

Class Teaching

Why teach?

- It can be very rewarding, seeing students learning under your guidance;
- It gives you good experience;
- It pays quite well;
- It helps the department.

Classes

Classes are problem-solving sessions. Problems are set by the lecturer of each subject.

Classes are for:

- **undergraduates:** Second year optional subjects, plus all third and fourth year subjects (but some colleges opt out of some classes).
- **postgraduates:** mainly MSc students, plus some Probationary DPhils.

There are also tutorials, which are normally arranged by colleges, and for about two students.

Each class has a marker, and a tutor. It is possible to do marking, or class teaching, or both.

Administrative arrangements

- Subjects available advertised by the Academic Administrator `Leanne.Carveth@cs.ox.ac.uk`.
- Discuss class timetable with Leanne or Jo and with the lecturer, well in advance of term.
- Courses with practicals normally have four classes; courses without practicals normally have six or seven classes.
- You set the deadline for when you want the scripts handed in: normally lunchtime the day before; Jo tells the students.
- Book room (with `Jo.Leggett@cs.ox.ac.uk`).
- Get question sheets from the lecturer or from the web (<http://www.cs.ox.ac.uk/currentstudents/>).
- Get model answers from the lecturer or `/users/courses`.

Marking

- Do the questions yourself: do not just follow the model answer.
- Have a policy for dealing with late scripts.
- Marks do not count towards the students' final grades, but are an essential part of the feedback we give to them and to tutors.
- It is normally easiest to mark each question on all scripts rather than taking the scripts sequentially: it is easier to keep track of the details.

Marking

- Try to mark fairly: give credit to students for what they have achieved.
- Write comments on the work, explaining where the student has gone wrong, how he/she could have been done better, or how the presentation could be improved.
- Try to be encouraging: indicate when an argument is particularly elegant or impressive.
- Do not write out the model answer for the student!
- Correct the English, if appropriate.
- Do not nit-pick too much.

Marking

- Give each question a grade on the following scale:
 - A: nearly all right, say more than 75%;
 - B: more than half right;
 - C: some progress, but less than half.

with pluses and minuses as appropriate; the grade is intended to be indicative rather than 100% accurate.

- Give an overall grade for the piece of work, based on your grades for individual questions.
- Aim to spend 10–15 minutes per script.
- Enter the marks on the database
<https://www.cs.ox.ac.uk/minerva/>, *after every class.*

Feedback to tutors/supervisors

It is *essential* that feedback is provided to the student's college tutor or supervisor.

Enter the marks on the database

<https://www.cs.ox.ac.uk/minerva/>, *after every class*; in addition to the overall grade, provide some details, at least the marks for each question, and preferably a few extra words.

Flag particular problems to the tutor or supervisor (Jo will tell you who this is), e.g. unexplained absence, failure to submit work, unsatisfactory work.

Colleges often complain about the quality of feedback, and can refuse to pay if they are not satisfied!

Make sure the final report for each student is on Minerva by 9am on Monday of Week 8.

Marker's duties

- Discuss the work with the class tutor; highlight any difficulties.
- Attend the class, and give feedback to students.
- Take the class register, and enter it on the database.

Becoming a tutor

Our policy is to ensure that class tutors have received sufficient training.

Tutors should have previously acted as a Teaching Assistant (TA), or already be experienced teachers.

The TA does the marking, attends the classes, presents some solutions to problems, and receives feedback from the class tutor.

Subsequently, they can apply to be the tutor for classes.

Preparation for a class

- Make sure you can answer the questions on the sheet, and know the relevant background (e.g. material presented in the lectures).
- Decide which questions to talk about if you do not have time to cover them all.
- Think about what you want to say.
- Think about timing.
- Maybe prepare slides (see later).
- Prepare copies of model solutions for students.
- Check the room.
- Discuss students' scripts with the marker, so as to know what points to concentrate on.
- Have paperwork ready (e.g. the register).

The class itself

- Remind the students of important concepts, where appropriate.
- Be friendly, smile, nod, give praise, etc.
- Encourage questions and interaction.
- Talk to the class (not to the board).
- Try to summarise important concepts at the end.

Helping the students learn

- Help the students to see how they could answer the questions; do not just present very polished answers.
- Try to lead them towards seeing the correct answer.
- Draw pictures.
- Give (small) examples.
- Maybe ask follow-up questions.
- Emphasise and repeat important points.

Who answers the questions?

Should you ask students to present their solutions?

- It will keep them on their toes;
- It will help you to identify misunderstandings;
- Their answers might be less good than yours;
- It will slow things down;
- It will cause stress for some students.

Slides or whiteboard?

- Slides work well for presenting factual information (e.g. bullet points);
- Slides discourage interactivity and discussion;
- Slides can be good for largish programs;
- Slides are bad for proofs;
- A whiteboard is good for non-linear writing.

Give out copies of any slides.

When using a whiteboard, write neatly, and in an organised way.

(For a tutorial, you might just write on paper.)

Example: binary search

We are given an array a of size N , sorted into increasing order. Write a program to find if the value x appears in the array. More precisely, the program should find the index of the first occurrence of x , if x does appear. The program should run in $O(\log N)$ time.

After the class

- Hand out copies of the lecturer's model answers;
- Be available to answer individual questions, within reasonable limits;
- Make sure everything is put in the database (at the end of term, include a fuller report);
- Flag particular difficulties to tutors/supervisors, e.g. unexplained absence, no work, very poor work;
- Give feedback to the lecturer, e.g. too many questions, theory not covered in lectures.

Payment

For 7 sessions, each of 1 hour's duration:

- Tutors with a separate marker get paid £256.87 per term for a group of 1–10 students, £282.57 for a group of 11 students, and £308.25 for a group of 12+ students;
- Markers get paid £145.49 per term per group plus £14.77 per student;
- Tutors who do their own marking get paid at the Higher Tuition rates, a non-linear scale, but £540.40 for 10 students, and about £54 for each additional student.

If there are fewer than 7 classes, they get paid on a pro-rata basis.

Feedback

- The course lecturer is supposed to attend (at least) one class and give you constructive feedback — look on this as an opportunity, not an assessment.
- Consider asking a friend to attend, and attend his/her class in return.
- The lecturer will receive feedback from student questionnaires — make sure you receive it.