

Staff-Student Consultative Committee
Minutes for Meeting No. 2 of 2015/2016

Date: 6th May 2016

Time: 2.30pm

Venue: Room 518, CYM Physics Building, HKU

Present:

Dr. J.J.L. Lim (Chairman, Staff representative)

Dr. J.C.S Pun, M.K. Yip, Jenny Lee (Staff representatives); Dr. C.C. Ling was away on leave 2nd to 4th year representatives, as well as members of Physics Society; 1st year representative was ill, but sent her concerns through email and was represented up by 2nd year representative

1. 1st-year student representative (Tsz Hanng Chang)
Concerns expressed through 2nd -year representative

2. 2nd-year student representative (Kin Ming Fung)

Students request more exercises in all physics courses, especially in PHYS 2250 (Introductory Mechanics) that is taught by Dr. M.K. Yip. Specifically, they wish to have more questions in the question bank, along with solutions.

In PHYS 2250 (Introductory Mechanics), the reference book does not contain all the topics that are taught, for example on surface tension. The students would like the course coordinator to specify recommended textbooks on such topics.

- Dr. Yip was notified, and he plans to include more problems with solutions that students can regard as exercises (before reading the solutions) or for self study. He also plans to include a new reference book to cover the topic on surface tension.

3. 3rd-year student representative (Teh Chi En).

In PHYS 4350 (Advanced Classical Mechanics), which is taught by Prof. S Q. Shen, the course homepage or Moodle page was not maintained in a timely manner; i.e., the lecture notes and assignments were not updated on time. For the first half of the semester, the students were receiving all these documents from the tutor via emails. This practice sometimes caused problems; e.g., on one occasion, the tutor forgot to send Assignment 3 before the midterm test, and the topics in that assignment were part of the midterm test. Students were therefore unable to revise for that test based on the marked assignments. Furthermore, because of delays, all the remaining assignments were squeezed into three consecutive weeks in April.

At the time of the meeting, the midterm paper has still not being distributed to them. Some of the students have inquired about this issue during the lecture hours, but did not received feedback.

- Prof. Shen was seriously ill during the semester when the class was taught. As a consequence, the day-to-day activities was handled by the tutor. In hindsight, another teacher should have been assigned to monitor theses activities. The SSCC apologized profusely for this oversight on behalf of the Department.

*Action item: The SSCC will recommend to the Department that, when a teacher experiences an extended illness, that another teacher be appointed to oversee the running of the course.

In PHYS3850 (Waves and Optics), which is taught by Prof. S. J. Xu, students mentioned that the contents of the Powerpoint slides are copied directly from the textbook. Instead of just pasting the contents from the textbook, students would instead prefer a summary of the contents or to highlight the main points. Students also ask that the derivation of equations (e.g., the lens equation, the equation in spherical refraction, etc.) should not be skipped. Although the derivations can be found in the textbook, if these derivations are not taught in class and the concepts involved not tested in assignments and examinations, then it seems like the only take-away from this course is the memorization of various equations.

- Dr. Xu was notified. This course was previously taught by Dr. John Leung (who has retired), and Dr. Xu was teaching this course for the first time. In response to student comments, Dr. Xu plans to add new contents such geometrical optics and remove some present contents such as waves. He is also considering ways to improve teacher effectiveness. In the longer term, Dr. Xu plans to overhaul the entire contents of this course.

In PHYS 3851 (Atomic and Nuclear Physics), which is taught by Dr. J. H. C. Lee, the textbook used in this course is "An Introduction to the Physics of Nuclei and Particles" by Dunlap. The problem sets used in this textbook is very different to the questions in other reference books as well as the assignments and examinations. Students therefore request extra problem sets written in the style of assignments and examinations during the tutorial sessions.

Tutorial sessions were held for both going through the assignments and laboratory briefings. Students found the laboratory briefings to be very helpful. Students found the discussion for assignments to be less helpful as most students will simply check the solutions when uploaded to the Moodle page. If there have questions, they will approach the tutor.

Finally, students expressed that the laboratory experiments were challenging compared with those conducted in other courses, something that they liked.

- Dr. Lee was notified, and she plans to modify the style of tutorial to include extra problem sets written in the style of assignments and examinations for students to practice

In PHYS3550 (Statistical mechanics and thermodynamics), which is taught by Prof. M. H. Xie, students found that two of the laboratory experiments: (1) Inverse square law and Stefan's law; and (2) Heat pump and heat engine, to be too simple. Most of the tasks involve just clicking a few buttons in software, or some mundane data recording.

