

Department of Physics
Division of Nuclear Physics
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Course Evaluation FYSC12, VT21

During the introduction of the VT21 lecture series, two student course representatives were elected (Sayan Ali Khan and Jesper Larsson). During the laboratory period, an evaluation sheet was agreed upon between teachers and student representatives. In most aspects, it is still the same as developed VT18. Additional questions concerned the 4h-long lectures (since VT20) preferred by the FYSC11 teachers, as well as covid-19 aspects.

Students received information via Canvas right after the laboratory period, and the evaluation sheet could be downloaded from that point on. Reminders were placed both in lectures and in connection with the oral examination. It was also pointed out that handing in course evaluations is in principle mandatory.

Following on a web-based scheme HT20, also VT21 the course evaluation was conducted as a web-based survey (SUNET), thanks to Luis Sarmiento. Extracted from SUNET, all student replies are attached. They were also made available to the course representatives, who prepared a brief summary from the student perspective (see attachment, part 1). The statistical and graphical analysis was done by the course responsible teacher (DR). The material is circulated amongst all teachers, i.e. lecturers and laboratory assistants, to allow to take home more specific notes on their part of the course.

Comments

22 out of active 35 registered FYSC12 students (63%) participated in the course evaluation. The number of student evaluations should be higher, but seemingly the change to a web-based form has increased the number of feedback sheets considerably compared with previous years – a step in the right direction!

The overall picture is very much compatible with the almost identical evaluations conducted since VT18, though VT21 the grand average of the score dropped from usually slightly above 4 to slightly below 4 on an evaluation scale 1 to 5. Based on the text pieces from the student evaluation, this minor drop is associated primarily with the covid-19 triggered, mostly distant teaching, which ‘hit’ FYSC12 for the first time under the pandemic VT21. In general, we teachers are once again happy to see that all in all the course as such is apparently appreciated by the majority of the students, in particular under the difficult circumstances (see student summary, first and last paragraph). Like VT20, the only severe exception is the 4h-lecture periods, which scored badly with 2.38, and which we also would like to avoid.

In the following, the different aspects of the course are commented on.

Lectures & Hand Outs

As stated in earlier replies, given that there is a planned major revision of the bachelor programmes at the science faculty, an update of course contents (and alignment with a similar introductory course at LTH) is ongoing and the revised version of the course is due HT21 for the first time (originally, see VT20 evaluation, that change should have happened already). With a title “Nuclear Physics” the more relevant (in Lund) “ESS-neutron” complex as well as lectures on interaction of radiation with matter will gain space on account of some details of the shell model and nuclear astrophysics, which will move into an “Advanced Nuclear Physics” course, which will be given HT22 for the first time. The new course plan increases also the weight of societal relevance of nuclear physics.

Hand-outs are meant to provide guidelines and summaries of topics. Usually, they are copied and handed out in person for taking notes during the lectures on site, but covid-19 did not allow for that procedure VT21. Earlier, students requested them as pdf for taking notes digitally, which was in principle possible VT21 as well. To help, the Lecture Notes were made available (for the first time) on Canvas as well. They were meant to provide and summarize the ‘essentials’ of the course, while there are the course books for learning / recovering details. An alternative course book containing more modern societal impact continues to be introduced, while it will be the new main course book starting HT21 (for FYSC22).

Though there was no 4h-block lecture teaching like VT20, there continued to be 4h-lectures of the same course (FYSC11 or FYSC12). The problem-sheet load was therefore more balanced (as usual). As stated and suggested VT20, the FYSC12 teachers would like to probe a scheme (for lecture hall A) with a 2-hour lecture physics 1a (8-10), 2 hour-lecture physics 3a (10-12), 2-hour lecture physics 1b (13-15), and a 2b-hour lecture physics 3 (15-17), which ‘a’ and ‘b’ denoting different subjects. Such a scheme would allow a longer break between lectures, to digest and/or to discuss among students or with lectures, e.g., around the problem sheets. ***Presumably, it is up to the student union to work towards such a (or a similar) modification of the scheme in the departments’ IGU group.***

Problem Sheets / Sessions

There are a few points raised by the students. More and shorter sessions are certainly something to consider for the future, but unfortunately, there are also economical boundaries. Scheduling also needs to be such that there is enough time between the training sessions and the actual deadline for hand-in. Possibly, or likely because of remote covid-19 teaching, it was extremely ‘quiet’ during those sessions VT21, and hardly half the students took advantage of the option talking to the teachers in smaller groups. In regular times, we have an ‘open office door’ policy, while some students in fact contacted us via Canvas (mail) and did receive prompt support with one or the other problem with the problems.

Some students, also VT21, would like to see the problem-sheet marks being a part of the final mark, which is going to be the case starting HT21 after the course revision. On the contrary, this may lead to an even increased stress level of the students during the course, which needs a close follow up in the future. On the positive side, with the result (oral examination) at hand, the compulsory problem sheets do fulfil their purpose.

Laboratories

This year's evaluation is all in all similar to previous years, i.e. the 'fresh' neutron laboratory is well established by now, receives very good feedback marks, and will be taken into the revised course, which will finally start HT21. Clearly, the more interactive and mandatory introductory quizzes and sessions to all laboratories will remain, adopted to the somewhat revised sequence and contents of the upcoming FYSC22 course.

There are still going to be three full-day laboratories but starting with a more basic one (choice of radioactive decay / radon in the environment, with report), followed by a choice of neutron or (updated) beta, introducing scintillator detectors, assessment during the day as now, and a gamma laboratory focussing on semi-conductors and all in all less 'heavy' (with report). Reports will (hopefully) have upper limits of pages. We (finally) expect (in physics 3) that in the future the students will have appropriate analysis and statistics 'tools' to be at hand, such that these do not (artificially) increase the felt physics 3 workload (for both laboratory and preparing parts of the problem sheets).

Do to covid-19 restrictions, it was simply not possible to conduct all three laboratories on site. In consultation with the supervisors, we decided to have the KF3 alpha laboratory remotely, not the least since we know since long that this is also considered the most boring even if taught 'on site'. In fact (see above), this is the one that disappears in the FYSC22 future. This fact may also explain that the alpha lab had issues VT21, because it was a one-time (remote) occasion, with the supervisors trying their best to put something on the virtual floor.

Course Evaluation

We plan to continue with a SUNET-based version of the course evaluation, which did boost participation from a weak 30-40% to an (almost) acceptable >60% level.

Examination

If the final examination receives the second best student mark (4.27), it cannot be all that bad. Concerning long-term statistics or bias in any direction, we refer to previous course evaluations for this point, e.g., VT20.

Learning Outcomes

Nothing specific nor general to comment on this time.