Consultative Committee for Mathematics in the Natural Sciences

DRAFT Minutes of a meeting held on
Friday May 6th 2016 at 4.15 p.m.,
in Meeting Room 11,
Centre for Mathematical Sciences, Wilberforce Road

Present: Dr Sue Colwell (Convenor), Dr Austen Lamacraft, Dr Jorge Santos*, Dr Mark Spivack, Dr Alex Thom, Dr Christopher Thomas, Ms Eleanor Sheekey, Mr Deaglan Bartlett, Mr Peter Gerlagh.
* Dr Santos did not attend the meeting until after the IA A Course had been discussed.

1. Minutes of previous meeting and matters arising.

The minutes of the previous meeting were agreed.

The reported clash between the first IB Examples Classes of the Lent Term and the introductory talk for IB students interested in taking Part II Astrophysics has been reported to Astronomy. They will check the timings and try to avoid the clash next year.

2. Part IA, A course: Ms Sheekey reported.
Lecture Course: Dr Santos

Most of the feedback has been very positive, and people think the lecturer makes the material interesting. Some people would like the notes to be put up more in advance, as they would like to try to get ahead. The notes are in the form of Powerpoint Slides, which the students like. The lecturer talks through the slides, but he does also write on the screen. So far the material is very familiar to those who have done further maths A Level. The lecturer goes through a lot of theory before he does examples, and the students think it would help if he did examples earlier. He does Tripos examples when possible, and gets the students to have a go before he goes through them. People are confused as to whether they need to know about suffix notation or not.

The examples sheets are thought to be appropriate in level and coverage. The attendance has remained static with the lecture theatre (the large Chemistry Lecture Theatre) being about three quarters full on Tuesdays and Thursdays and a bit less full on Saturdays.

3. Part IA, B course: Mr Bartlett reported.
Lecture Course: Dr O'Donnell.

Overall the notes are much clearer than last term and the layout is better. The key points are in the printed notes, which are thought to be pretty good, but the students do have to add things themselves. The lecturer is audible, and legible, but e.g. some suffices get muddled up although the lecturer does read them out as he is writing them. People enjoy the lecturer's style; he is entertaining, and makes the theory accessible. He explains things well and simply.

The pace is reasonable; some felt it was a bit slow, but people don't want to get ahead. So far the students have had five lectures on Matrices and one examples lecture (the lecturer had to miss one lecture and will give an extra one later). They have just started on PDEs.

The Examples Sheets seem to cover everything and there is a good spread of questions at about right level. The attendance has been good, even on Saturdays.

4. Part IB course*:* Mr Gerlagh reported.
Lecture course: Professor Kent.

Some students feel that, after the section on Normal Modes, the pace of the lectures became too slow, and they would prefer the lecturer to go faster. He hands out notes which are complete, with large margins and have theory and examples alternating. He writes a bit during lectures but it is always extra material, either material that is not strictly necessary but is helpful, or just extra but interesting, e.g. quantum computing. Some students feel that the lectures and the handout are not very well organised.

The student rep did not attend the Examples Class, but thinks they are a good idea. Some people were not aware of when they were, and had arranged other commitments so the attendance was probably not high.

By and large the material is felt to be quite easy, with the exception of Representation Theory. The student rep, who intends to study theoretical physics, would have liked the course to be more formal, and feels that sometimes examples are used instead of proper definitions. He does, however think the course is a good complement to physics.

About half the students are not actually going to lectures but are relying on studying the handout for themselves. The lecture theatre is not very full, and the estimated attendance is roughly the same as, or a bit less than last term.

5. Any other business.

There was a general discussion about the difficulty of the IA courses, and the preparatory material and advice sent out. The IA A course rep said that everyone had found the course challenging, but they had learned a lot of new stuff, and it has been worth it. The IB rep said the course had been easier than expected and the pace was about right in the Michaelmas Term. In the Lent Term people found it harder, and the notes were not as good. Colleges did try to put people off the B course, and had got it about right as not many people changed. The introductory workbook was felt to be too easy and the students think it should have some more challenging questions.

The students would have liked to see matrices lectured earlier. Those on the syllabus committee said they would look in to this, but felt that there was little scope for displacing other material. The students asked again whether ODEs could be illustrated with an application that wasn't the SHO which they had mostly met elsewhere.

There was a discussion about books; the student representatives said that most people don't use books much, relying instead on their lecture notes, or on material found on-line, but the IA A course rep said that she had found the book by Stevenson useful.

The Committee thanked the student representatives for their efforts throughout the year and wished them well in their examinations.