

SD2307 2019-20 course analysis

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16 students, 10 answers, 62,5% answering ratio

Good ratio, more than bigger courses. It helps telling the students that this is very useful for us.

Estimated workload. In theory 7,5hp=half-time (4h/day)

Answers 10-20 hours per week incl scheduled hours – this looks fine, they usually underestimate these times. The project is time consuming and feels few points for the work you need to put in.

Average response to LEQ statements

The average response to LEQ statements is very good, from 5,7 to 6,8.

The ones below 6.0 are:

#15 – 5,7 – I could practice and receive feedback without being graded (j)

#16 – 5,9 – The assessment on the course was fair and honest (k)

#19 – 5,9 – The course activities enabled me to learn in different ways (m)

Segregating the answers, international master students give a 5,6 average to #7 – The intended learning outcomes helped me to understand what I was expected to achieve (e)

Down from a 6,0 point average there seems to be a big difference on this. The low sample size does not allow to see what the other student groups were but they could be Swedish students åk 4-5 or international exchange students.

#15 relates to comments below on e.g. needing additional in-lecture exercises

#16 relates to comments about the actual exam not being the best measure for such a broad course.

#17 might relate also to the limitation with the practical exercises, however there are already several activities that promote different kinds of learning in the course:

- Regular lectures with discussions
- Book and slides are available
- Lecture recordings are available
- Study visit that anchors the different concepts taught in the course, physically and visually
- Project task where they work with the concepts towards the solution of a practical problem.
- (Not many in-lecture practical exercise solving sessions but this can be easily mitigated)

Best aspects (curated):

- Study visit to Hagalund (x3)
- The discussions during the lectures, open dialogue (x2)
- The project task

The study visit was introduced this year, so it is great that it was so useful for them. It will be repeated next year, probably in a later stage as there were component concepts introduced afterwards, so it is much better to have the whole perspective before that.

The short visit to the Roslagsbanan station was not mentioned but is something that could be extended as a second study visit.

The discussions and project task are an integral part of the course and we will keep it like that.

Improvement suggestions (curated):

- Exam (x3); layout not very good / format; more general questions, less detailed ones
- Lack of practical exercises or solving problems (x2)
- Book with 20-year-old material
- Books not in the library
- Swedish terminology in slides (?)

Exam: there was a major conceptual change in the examination from a “lots of very specific questions” to a more “one big conceptual question plus some small specific ones”. The external aspect of the exam though looks very similar and there is so much to cover that the changes did not work as expected. For next year not every theme will be included in the exam in order to create broader conceptual questions instead of over-specific ones from each single subsection.

Practical exercises: this is easy to fix, specific problem-solving sessions can be introduced for the most common calculation areas.

Book: the book is regularly updated, including figures and latest research, but most of the theory is timeless and 20-year-old figures are not necessarily bad in my opinion. I agree with the fact that there should be books in the library and will talk to them for looking at the possibilities.

Swedish terminology: I will check this further, but it looks like an oversensitive comment, the course has been given in English for more than a decade and all slides are regularly updated.

Advice to future participants (curated):

Attend the lectures and participate in the discussions that happen in the class

Spend time to read the course textbook:

- Read the book together with the lecture and try to relate the theory to real examples, i.e go check the trains

The project can take away a lot of time:

- Begin work on the project task right at the beginning
- Respect the deadlines
- Don't wait too long with doing the different tasks in the project, as focusing on one of them may lead to that you later realize that it doesn't work out in combination with another design aspect.

I will use these comments for the introductory lecture in order for the new students to be

Is there anything else you would like to add? (curated)

- More coherence between book notes and lectures, especially when it comes to symbols (t. ex , Q1 in book, N1 in lectures does not help)
- Please keep the study visit for the future, it was highly appreciated!
- It is important to keep the discussion aspect of it going. Keep the class strength at this level, at least not more than 30.

Book-slide coherence: this issue needs specific examples. Q is used for vertical load and N for normal load which are different things, so...

Other comments are appreciated, and we will definitely keep up with these!

Answer to specific questions:

11 – Understanding of key concepts had high priority

- In the course yes. But in the exam not.

16 – The assessment of the exam was fair and honest

- To detailed expectations in the exam
- The exam was pretty long for the given time. It can be suggested that the exam to give options to choose 3/4 topics to be fully answered to get the total mark 40. Students can study in depth for the topics they are more interested in. To cover all aspects in one exam seems not realistic.

Issues with the exam – see the comments to the improvement suggestions.

Overall evaluation

The average grades are really high and it makes me very happy to see that the continuous effort in developing the course is creating a really appreciated course. This year there will be no major changes planned, but they will address the main comments:

- Examination form needs to be improved. Specifics will come with working in the topic, but an initial approach is to avoid over-examining each and every chapter and focusing more on key concepts-related questions, even if not every single theme is covered. Focus on ILOs, not in book chapters. Also, the coupling between the project task and the exam needs to improve also so that they know that while working in the project task they are working towards the concepts in their examination.
- Short problem-solving sessions will be embedded in different lectures: mass/adhesion, resistance, and traction and braking, mainly.