

Report of Phys 251 - Near Earth Space

In 2014 and 2015 around 18 students registered for the course, and eleven students finished the course both years. The reason that some students drop out seems to be very individual, but a frequently stated reason is that the workload of other courses is too big. A few students have said that the content of the course was different than expected. I will update the "Course Description" to try to avoid these misunderstandings in the future.

The students have performed well on the exams, and they have received grades between A and D with an overweight of the best grades. There are usually 4-5 students which don't show up on the exam day. These students have seldom followed the lectures, and might have forgotten to cancel their exam registrations. It would be good if the University improves the routines for exam registration to avoid this in the future.

The course have traditionally used a norwegian compendium authored by a emeritus professor in Space Physics. The compendium covers all the topics taught in the course, and most students seem satisfied with the compendium. A challenge is that many of the students are unable to read norwegian. Therefore, an english compendium will be finished before the next course starts. The english compendium will mostly be built on the old compendium, but will also include new material based on more recent research.

The course is taught in the traditional way by the teacher writing on the black board. Occasionally, some material is shown with the computer and the projector. The students are usually quite engaged and ask several questions during the lectures. Every week, some of the students prepare and present some exercises for the other students. In good time before the exam the students are given more than 100 questions which they can be asked at the exam.

The student evaluations indicate that the students thinks the course is interesting and contains many topics which are not taught in other courses, and they think the amount of work is fair. They wrote that they earned a lot of theoretical knowledge, but not so much practical knowledge. The biggest complaint was about the lack of an english book, but that will be amended next year. There were also some comments that I (the teacher) can improve the presentation technique. This I will certainly try to do.

Near Earth Space servers two purposes. First, it is an introductory course for students who want to do a master in space physics or related subjects such as astrophysics or plasma physics. Second, it is a general physics course which many students can include in their degree. For this purpose it is an advantage that the students get the chance to apply and combine many of the subjects they have learned during their first years with physics. This include fluid mechanics, electromagnetism, thermodynamics and some chemistry. I think the course in its present form works well.