

Getting the most out of intercollegiate classes

The transition from tutorials of 2-3 students in your 1st and 2nd years to intercollegiate classes of 10+ students in your 3rd year can be a difficult one. These notes offer some guidance on how you can get the most out of these larger classes.

Before the class: make your preparation useful

- Attempt the problem sheet seriously, but do not worry if you have not been able to complete all of the problems – hand in everything that you have done, including any incomplete attempts, in order to get as much detailed feedback on your work as possible.
- Indicate the places where you got stuck or where a solution worked but you are not sure why. Class tutors and TAs will find this useful for planning a class.
- If possible, try to bring specific questions to the class, as these can often be more useful to address: ‘Why does/doesn’t this step work?’ rather than ‘Can we go through question 4?’
- Review the marking and feedback on your work. Identify the things you want to improve, not just questions where you lost marks.
- Have the relevant definitions, theorems, etc. to hand so that you can connect individual problems to the main ideas from the course.

During the class: participate, even when you are unsure

- Ask questions. The class is a place to clarify reasoning, terminology, and motivation. If something is unclear to you, it is probably also unclear to others in the class.
- Offer partial ideas as well as complete solutions. Explaining where you got to, or suggesting a possible approach, can lead to a productive discussion.
- Listen to other approaches. A different method may reveal useful intuition or a more general idea, even when your own solution is correct.
- Give yourself time to think. If they ask you a question, the class tutor or TA will not expect you to answer instantly.
- Avoid letting a few confident voices do all the talking. Contributing does not mean speaking constantly; it means being ready to ask, answer, explain, compare methods, and engage with the discussion.
- Focus on understanding, not copying. Make notes of key ideas, methods, pitfalls, and corrections, but leave yourself enough attention to follow the argument and ask questions.
- Use the larger class to your advantage. A larger intercollegiate class offers something that a small tutorial cannot: a wider range of approaches, questions and mistakes to learn from. Try to treat other students’ contributions as mathematical evidence to examine, rather than as performances to compare yourself against. As you know, difficulty is normal when studying mathematics, and a useful class should make the difficult points visible rather than hide them.

After the class: turn discussion into progress

- Soon afterwards, revisit the problems that were discussed. Try to reconstruct the key arguments without simply recopying the solutions.
- Write down two or three ideas you want to remember: for example, a technique, a useful example, a common error, or a connection with the lectures.
- Act on feedback in the next problem sheet. The aim is not only to understand this week's solutions, but to become better able to find and present solutions yourself.
- If an important point is still unclear, ask. Tutors should leave time at the end for individual questions; the TA in particular will be able to address specific points in the marking.

After two years of tutorials, participating in a larger group can be difficult and nerve-wracking. You are not expected to become comfortable with a new format immediately. A useful way to make participation more manageable is to aim to contribute (at least) one thing, perhaps by asking a particular question that you have prepared in advance, or by volunteering an observation about a problem you attempted. Remember that others in the class will have had the same difficulties as you, and will silently thank you for raising them.