



MWL

The Marcus Wallenberg Laboratory
for Sound and Vibration Research

COURSE EVALUATION AND ANALYSIS – NON-LINEAR VIBRATIONS 2019

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 no 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:

8 November 2019

Results of course evaluation and analysis:

- The previous studies for the students are sufficient to follow this course
- To the prerequisites it is recommended to add more specific math courses
- 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. However, this year there were lots of travels for the students (to China) and for the teacher.
- The final schedule became too jumpy and a more regular schedule is, if possible, more preferable.
- The students recommend a 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 tempo of the course is neither too fast nor too slow (more than this year's jumpiness). It is suitable.
- The lesson room Munin is little bit too big for the small course (few participants). However, the many white boards and projector are good for the derivations in the course.
- The lesson room Balder is suitable for the small course (few participants). However, the small white board is not very suitable for the derivations in the course. The TV-screen is good for the course. This year we were not allowed to be there more than a few times due to other meeting bookings.
- The YouTube clip of non-linear waves shown in the class were appreciated from the students. However, the chock wave propagation were known for the majority of the students because there were studying the flow mechanics track.

Modification of the course due to evaluation and analysis from 2018:

- The students would like to see more YouTube clip of non-linear acoustics in the class. This was not done extensively 2018.
- The YouTube clip of non-linear waves shown in the class were appreciated from the students. However, the chock wave propagation were known for the majority of the students because there were studying the flow mechanics track.

General recommendations for the next time the course is given (2020):

- Keep most of the form of the course (lessons, time schedule, adaptive flexibility, home assignments, course literature, extra written assignment, seminar etc).
- To the prerequisites it is recommended to add more specific math courses.
- 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. However, this year there were lots of travels for the students (to China) and for the teacher.
- The final schedule became too jumpy and a more regular schedule is, if possible, more preferable.

- The students recommend a pace of the course 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 papers should be handed out well in advance. This year the last regular lesson was very late so the time to the seminar became short.