Consultative Committee for Mathematics in the Natural Sciences

Minutes of a meeting held on
Thursday 16th February 2017 at 12.00 noon,
in Meeting Room 9, Centre for Mathematical Sciences, Clarkson Road

Present: Dr Sue Colwell (Convenor), Dr Mark Spivack, Dr Alex Thom, Dr Christopher Thomas, Mr Dobrik Georgiev, Mr Alex Petrosyan, Mr Sridhar Prabhu.
Apologies: Dr Austen Lamacraft, Dr Jorge Santos.

Dr Thomas left the room for most of the discussion about the IB course.

1. Minutes of previous meeting and matters arising.

The minutes of the previous meeting were agreed.

2. Part IA, A course: Mr Georgiev reported.
Lecture Course: Professor Manton.

Overall the students are happy with the course. The lecturer has distributed handouts with gaps, and he has put these on Moodle, but what he writes in lectures doesn't routinely go up there. The students would appreciate it if the notes he makes in lectures could be put up on-line.

Some students find that the spaces in the handout aren't big enough for the material they are supposed to write down. Sometimes the lecturer does things in lectures slightly differently from the way he did them in the handout and the students find this confusing.

He spends most of the lectures going over theory but he does also go over examples which the students find very helpful, and he gives them examples to do on their own. The students would like more worked examples as they believe they learn more from them than by listening to him going over the notes that they could read on their own.

So far the lecturer has handed out the first two examples sheets but not the third. He is audible, but sometimes his handwriting is too small and illegible. The student rep believes that many of the students taking the course, especially those who have done Further Maths A level, are not actually coming to the lectures although they did come to the first lecture to get the handout. He estimates that the current attendance is about 100 or 110.

There was a comment that the lectures start at 9.00 but often go on past 10.00, but consultation with the lecturer ascertains that this in not in fact the case.

There have been a lot of requests for the lectures to be video-recorded and put up on Moodle so that people could review them later. This is routinely done in Chemistry, and, as was pointed out, is common practice at some other Universities. The Convenor commented that although individual students with special needs could, with the lecturer's permission, already record the lectures, it would be a big change of practice for lectures to be routinely video-recorded. The matter was not one on which this Committee could act, it could only pass on the request to other Committees. Those Committee Members who are also members of the Syllabus Committee agreed to raise it at their forthcoming meeting.

3. Part IA, B course: Mr Prabhu reported.
Lecture Course: Dr R. Rafikov

The student rep had circulated a Google form and had had 70 responses most of which were very positive. The students think the lecturer is very good, and explains everything extremely well and carefully. He manages to make the material interesting and he makes brief but relevant digressions.

He has provided A5 handouts with gaps. He goes through them in the lectures and fills in the gaps in his A4 copy of the handout which means that he has room, but the students sometimes do not. Some people have complained that the complete handouts are not on line, but the student rep pointed out that in fact they are. The lecturer also uploads scanned copies of the notes he makes in lectures.

Some people find the course too slow, and would have liked a more formal mathematics course. They also feel that the lecturer could have compressed the first section on differential equations as it was mostly familiar material. Others find it a good pace to learn material and sort out any problems and say it "allows the information to settle down". The lecturer does a lot of physical examples, which some of the Computer Science students find inappropriate as with the new 75% Computer Science option some of them are not doing any other Natural Sciences course.

The example sheets are comprehensive, and were all handed out at once, but no answers have been handed out yet. Some people feel the questions involve too much laborious algebra, some would like harder questions, some would like more pure mathematical questions, but others would like more basic questions.

Although the lecturer doesn't use the microphone he is audible, but there are some concerns about the legibility of his handwriting. Attendance is stable and good, and the room is full even on Saturdays.

There was a request for the lectures for this course (as well as the A course) to be recorded and uploaded on to Moodle.

4. Part IB course*:* Mr Petrosyan, reported.
Lecture course: Dr C. Thomas.

The students find that the lecturer's delivery is rather low key, and his speech is rather quiet. There have been problems with the feedback on the microphone, and in fact when he dispensed with it the students found he enunciated more clearly and was more audible. The lecturer provides handouts with gaps, but some students find them ineffective as they can not skip ahead. Also, the blanks don't correspond to key results so they don't quite see the point. The pace of the lectures themselves is slow enough so that students can keep up even if they are making their own notes.The handout with gaps is on Moodle, but the students would like the complete handout to be put there.

The Examples sheets were felt to be better than last term with a better balance of questions, both in material and in length. The rep thought that the questions on ordinary Lagrange multipliers could be omitted as the material had been covered last year, but that there should be more examples on calculus of variations with constraints. The Staff members commented that the examples sheets were a resource, students were not necessarily obliged to do every question and they should take their supervisor's advice. There followed a discussion of how supervision practices differed between colleges.

The first examples class had been well received. The attendance was good, but people came and went so it is hard to estimate numbers. The lecturer ran out of time, and some students felt he spent too long going over bookwork when more explanation of the problem solving bits would have been more helpful. His handwriting was sometimes a bit hard to read, especially when making corrections, but he did read out what he wrote down, so it was easy to keep up with him.

Attendance at the lectures has been good, and in general people only skip them for good reason.

There was some criticism of the MathComp course, in particular the rep said that remote submission is difficult, and so it discriminates against those who are unable to stay in Cambridge after the end of Full Term. The Convenor and Dr Spivack, who run the course, commented that remote submission should be easy these days, and the warnings in the handbook were just to emphasise to students that if they chose to submit remotely, it was their responsibility to ensure it worked. There was also some criticism of the content of the course and the staff members of the Committee explained that it would be significantly updated in the coming academic year, so no changes would be made this year.

5. Any other business.

The results of the second week questionnaires had not been circulated in advance, but were available at the meeting and the student representatives were given time to read them. The comments were generally in line with those they themselves had received. One of the staff members commented that he was disappointed at the low response rate for the questionnaire.

The IA B course rep commented that he found the on-line version of the book by Riley Hobson and Bence very useful.