**JOB DESCRIPTION FOR TEACHING ASSISTANTS**

Intercollegiate classes are organised by the Mathematical Institute on behalf of colleges to support Part B and Part C lecture courses. Teaching assistants are appointed to help class tutors with these classes and are responsible for:

- marking student work;
- recording students’ marks and attendance on Minerva, promptly after each class;
- liaising with the class tutor prior to each class;
- attending and assisting with every class.

It is hoped that the job will provide you with useful experiences and give you an opportunity to develop your teaching skills. To have had some teaching experience is likely to benefit your career, especially if you intend to continue in academia, but also more generally as it should help you to develop your communication skills.

### Pre-Term Meeting

The lecturer should call a pre-term meeting for the teaching team which you should attend.

### Training Sessions

All new TAs should attend a class teaching seminar, or if they are unable to attend they should be properly briefed on their role. The next class teaching seminar is on 3rd October. All new DPhil students are already registered to attend part of their induction programme, if you’re from another department please contact Jasmine Smith (Jasmine.Smith@maths.ox.ac.uk) to register.

### Payment Rates

The payment rate for 2017-18 per set of four 1.5-hour classes for ICC TAs is: £81.60 (for attendance at and participation in the classes, based on a nominal hourly rate of £13.60 per hour), plus £5.85 per script marked. A set of six 1-hour classes will be paid for pro rata. This is under review until the University’s teaching rates for 2017-18 are confirmed, when there may be a small increase to the payment rates.

### The Class

TAs are required to attend each class. How they participate will be decided in conjunction with the class tutor, but the TA should demonstrate one or more of the problems, and this is a particular requirement for those who are in training. The TA can also help by encouraging students to participate in the class and pointing out particular problem areas (without exposing particular students). At some stage during the class, students should have an opportunity to raise any individual queries. Where a student is not attending a class it would be helpful if the TA contacted Jasmine Smith (Jasmine.Smith@maths.ox.ac.uk) so that their registration can be checked before student numbers are frozen at the beginning of week 4.

Note that you are only expected to mark work for those students who are registered for the class on Minerva. You are not required to mark any supplementary material set specifically for Masters students. Furthermore you are not required to mark work for graduate students who are solely sitting in on the class as observers.

### Pre-class meeting

Some class tutors like to be informed of how the students have done by e-mail, and there should also be a pre-class meeting of about 10-15 minutes. This is an opportunity for the TA to share with the class tutor how the students have done and to help the tutor plan the class. Once the students’ performance is known, it will be possible to decide which topics and problems (or parts of problems) should be prioritised in the class, to ensure the best use of time.

### Marking – Please read carefully and see over

- Students submit work for each class, which is marked by the TA in advance (though the class tutor may mark one or two scripts). Payment varies with the number of students in the class. Model solutions will be provided, though the TA should review and reflect on the problems, before consulting the solutions.
- Research shows that students benefit most from feedback on their work, rather than grading. So you should write brief comments on the work; for instance explaining where the student has gone wrong, how it could have been done better, how the presentation could be improved, or indeed that an argument is particularly elegant or inventive. Try to be reasonably positive and encouraging.
- Please also give each question a grade and also give an overall grade for the piece of work and keep a record of the grades. You should give either a numerical mark or a quality mark for each question. These translate roughly as follows. If a question were marked out of 25, then 19-25 would be an alpha, 12-18 a beta and 6-11 a gamma with additional pluses or minuses to indicate where in the range the mark falls. An overall grade might be assigned as follows:
  - **Alpha:** A student has answered most questions with an alpha score (possibly with one or two betas); has demonstrated a very good grasp of the topic, with possibly a few minor errors. Overall shows flare.
  - **Beta:** A student has mostly scored beta for each question (with, possibly, one or two alphas or gammas). Has answered the questions well and has demonstrated a sound knowledge of the topics.
  - **Gamma:** The work is poor, with mostly gamma scores (maybe with a few betas or alphas). It is short
on details or precision. The student appears to lack understanding.

- See below for more information about marking.

**Student Hand in Area**

The problem sheet hand in area is by L2 on the mezzanine level. Each class will be allocated a mail box which will be labelled with the details of their class and an identification number. TAs can collect work from the mail boxes by entering through the side door of the hand-in area, using their University card, and going through the door to their left. This takes you to the back of the mail boxes (also labelled with the box identification numbers). Please be aware that students may occasionally mistakenly put their work in the box above or below the correct one. All mathematics DPhil students should automatically have access to this area but if you have any problems please contact Jasmine Smith (Jasmine.Smith@maths.ox.ac.uk) or door-entry@maths.ox.ac.uk. Please note that you will have to activate your card using the free standing card reader in reception before trying to access the hand in area.

