Kursanalys för SK2411

Datum för kursanalysen	2018-06-02

Sida 1: **Kvantitativ analys**

Läsår:	2018
Läsperiod(er):	VT-2018

Kursansvarig:	Valdas Pasiskevicius
Lärare: Föreläsare	Valdas Pasiskevicius
Övningsassistenter	Robert Lindberg
Labbassistenter	Fredrik Laurell, Robert Lindberg, Anne-Lise Viotti
Övriga inblandade lärare	Max Yan

Antal registrerade studenter	12 st
Prestationsgrad,* % (t.o.m. ovan datum)	68 %
Examinationsgrad, %** (t.o.m. ovan datum)	73 %

* Antalet presterade poäng hittills på kursen dividerat med antalet möjliga poäng för de registrerade studenterna vid gällande datum.

** Andel studenter av de registrerade som klarat samtliga kurskrav vid gällande datum.

OBS! När du skickar in din kursanalys, bifoga aktuell kursplan.

Sida 2: **Kvalitativ analys**

Kursens pedagogiska utveckling

Redogör för eventuella förändringar införda utifrån förra årets kursanalys.

1. Lecture notes have been updated with new developments in the field.

2. The plans of the Lectures 10,11 have been modified to make the overall flow of the material more logical. This imposed modification of the textbook reading sequence.

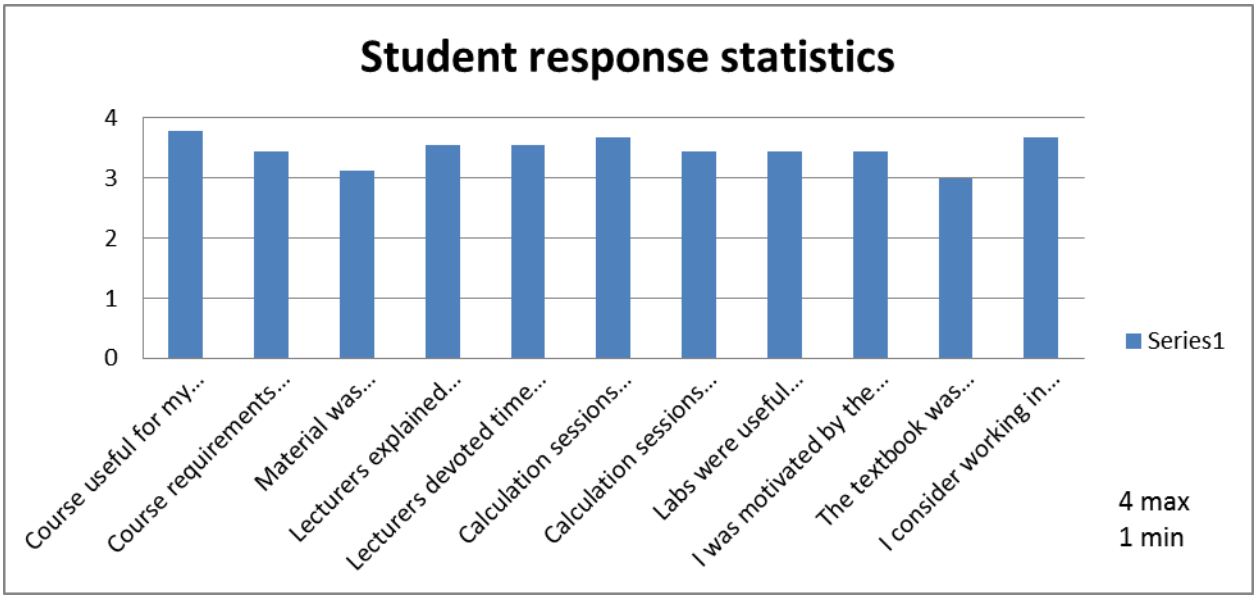
3. New TA for the exercise sessions have been introduced.

4. Thecourse website had to be remade to the KTH Canvas format.

Studenternas syn på kursen

Redogör för studenternas syn på kursen (dokumenterad genom kursenkät, kursnämndsmöten, intervjuer och/eller annan lämplig metod).

The student questioner has been given during exam. Most of the students provided answers. The statistics is shown below.



From the answers it is clear that the students perceive the course as very useful for their education and their future careers. Actually most of the students answered that they consider, in the future working in the field of optics and lasers. The exercise sessions and labs were appreciated as well. The textbook and the amount of material was considered as large. In the comments there were suggestions to increase the number of lectures and exercise sessions as well as to add two more labs. One summary comment

stated that the course was difficult but useful. In general there is preference by students for explaining things more on blackboard than relying solely on power point slides. I this course we had a mixture of both.

Kursansvarigs syn på kursen

Sammanfatta hur utförandet och resultatet av kursen gått, samt tolka/analysera studenternas syn på kursen.

The class of 2018 was interested and engaged in the subject. They were eagerly solving exercise problem and asked to post more of the previous exam problems on Canvas. I did not appreciate much communications improvement with the new course website on Canvas. Although the clarity of the material layout is arguably better. Personally, I did not encounter large problems making the new course website, however it did not reduce the amount of additional work required, quite the opposite.

There is recurring weakness in basic physics knowledge among students. This is a systemic trend which forces us to presume that the majority of the class has not completely absorbed the knowledge from basic physics courses, especially quantum mechanics. This year was not an exception. This forces us to once again explain the basics first (primarily related to quantum mechanical picture of light-matter interaction). Hopefully with the new and updated Optics track this problem will be solved by introduction of a new mandatory course to cover such basics, i.e. connection between the formal quantum mechanical picture to the application of it for understanding the real-world phenomena. Such additional course would reduce the amount material and reading required in the Laser physics course.

Seminar room FA32 is not well suited for the lectures where both, the overhead projection and whiteboard writing are used, quite often at the same time.

Upgrades of labs would be highly desirable. Adding one or two more labs would be even better. The resources are as limited as ever, though.

Förändringar inför nästa år

Föreslå vilka förändringar du planerar att göra för att främja kursens pedagogiska utveckling och kvalitet.

Improve further the quality of exercise solutions posted on the course Canvas.

At least the solid state laser lab needs maintenance and therefore some investment.

Increase visibility of the course by advertising to other master program tracks and other schools. Owing to the fact that this course will become elective from 2020, there will be more flexibility to adjust the contents of the course and to make it more appealing to the programs interested in laser applications. There will not be any need to cover the basics of the light matter interaction, as that will be covered in the planned separate course. The planning for such shift will start in 2019.