

Consultative Committee for Mathematics in the Natural Sciences

*DRAFT Minutes of a meeting held on
Wednesday 15th February 2012 at 1.00 p.m.,
in Meeting Room 11, Centre for Mathematical Sciences, Clarkson Road*

Present: Dr Sue Colwell (Convenor), Dr Harvey Reall, Dr Mark Spivack, Mr Calum Kennedy-Dietrich, Miss Hannah Williams, Miss Elizabeth Matthews.

Apologies: Dr Robert Best, Prof. Steve Gull, Dr Ben Allanach.

1. Minutes of previous meeting and matters arising.

The minutes of the previous meeting were agreed.

2. Part IA, A course: Mr Kennedy-Dietrich reported

Lecture Course: Dr Dalziel.

The class is very split with about half of the students thinking it is fine, and the other half finding it very difficult. The representative thinks that those who are lost just require practice with the material and that, on average, the pace and level of difficulty are appropriate. The printed notes are very logical and very comprehensive but the lecturer has not left enough space for students to put in the details of the examples. He writes the examples out in full on acetates, and until the last few lectures he was writing out all his notes as well. After the intervention of the course representative he is now projecting the printed notes and just talking through them. This means he can now be more descriptive and he is now partly annotating his printed notes and partly writing on acetates.

The examples sheets are felt to be good, well put together, and with an appropriate range of questions. The attendance at the lectures has been good, especially for the section on Ordinary Differential Equations. It dipped for the section on Partial Differentiation, but that did coincide with a spell of particularly cold weather, and attendance is now rising again. It looks as if some people have switched to the A course from the B course.

The rep pointed out that the Physics Department has a list of useful formulae and he requested that a link to this be provided in CamTools.

3. Part IA, B course: Miss Williams reported.

Lecture Course: Dr Challinor.

Miss Williams wished to add some further comments about the Michaelmas Term's course. The students had requested that more of the examples be filled in and fewer gaps left, in the notes on CamTools. There are often steps missing in the notes, and the students suggested there be a separate document on CamTools with all the steps anyone could possibly want filled in. They also requested a Contents Page and suggested a list of which pages in the notes were applicable to which examples sheet questions. Some of the staff members commented that working this out was part of the learning process. Some of the students felt that some of the examples sheet questions were ambiguous although no details were given.

Lecture Course: Dr Ogilvie.

The lecturer goes at a reasonable pace. He is interesting, understandable and clear, and everyone likes him. One student requested that he should stop handing out printed notes so students were forced to make their own notes, but this seems to be a minority view. There was a request that after each lecture he should point out which examples sheet questions they could now attempt. The examples sheets correspond well to the course, but it was felt there was too much variation in difficulty. The IB rep pointed out that in Physics the examples sheets questions are labelled to indicate their difficulty.

The attendance at the lectures seems to be stable, but there is no longer a space issue in the lecture theatre although there was one at the beginning of the term.

The students repeated their request for a short break in the middle of the lectures. They also request that the lecturer should stop latecomers walking up the middle of the lecture theatre as they find it very distracting.

4. Part IB course: Miss Matthews reported.

Lecture course: Professor Townsend

The lecturer speaks clearly and writes legibly and the students like him. He has given a complete handout and then writes out everything which they find quite helpful. He did not put the figures in the handout, and has not left any space for them. He writes more on the overheads than is in the handouts and has left no room for the students to make notes so they would like more space in the handout at the bottom of the page, or as a wide margin.

The student rep. pointed out that some of the people who did the A course are a bit lost in places. There was then a general discussion as to whether the Maths A course in IA actually provides a sufficient foundation for Natural Sciences Maths in IB. The student rep. pointed out that although the lecturer does run through the material that was specific to the B course, he sometimes does not do it thoroughly enough for the ex A course people to really grasp it. For example, the method of solution of differential equations by separation of variables was used in the Michaelmas Term with only an outline explanation. It is currently being used again with a much more thorough explanation, and some students are only now getting to grips with it. Other examples are Fourier series, and convergence of series. The Michaelmas Term's lecturer did hand out an "Examples Sheet 0" which covered some of the material needed at the beginning of the year, but other material emerged later. It was requested that the lecturers specifically comment when they are using "B course material" and that they ensure it is fully explained on its first occurrence.

The examples sheets are good, but many supervisors are getting ahead of the lectures. The lecturer handed out a sheet giving hints and comments as well as answers to the first examples sheet, about two weeks in to the term, and this was found very helpful. The first examples class was due to take place on the afternoon of the meeting, and the lecturer had stated which Tripos questions he would be covering. He has done a lot more examples in the lectures than last term's lecturer did, and the students find this helpful.

The attendance seems to be constant, and the lecture theatre is about three quarters full.

People are still asking conceptual questions in lectures which interrupts the flow, and many students think this is inappropriate. They request that the lecturer make an announcement stating that students should feel free to point out typos etc. or to comment when the entire class is lost, but that if they have individual questions they should approach him after the lecture.

6. Any other business.

There was a discussion about which students should be taking the B course and which should be taking the A course. The students thought that the advice given in the schedules was correct, given the difference in approach between the courses, but they felt that Directors of Studies did not always follow it. They also pointed out that it would be better if the B course could be presented as "only for those enthusiastic about mathematics for its own sake" and the A course as "for those who view maths as a tool for their other subjects" or somesuch. At present they feel that the B course is presented as "the hard course", and some students feel that they will be failing if they do not attempt it.

The students confirmed that the Book by Riley, Hobson, and Bence was still found useful for reference, but few used it to learn new material.