the pace of the course and that a week or so is given between the hand-out of the home assignments and the deadline of the hand-in of the home assignments.
- The students liked that it was a longer time between the hand-out of the papers and the deadline of the hand-in of the report + seminar. However, the seminar was one week too late due to that period 4 has already started by then. One week earlier would have been better.
- The tempo of the course is neither too fast nor too slow (more than this year's jumpiness). It is suitable.
- The lessons were made in zoom. The students liked the zoom lessons. However, the teacher thought that the interaction between the students and the teacher and between the students themselves were more difficult than during normal lessons in physical class.
- However, the students nevertheless asked several questions during the lesson. They said they learned a lot from it.
- The students liked the power point presentations and that they got the presentations after the lessons.
- The YouTube clip of non-linear waves including traffic disturbances shown in the class were appreciated from the students.
- The students liked the more focus on the sustainable development examples shown.

**Modification of the course due to evaluation and analysis from 2019:**

- To the prerequisites it was recommended to add more specific math courses. It was done this year and the students liked it.
- The YouTube clips were liked by the students. The content was new for all of them this year (2020).
- This year the pace of the course was regular. It was a week or so given between the hand-out of the home assignments and the deadline of the hand-in of the home assignments. The papers were handed out well in advance. That was not the case last year 2019. The students liked it.

**General recommendations for the next time the course is given (2021):**

- Keep most of the form of the course (lessons, time schedule, adaptive flexibility, home assignments, course literature, extra written assignment, seminar etc).
- The students recommend that the final seminar is given before the start of period 4.