- Prof. Xie was notified. The experiments used in this course were inherited from the previous years, when Prof. Steve Fung was the course coordinator. Prof. Xie will discuss this issue with Dr. Jenny Lee to see whether new experiments can be set up.

Finally, some general issues.

Marker pens sometimes run out of ink during the lecture hours as well as all the tutorial sessions.

Do not to use the 'glass boards' in the CYPP lecture rooms as white boards. Desktop visualizers are installed in these classrooms and should be used by the teachers in order to maximize the learning experience. Indeed, the 'glass boards' are very bad white boards. Even students sitting in the first row have a hard time to see everything clearly.

Students understand that it is University policy that final exam papers cannot be distributed back to the students. They suggest two ways to allow them to check their answers and scores: (1) teachers sends emails to all the students and arranges a time when all the students go to a classroom for checking their exam papers; (2) a period of time is given so that students can go to the department office to check their papers and scores. Students emphasized that the aim of taking a course is not simply to pass and get a grade, but also to understand their mistakes during the exam so that they can learn and improve.

Students find it unreasonable that more difficult courses like PHYS2150 (Methods in Physics I) and PHYS2155 (Methods in Physics II) are not listed as core courses for physics major declaration. Instead, PHYS1150 (Problem Solving in Physics), which is generally considered less challenging, is compulsory regardless of the mathematics achievements by the students during high school. Only very exceptional students are being considered for exemption but students believe this should be made open and routine until the syllabus of the course is made harder.

*Action item: these issues will be reported at the Department staff meeting. The SSCC notes that the first issue has been previously bought up and teachers/tutors asked to bring their own marker pens to lectures/tutorials.

4. 4th-year student representative (Li Junhao)

Students hope to learn how to solve problems in physics through computer programming and numerical methods. This approach allows students to learn about physics problems that are more realistic and which cannot be solved analytically. Moreover, the computer skills learnt are transferable and therefore helpful for finding jobs.

At the CUHK, such courses are offered starting from second year that assume no prior knowledge in computing. These courses include PHYS2061 Basic Computational physics,

PHYS3350 Introduction to simulations of physical systems, and PHYS4370 Computational Physics. [<http://www.phy.cuhk.edu.hk/course/2015-2016/1/phys2061/>]

Students feel that their learning progress in physics is too slow during their first two years, mainly because they think that a portion of the topics covered in year 2 courses were already covered in year 1 courses. When they compared the curriculum for physics degrees at HKU with those at CUHK and HKUST, they found that the courses offered in years 3 and 4 to be similar, but in years 1 and 2 to be quite different, between HKU and CUHK/HKUST. For example, HKUST offered PHYS 1111 General physics I, PHYS 1112 General physics I with calculus, and PHYS 1312 Honors general physics I for year 1 students with different backgrounds (for PHYS 1112, those that have taken module 1/2 in DSE; for PHYS 1312, those who achieved level 5 or above in both DSE Math module 1/2 and physics. Similarly, General physics II are separated in the same manner for different levels. Providing "fast tracks" can help capable students to excel in physics. Sometimes, even when students do not get good grades in the current courses, it does not mean that they are not capable. Instead, it may simply be that they are not motivated by the course contents and level but have no choice but to take it if they want to major in physics (or even switch to other majors they think are more meaningful, interesting and/or useful, etc).

[<http://physics.ust.hk/> --> curricula-->courses list--> undergraduate...]

*Action item: both these issue will be bought to the attention of the Curriculum Development Committee

5. Graduate representative (Ming Yan Chan)

Students requires public access to

- Coffee machine (with coffee beans). There is one in the department library, but it has not been used recently. It will have to be checked first to see if it works properly.
- Microwave Oven
- Cold water machine (there is only a hot water machine in pantry)
- Color printer; there is a color printer available in the front office, and students are satisfied with this solution
- A3 scanner; the photocopier in the front office also works as a scanner

*Action item: these requests will be brought to the attention of the Department

In PHYS 8950 (Seminars Course), which is coordinated by Prof. Jian Wang, students attending seminars in other fields found it frustrating to sit through the whole seminar, understanding a few of the introduction slides.

*Action item: this urgent issue was brought to the attention of the Department during the September staff meeting. Actions are underway to improve the learning experience of students in the Seminars course.