

Course Analysis SK2300 Optical Physics HT2019 (period 1)

Marijn Versteegh, February 2020

Course responsables: Marijn Versteegh and Val Zwiller

Examiner: Val Zwiller

Teachers:

Val Zwiller: 8 lectures, 4 exercise sessions

Marijn Versteegh: 6 lectures, 4 exercise sessions, Michelson interferometer lab, Polarization and 3D imaging lab, Fourier optics lab, Quantum entanglement lab

Lily Yang: Microscope lab, Fourier optics lab, Quantum entanglement lab

Teaching assistants: no

Thus year 22 students were registered for the course. All 22 students passed all 5 labs (9 lab groups). 21 students took the written exam in October, of whom 19 passed and 2 failed. The 2 students who failed in October passed the re-exam in December.

Changes with respect to HT2018:

- Lily Yang took over the Microscope lab from Ying Fu.
- All labs were taught by Marijn Versteegh and Lily Yang.
- The exercise sessions were taught by Val Zwiller and Marijn Versteegh. With respect to the previous year we strengthened the connection between the content of the lectures and the exercises. Also, we used more exercises from previous exams. In fact, we went through all questions of the 4 exams of the years 2017 and 2018. This way the students knew better this year what kind of questions to expect at the exam.

We asked the students to participate in the course evaluation, for which we used LEQ. Unfortunately, only 6 students filled in the questionnaire. From the answers from the students we notice that:

- The students who filled in the questionnaire only spent on average 8 hours per week on the course, while they should spend 18 hours per week according to the 6.0 credits that stands for this course. In 2018 the average was 14 hours per week.
- Found that they worked with interesting issues (score 6.3).
- Found the course challenging in a stimulating way (score 5.8).
- Found the assessment on the course fair and honest (score 6.3).
- Were able to learn by collaborating and discussing with others (score 5.2).
- Were able to get support if they needed it (score 6.2).
- Were able to practice and receive feedback without being graded (score 6.5).

These scores are similar to the scores of last year. The students are generally satisfied with the course. Many students told us that they like the labs.

The small number of hours spent on the course is somewhat surprising. Without any study at home, if one just attends the lectures, exercise sessions, labs and writes the exam, one already spends on average 8 hours per week during 9 weeks.

The following changes will be made for the next course round:

- In order to increase the learning of the students we will ask them to solve more problems as homework. The solutions will be discussed at the problem sessions. The students will this way solve more problems throughout the course, and spend more time on the course.
- As a way to contribute to the sustainable development agenda of the UN, and of KTH, Val Zwiller will give a lecture about photovoltaic and thermal solar energy technology.
- Lily Yang is planning to leave KTH before the next course round, so someone needs to take over Lily's lab teaching.