14 January 2009

To: Senior Mathematics Tutors (also by email to all college mathematics tutors)

Hilary Term 2009 – Teaching Information

Pedagogical Issues

1. Overall Mods Lectures MT 2008 Course Questionnaire Returns

   Overall there were 751 returns and they show a high level of satisfaction with Mods lecture courses. From the questionnaires, 95% of respondents attended most of the lectures, and there was a high level of satisfaction with College provision for tutorials (90%). There are some issues to take note of: we need to better organise the problem sheets in the first 2 weeks now we have two new short courses (intro to complex numbers and Reasoning and proofs) as this has caused some problems in colleges – students say they were not supported for these courses. There were similar responses to last year in terms of pace of lectures: 75% felt they were about right (74% last year), 16% felt they were too fast (18% last year), 20% felt problem sheets were too challenging (18% last year). In this, their first term students are adjusting to the University environment and we probably need to take this into account a little more. As usual some students (9%) wanted more worked examples and disappointingly some students (7%) felt that lectures weren’t interesting. We do need to look at how many questionnaires are returned as there were some lower numbers than in previous years.

   The advent of on-line notes: If the lecturer posts the notes at the end of the course – students complain, whereas actually we need to educate our students to realise what on-line notes are for. They complement a lecture course and never replace it. If there are physical experiments taking place, these are some of the most important things to see in action. Taking ones own notes, annotating them with what the lecturer describes, capturing understanding – these are the things that can only be gained from attending the lecture. This is what could be described as actively taking part in a lecture, or “active learning.” Seeing how the experts see the subject, walking through the examples with someone showing you all the minefields, seeing how topics mesh together, these are all acquired by writing, listening, and thinking through the theory with someone to guide you.
Action we might want to take:

a) Dynamics: Did we ought to video these lectures one year for our web site? MIT does this very successfully via Wikipedia.

b) Students mention about (high) the cost of printing notes in college: the dept needs to have a think about this.

3. Bibliographies

Please continue to encourage students to include a bibliography at the end of each problem sheet. This will encourage them to appreciate copyright sources and to learn correct citation.

4. Lecture Note Taking Skills

I draw to your attention comments from faculty who have conducted peer review of lectures. Some concern has been raised that students are not taking detailed notes when attending Lectures (even at Part B).

5. Tutors Forum

We are hoping to start a tutor's forum, via these pages in the first instance. The idea is that with many faculty retiring and new faculty arriving with limited experience of the collegiate system, we should try to find a way to retain this expertise. Each College delivers tutorials in a slightly different way. Balliol have very kindly agreed to start the ball rolling, hopefully next term.

Practical Arrangements

1. MAPLE

- The Mathematics with Maple course will continue this term. All first-year undergraduates taking Mathematics or Mathematics & Statistics must complete two Maple projects. These count towards Moderations. The deadlines for these projects are Friday 12 noon, Weeks 5 and 8. Project handbooks are available from reception at the Mathematical Institute or online at http://www.maths.ox.ac.uk/courses/material/4546

This term, the Maple slots in Week 1 will be the same as those for the odd weeks of Michaelmas Term, to allow those who did not have a session in Week 1 last term to catch up. So if you were allocated on the odd weeks, please attend in Week 1 as usual in the same room as last term.

From Week 2 onwards, there are no fixed hours for each college, so you may drop in whenever suits you within the following times:

Weeks 2, 3, 4, 6, 7 Mon-Fri 3pm-4pm
Weeks 5 and 8 Mon, Tues 2pm-4pm, Weds, Thurs 2pm-5pm, Fri 10am-12noon

The MAPLE license needs to be renewed at the end of each year. Students can do this by logging onto the OUCS website at https://register.oucs.ox.ac.uk and choosing "software" from the options on the left-hand side of the screen and then selecting maple from the list of software that appears.
Dr Wilkins (Maple Projects Coordinator) will be giving a lecture for all students taking Maple. It will be held at the University Museum from 2-3pm on Monday of Week 1.

- **Maple for Students Transferring to Mathematics**
  Case 1 - If a student transfers from a mathematical joint school (Mathematics & Computing, Mathematics & Philosophy) to single honours maths (or Mathematics & Statistics) before the end of week 7 of MT, they would be allowed to submit their Sample projects by noon on Monday week 1 of TT. (Ideally one project would be submitted before the end of HT but that would be for a tutor to guide).

  Case 2 - If they were to transfer before the end of MT week 8, they would need to submit their maple projects by noon on Monday of week 2 of TT.

  Case 3 - If s/he missed this s/he’d be "incomplete" at the examination board in July 2009.

