Course analysis evaluation
Laser physics SK2411, IO2659, VT-2012

Lecturers: Valdas Pasiskevicius, Min Yang.
Problem-solving assistant: Niels Meiser.
Labs: Fredrik Laurell, Kai Seger, Nicky Thilmann.
Number of registered students: 35.
Number of students who took exam: 36 (one student from previous years).

Changes made in the course for VT-2012. Effects of changes.

1. Larger lecture halls were booked to accommodate more comfortably more than 30 students. This year it worked out well.
2. An additional re-examination was arranged in June to accommodate exchange students leaving Sweden. This adds work for teachers of creating tasks for one additional exam.
3. Lecture note slides were updated and new material put on the course website.

Results of the student survey

The anonymous survey has been conducted at the end of the course just before the examination. The survey consisted of 12 questions soliciting opinions on lectures, exercises, labs, textbook, methodical aspects of the course and students' motivation issues. The results are shown in the graph below. The scale 1-4 (4 maximum) reflects the degree to which students agree with particular statement in the survey. The bars represent averaged responses to the questions.

Motivation:
It is obvious that students think that the course is important for their education and that there was strongly perceived self-motivation to study the subject. Most students disagree that the motivation to attend the course was purely for the purpose of collecting points. It is understandable: Laser physics course is not the course where points are obtained in the easiest way. Motivation was obvious during lectures with students eagerly participating in the process.

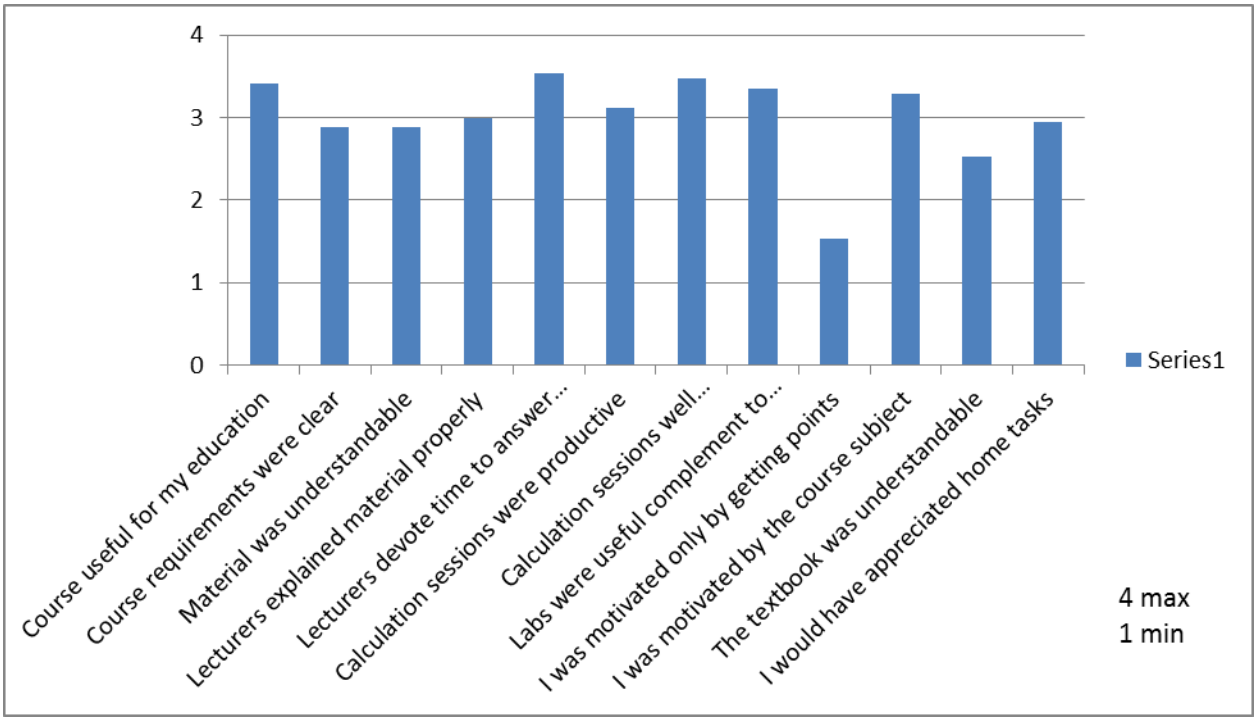
Lectures:
Lecturers and course material distribution has been evaluated very positively. Especially it is reflected by the large average score given to the dialogue between students and lecturers.

Textbook:
Students gave it the score above average. Individual discussions with students revealed positive response. The book is one of the most competent master-level textbooks on the subject. Due to rather large volume of the text and some material which is superfluous for the master level students we will try to be more specific next which parts of the textbook are absolutely necessary to read for properly covering the course program.

Labs and problem solving practice:

Students gave rather high scores to the problem solving exercise sessions. Following previous year suggestions we offered additional individual home tasks for students to better prepare for the problem solving sessions and for the exam. Fortunately the textbook contains extensive selection of problems and some solutions or hints for students. In fact students expressed wish to have more of the problem solving sessions. The proposal to give more homework tasks, however, was met with mixed response.

Lab practice was clearly well received by students.



Considerations by the lecturers. Improvements.

1. Following a large class in 2011, the class of 2012 was of similar size. Due to advance booking of larger classrooms in 2012 everything worked out well.

2. There were some delays in reporting exam results by the KTH administrators, especially in Kista campus. For the 2013 course we need to address this issue more closely.

3. The chosen grading scale at the exam seems to be properly chosen, as revealed by personal discussions with administrators at some foreign universities where exchange students are coming from. There were concerns expressed by some universities that at KTH the grading is too liberal. Our requirement of collecting at least 50% of points to have grade above F seems to be appropriate and in line with requirements at other universities.

4. Next year we will have to be more specific regarding minimum reading requirements, due to the fact that the textbook is rather large. Fortunately and owing to well-structured text of the book, it is possible to skip several subchapters without losing major concepts. Although we give keywords to help students with individual reading, it seems, that this mode of study is not the most efficient.