**Reports**

TAs are asked to record students’ attendance and grades on the Minerva Undergraduate Classes Database promptly after each class. A report comprising those grades and overall comments on each student should be completed by the class tutor with input from the TA by the end of seventh week.

**Further discussion about marking:**

Whilst there is bound to be some variation, it is expected that the marking for a 90 minute class should take around 20-30 minutes per script. Additional preparation time will inevitably vary with how familiar you are with the topic, but, for a topic with which you are reasonably familiar, this might take roughly 1-2 hours. If you are consistently taking longer than this you should discuss it with your class tutor in the first instance.

However, often those new to marking will find that they are quite slow for their first few sets of scripts, but once they become more experienced they should hopefully be able to do a respectable job in around 20 minutes per script. Note also, that marking is a nonlinear process; you get faster as you progress through the scripts. For each set of work TAs are asked to give grades (or marks) for each question together with an overall grade. But it is also very important to give individual feedback by writing comments on the work. However, there is no need to write more than a short sentence or two, nor generally to complete the solution. In general:

- Where you spot an error, explain briefly. Possibly, if one comes readily to mind, give a counterexample or hint.
- Give praise where it is due. So if something is particularly elegant or inventive, say so.
- Indicate if you think an argument or the presentation has omissions or could be improved or clarified.

Remember that students sometimes lack confidence so try to be reasonably positive and encouraging.

Before starting to mark, you should thoroughly review the questions, and reflect on those that you think are less than straightforward before consulting the model solutions. The model solutions are important so that you know what the lecturer’s expectations are. It may help to speed up the marking if, once you know which are the stronger students, you mark their work first.

The nature of marking will vary with the subject, so these notes need to be interpreted in the context of the course for which you are marking. Note that you are not expected to find careless errors in the midst of long calculations, but you should try to satisfy yourself that the error is indeed careless rather than substantive. If an error cannot be addressed briefly, and if the problem will be covered in class, then it is fine to refer to the class and put “see class”, but you should still try to indicate errors or misconceptions, and you should help to ensure the problem is covered in class. Sometimes a student’s work may be quite muddled or confused, but one of the aims of the marking is to help students to learn presentational skills. So, if a student’s solution is difficult to follow, for example if this is a problem where axioms must be checked and this has not been set out clearly, then, rather than spending ages trying to decide if everything has been done correctly, say that the axioms must be checked carefully and that this must be set out properly. Not all students will necessarily use the same method and you will need to use your professional judgement about whether this method is correct, but when in doubt you can always consult the class tutor.
Some suggestions for presenting solutions:

You should have some choice of the question(s) you demonstrate in the class and have enough notice so you can prepare your presentation. You will need to thoroughly understand the question and its solution. Simply copying the model answer onto the board will not suffice. Most people find they need to do the problem themselves, but for some it may be enough to review it carefully (as above) and then look at the model answer.

You might like to think about how you will introduce and give context to the solution, and how you will explain it. Your aim should be to try to help the students see how someone might have thought of this solution, and to use the problems as a way to review and deepen understanding of topics from lectures. If the students have all done one part correctly it may not be necessary to go through that part, but you may need to say something about it to give context to the rest of the question. Typically a TA should use the same approach and notation as the lecturer. You need to make the best use of time, so if there are routine calculations it might be better not to spend time going through them in detail on the board, so a brief summary might be appropriate. For example, if the problem were to require the calculation of the eigenvalues or eigenvectors of a matrix it should not be necessary to show this in a third or fourth year class.

Take time to consider carefully your board use, what maths should be written up and stay up and what things can just be said out loud. When using the board be careful to address the audience as much as possible, rather than the board, and to write clearly and legibly. Don’t stand in front of what you have just written. Getting audience participation is not always easy, but try to involve all the students. Maybe ask questions, about what might come next, or a piece of theory you will need, or a standard example they might know. Watch the students and encourage them to say when they don’t understand, but be careful to react positively when students ask questions and be patient when they don’t understand.

If you want more help or advice, please consult your class tutor or the FTA or DUS (see below). In particular lecturers are required to provide model solutions and in a timely manner. So if there are problems with this, please contact the FTA or DUS in confidence (or ask your class tutor to do so).

Contacts
Dr Vicky Neale, Faculty Teaching Advisor (FTA) (vicky.neale@maths.ox.ac.uk)
Dr Richard Earl, Director of Undergraduate Studies (DUS) (earl@maths.ox.ac.uk)
Jasmine Smith, Academic Assistant (Jasmine.Smith@maths.ox.ac.uk)