ST EDMUND HALL

MATHEMATICS

Dear Incoming Student,

Congratulations on achieving a place at St Edmund Hall to study Mathematics (and

Statistics/Philosophy as appropriate)! The aim of this letter is to welcome you, to give you some idea of what to expect when you arrive, and to give some pointers to what you can do between now and the start of the course to prepare for studying at St Edmund Hall.

Much of this information is available from the Mathematics Department website

(http://www.maths.ox.ac.uk), with a good starting point being the information for Prelims (first year) students at http://www.maths.ox.ac.uk/members/students/undergraduate-courses/teaching-and-learning/prelims- students .

You may also find the page on bridging the gap between school and university mathematics (http://www.maths.ox.ac.uk/study-here/undergraduate-study/bridging-gap) helpful.

The key components of the mathematics course are lectures (as at every university) and tutorials; it is tutorials that make studying mathematics at Oxford special. In the lectures you will be told most of the mathematics that you need to know. But (especially at the high pace of Oxford lectures) you will not understand everything the first time. Also, we are not just trying to teach you mathematical facts, but how to *do* mathematics. And as with anything, to learn to do mathematics you must hear/read about how to do it, then actually try doing it yourself, and then get feedback from an expert about what you are doing right/wrong. (Imagine trying to learn to play the piano without a teacher ever watching you play, for example!) The feedback part comes in tutorials -- meetings with usually two, but sometimes 1 or 3 students and a tutor.

In lectures, you will be given problem sheets to do for the tutorials. In St Edmund Hall we always ask you to attempt these before the tutorial, and hand the work in. This is so that the tutor can look through what you have done, to see what you already understand and what not, and so use the time in tutorials effectively.

There is nothing particular you need to do to prepare for the tutorial system: just arrive with the right expectations! It is a system almost unique to Oxford, and many good students would have loved to have your place here, so we expect you to take full advantage of it. That means really trying your best on the work set in advance. At the same time, you should remember that the work is not marked, and there is no need to try to impress the tutor -- to help you we need to see what you can do and what you don't understand. So a good general rule is to try your best on every question, and if you can get nowhere, to at least write down something (for example that you think the relevant result from lectures might be X, but when you try to use it you get stuck at Y).

A lengthy but very useful account of the teaching system in Oxford is available at http://www.maths.ox.ac.uk/system/files/attachments/study_public_0.pdf from the page `Bridging the Gap' (http://www.maths.ox.ac.uk/study-here/undergraduate-study/bridging-gap).

The first term

The content of the course is described in detail in the Prelims synopses available (currently only for previous years, but not major changes are expected) from

https://courses.maths.ox.ac.uk/mod/folder/view.php?id=55865 ; during the first term there will be lectures on Introduction to University Mathematics, Linear Algebra I, Analysis I: Sequences and Series, Introductory Calculus, Probability and Geometry. You will have an average of around 10 lectures and 2.5 hours of tutorials each week; roughly speaking for each course either a 1 hour tutorial each fortnight, or 1/2 an hour each week. In the first term you will almost certainly be taught by some, or quite posssibly all, of the college's fellows in mathematics, Prof. Luc Nguyen, Prof. Oliver Riordan and Dr Tom Crawford; some tutorials will also be given by graduate students.

Students' experience of the first term varies, but almost everyone finds some or all of the material difficult. There is a wide variation in what you have covered at school, so for some of you much of the material will be entirely new and the pace will be very fast.

If you find this, don't worry! We have offered you a place because we think you can cope with the course; if you covered a bit less at school then it will be difficult at first, but not impossible. Also, the material quickly moves beyond what anyone has covered at school, so after a little while all students are in the same boat. (For those of you who were particularly well prepared at school - if the very start of the course seems easy, don't relax! It will soon be hard enough.)

Before you arrive

Please work through the practice problems on the department website, at

http://www.maths.ox.ac.uk/study-here/undergraduate-study/practice-problems . There is some relatively basic material; if you like, or if you find all of this routine, there is also some more advanced material. In addition, please read the guide mentioned above

(www.maths.ox.ac.uk/system/files/attachments/study_public_0.pdf)

When you are here

The College Library should have copies of the essential books for the main courses, and for the most important books there should be enough copies that you can keep one throughout the term. If not, please mention this to any of your tutors. There is also a college grant available to every student each year for academic purposes (a total up of to 300 pounds per year of which up to 100 pounds may be spent on books).

Finally, although the course is difficult, a very high fraction of the students we select do succeed, so please be reassured that you will be able to cope. Once here, you will be put in touch with students who started a year ago -- they will be a good source of advice in addition to your tutors.

Best wishes,

Luc Nguyen, Tom Crawford and Oliver Riordan

Mathematics Tutors, St Edmund Hall