

Consultative Committee for Mathematics in the Natural Sciences

*DRAFT Minutes of a meeting held on
Thursday 12th February 2015 at 5.00 p.m.,
in Meeting Room 10, Centre for Mathematical Sciences, Clarkson Road*

Present: Professor Ben Allanach, Dr Sue Colwell (Convenor), Dr Austen Lamacraft, Dr Mark Spivack, Mr Oliver Dutton, Mr Anushan Fernando, Ms Amelia Mitchell.

Apologies: Dr Alex Thom, Dr Harvey Reall.

1. Minutes of previous meeting and matters arising.

The minutes of the previous meeting, which had not been circulated earlier, were tabled, and the convenor invited comments and corrections by e-mail.

2. Part IA, A course: Ms Mitchell, reported.

Lecture Course: Professor Manton.

There had been a lot of feedback on this course. The major issue is that students are confused as to what material is on their course, and what is not. The lecturer has handed out a complete set of printed notes, but he has told the students that some of the material is only for B course students and they don't need to know it. He then writes out his own notes in the lectures and students have to copy them down. He says that his notes are "what they need to know", and some students highlight the printed notes, but what the lecturer writes doesn't always correlate to a section of notes. The result is that students are very confused as to what material is actually included in their course, (and are not in the habit of looking in the Schedules).

Some students like having to write their own notes, think it helps them pay attention and find it useful to have two sets of notes. Others see no point in writing out information that is in the printed notes, and find that trying to copy what the lecturer has written makes it harder for them to concentrate on what he's saying, especially as his writing is rather small and difficult to read. Opinions on the notes themselves were divided with some students thinking they are very good, but others saying that they aren't detailed enough, are difficult to navigate, are cramped and lacking in examples. The notes are given out in sections, with two A5 pages on each A4 sheet, and are stapled in a confusing way. The students would have preferred full size A4. They would also like the lecturer to put his own notes on Moodle.

Some students feel that the lecturer isn't always clear, the presentation is sometimes jolty and unorganised, and they are not always certain where a particular section is leading. On the other hand some feel he spends too much time introducing topics and talking about their backgrounds. For example he spent a long time motivating pdes without saying what they were. The students would like more more time spent doing actual worked examples with actual numbers, rather than deriving things from first principles and performing proofs. They feel that most of the course so far has been quite abstract with little reference to problems they might see in the exam. There was a comment that some graphs might have helped them understand the section on partial derivatives more easily.

The order of the questions on the Examples Sheet doesn't always match the order in which the lecturer has taught things. This means supervisors are unsure what questions to set and students are unsure as to what questions they should be able to do.

Some students have chosen not to attend all the lectures as the material is familiar to them from Further Maths A level, and the lecture room (the large Chemistry lecture theatre) is about half full, except on Saturday mornings.

3. Part IA, B course: Mr Dutton reported.

Lecture Course: Dr I. Borzym

The lecturer is very clear, she is audible and her writing is legible, but she sometimes goes off on digressions which the students find interesting, but they unsure how useful they are. In the lectures she uses different colours to highlight the important parts and the non-examinable parts of the notes, but these do not show up in the (black and white) printed notes. The booklet of notes is quite large and the students would appreciate an index.

The level of the course is in general appropriate; some of the material is still a repeat of A level and the students think she goes through these parts too slowly. They are also unsure as to why she treats some parts of the course very rigorously, but apparently dispenses with rigour in other parts, and they are generally unsure about how much rigour they need to use.

One minor comment was that the lecturer never actually explained what a partial derivative was, and the student rep commented that the example used to illustrate damped oscillations was identical to the one used in physics, and he would have appreciated seeing a different one.

The examples sheets are good, but the students would like some more stretching examples.

There are still a lot of latecomers in lectures. The lecturer shouts at those who enter late, but those who are already there find this a bit distracting.

4. Part IB course: Mr Fernando reported.

Lecture course: Dr C. Thomas.

The students appreciate the match up in the material and the notation between the maths and physics courses, e.g. in the section on variational calculus. It does mean that many people see the same thing twice, but most find it helpful.

The students enjoy the lecturer's style and like the fact that he takes a couple of minutes in the middle of a lecture to talk about something different, e.g. a famous mathematician. On the other hand although he is audible, his writing is not always legible, and as he appears to be thinking things out as he goes, he does sometimes make notational mistakes. He gives out notes with gaps, in sections of about half a dozen lectures, and puts the complete notes on CamTools later. The students would appreciate it if the completed notes could be posted at the end of each lecture. Also, because the notes he uses in lectures are paginated differently from the students' version they sometimes have trouble identifying he right gap to fill in.

The examples sheets are good, and there have been no complaints about their difficulty.

The first examples class had had to be postponed, so had not taken place by the time of the meeting. The lecturer had encouraged students to suggest specific Tripos questions they would like to go over.

5. Any other business.

Further to the previous discussion about relative numbers attending the A and B courses, the B course rep reported that many DoSs and supervisors had told students to ignore the advice about obtaining 95% in their Further Maths A level modules.

There was a request for more pre-arrival information about the distinction between the A and B courses, and for some examples showing the difference in approach to be put on the website. There was also some discussion about how the current pre-arrival information could be better publicised.

In response to a question about books, the IB rep confirmed that Riley Hobson and Bence was very useful, and the IA reps said they did not need to use books, as they had good supervisors.