- **Late Submissions**
  Candidates who miss the above deadlines may ask their college to apply to the Chairman of Mathematics for permission to submit late. Where there is a valid reason, the Chairman would normally approve the late submission without penalty. Where it is deemed that there is no valid reason the Chairman of Mathematics will advise the Moderators to apply a penalty of at least 5\% of the marks.

2. **Mathematics and Philosophy**
A revised Handbook for this course is accessible via the website
https://www.maths.ox.ac.uk/current-students/undergraduates/handbooks-synopses/mathsphil.
A hard copy is being sent to each first year student.

Please note that Mods Probability and Graph Theory are an option for Part A Mathematics and Philosophy students for the current academic year.

3. **MODS AND PART A COLLECTIONS**
   on Michaelmas Term lecture material have been revised, and new versions are now on the web. Please note that there is overlap with questions set last year.

   You will need your Mathematical Institute IT username and password to access these and some other material at https://www.maths.ox.ac.uk/teaching-staff/restricted/teaching-material/.
   If you have difficulty with this please contact the IT staff via help@maths.ox.ac.uk.

4. **Hilary Term Lecture List**
The up-to-date lecture list, along with details of changes which have been made since the printed version was produced, can be found on the website;
https://www.maths.ox.ac.uk/notices/lecture-lists.

   Please note that any late room changes will be posted on the web however there have been none to date.
Note the changes to the HT Lecture list these have all been updated on the web lecture list.

- For Mods students taking Mathematics and Computer Science note that as usual they take our Linear Algebra lectures.
- Part A - **Group Theory and Introduction to Fields**
  
  Please note that there was an error in the posted Hilary Term lecture list in the above lectures which has now been corrected. Introduction to field will be lectured in weeks 1-4 and Group Theory will be lectured in weeks 5-8.

5. **Classes**

   In some areas there is a shortage of tutors and we may have to run classes with more than 12 students. Where this seems likely Helen Lowe will email you to alert you. She will ask colleges if they wish to withdraw their students. If the students DO attend, the college will be billed at the usual rate.

6. **Exam Entry**

   Mods and Part A students are entered automatically at registration.

   For Parts B and C, students should enter for their exams via the college office by noon on Friday 30 January 2009.

   Part B students should declare on their exam entry form their intention to take either the three-year (BA) or four-year (MMath/MMathPhil) course. From that point onwards the registration will be stored officially in the University Student Records system, and if the college wishes to check/change the registration after that date they will have to do it via that system.

7. **History of Mathematics**

   Please note that mini-projects must be handed in to the Examination Schools by noon on Friday of week 9 this term. Further details will be communicated to students.

8. **Undergraduate Ambassadors Scheme**

   Please note that the deadline for journals and reports for the Undergraduate Ambassadors Scheme is noon on Friday of 0\textsuperscript{th} week Trinity Term.

9. **Lecture List for 2009/2010**

   Bids for Mods and Part A Lectures will be coordinated shortly. Please note that Part A Analysis for Michaelmas Term 2009 is now vacant. Please contact Charlotte Rigdon if you wish to bid for this (charlotte.rigdon@maths.ox.ac.uk).

10. **Careers Event**

    The Careers Service will be holding a Careers Event for undergraduate Mathematicians at the Mathematical Institute on Friday 13 February from 4-6pm. Details will be sent to tutors and students by email.
11. International Student Evening
A Mathematical Evening for international students is being held on Monday 26 January 2009. The programme for the event is as follows:

**Monday 26th January 2009, Mathematical Institute, L2 lecture theatre**
6.00pm: Introduction
6.05pm: Welcome from the Chancellor, Lord Patten
6.35pm: Cultural connections – Dr Heather Bell
6.50pm: Professor Marcus du Sautoy, (approx 1 hour)
7.50pm: Round-up
8.00pm: Social event International food celebration (Common Room)
9.00pm: Evening closes

12. Examiners Reports
For the first time external examiners reports are now posted on-line they can be found at [https://www.maths.ox.ac.uk/notices/exam-reports](https://www.maths.ox.ac.uk/notices/exam-reports)

13. Pathways Review in Applied Mathematics
The Pathways Review in Applied Mathematics working group met for the first time on 4 December 2008. The minutes of the meeting and the initial overview can be found at [https://www.maths.ox.ac.uk/notices/committees/teaching/reports/restricted](https://www.maths.ox.ac.uk/notices/committees/teaching/reports/restricted)

14. Amendment to Part A Synopses
Please find enclosed a supplement to the handbook for undergraduate mathematics courses. May I draw your attention to the amendments made to the Part A Synopses. The Introduction to Fields had been revised but the correct version had not been posted. Students have been issued with the attached supplement see pages 2 & 3 of this.

With best wishes

Dr A G Curnock