

Mathematics

Written by:

Asiya Ramjan (abmr2@cam.ac.uk)

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Example Timetable

In first year, all lectures and courses are compulsory so everyone has two lectures a day from 10-12 Monday- Saturday. There are four courses a term to take in Michaelmas term and Lent but in Easter term there are only two short courses so those run for the first few weeks of Easter term, and then you spend the rest of that term revising and preparing for exams.

Every two weeks each of these courses has one example sheet due, with about 15 long questions, so you usually spend roughly three days on an example sheet, and then have a one hour supervision to go over each sheet, so every week you will also have two supervisions as they stagger the courses. So contact hours are about 14 a week, give or take based on when your supervisions are.

What are Supervisions Like?

Supervisions for maths are quite collaborative, and very fun. You and your supervision partner go over the questions you found difficult with your

supervisor and they try to explain any concepts you need help with, either to do with the questions on the sheet or topics in lectures you don't fully understand. I think they are really interesting, and it's great to get to discuss maths with experts in the field, but you get out what you put in so if you don't speak much in the supo you can't really get proper help, so it's very important to engage in them and try your best.

What is unique about the Cambridge course?

One of my favourite things about the Cambridge course is that most maths courses at other universities have set modules you have to take and there's not a lot of choice, whereas for maths at Cambridge they make you take courses in first year to set up your foundations for choosing what you like in second year, and then by third year there is so much choice you can basically go into whatever you like, from probability theory to quantum mechanics, and even some shorter courses like mathematical biology are available in third year if you want to branch out and try different things.

What did you wish you knew when applying?

When applying, I do wish someone would have told me it is hard work. It is worth it, and can be so much fun but at the same time it requires a lot of commitment and dedication. However you don't have to be 'naturally good' at maths. If you are doing the right A levels and meet your STEP offer then you have the ability to really thrive in the course. Also, your ability will fluctuate across the three years as you find what you're best at and get the hang of the Cambridge system, so don't panic if you're not feeling too confident in the first few months- or even the first year! You don't know how you will do unless you try, so do not let worries about not being good enough stop you from applying; if it is something you want to do you should go for it!

Favourite and worst thing about your subject?

My favourite thing about Cambridge Maths is definitely being lectured by such incredible mathematicians. You meet people who have written the books you enjoyed reading so much in A level, or who have recently proved this new theory and even Field medallists, and it's so amazing that they are lecturing you or presenting a talk at the maths faculty and that you get to attend them.

The worst thing for me is that some of the students have a tendency to be a bit standoffish and not want to collaborate, even though it helps both parties when you discuss the concepts together for the questions and also just understanding all of the content in the short space of time given. But if you try hard and ask enough people you'll find others to work with and make friends.

Application Timeline

Summer: First priority is doing the STEP Foundation Modules. There are 25 online and they are a really great way to build up your skills in preparation for STEP, or MAT if you are also going to take that. It will also help your mathematical ability throughout year 13 so is a great use of your time. If you are reading this and summer has already past don't worry! There is time to do the foundation modules in the first term of Y13, but doing them earlier will make you more free across that term.

Second is to finish your personal statement if you can (because first term of year 13 is very busy so it helps a lot to have that out of the way)

September: focus on any transitional or upcoming exams you have and finalise your personal statement.

October: if you're taking MAT or TMUA then continue to prep for those and this will help your Cam application indirectly anyway, but also stay on top of your A Level work and start the STEP 2 modules

Progress will be slow on those so don't be disheartened but try to get a few done in October.

November: finish the STEP 2 modules and try to start the STEP 3 ones

December: you should start receiving information about interview dates so I would say do as much interview practice as you can. Practice talking through your answers and explaining your thinking, and if your school can arrange any

mock interviews do as many as possible. CUISoc will also have an opportunity to sign up for mock subject interviews so you can sign up for those as well, and they will be led by current students doing that subject.

If you have mock exams also try to stay on top of those and your A Level content. In the Christmas holidays I would continue with interview practice (graph sketching, practice problems etc) and then try to start the STEP 3 modules and work through some of those.

Personal Statement Tips

I would focus your personal statement on showcasing that you are passionate about maths. Speaking about things you've done outside of your school curriculum is especially important: e.g. papers you've written about topics you're interested in, talks you've given to your peers about the subject, maths competitions you've attended. Try to create a narrative on what led you down the path to deciding you want to do Maths at Cambridge, and why you think you will do well in the environment. Mentioning books you've read and what you enjoyed is also good but make sure all of it is in context and you're not just listing things you've done or read.

Entrance Test Tips

STEP is probably one of the most challenging uni entrance exams but there are ways you can maximise your chances of doing well. First of all I would say make a plan as to how you are going to fit in all the foundation modules and STEP 2 and 3. Around February time begin to decide what sections you are going to leave and what you are going to keep working on (e.g. for me I decided I found the mechanics section too hard so I stopped doing questions on those and focussed on the pure sections and stats and probability). Figuring out which types of questions commonly come up and practicing those types will mean Inshā Allah you can secure marks that you know you'll be able to do, which is good for the exam.

Also exam strategy is really important. When the paper starts you want to spend five minutes checking each question and deciding what ones you are going to attempt and in what order, based on what works best for you.

Interview Tips

For interview the most important thing is to communicate your ideas well. It's less about getting every question right and more how you explain how you got there, and taking on the feedback they give in the interview. It's a bit like a supervision in that sense, but if you don't explain what you're doing they can't have a conversation, and they want to see that you're teachable and proactive in the way you discuss your ideas and tackle the problems.

Other

Only Allah knows what University or life path is best for you, so across the year pray Istikhara and Tahajjud and put your faith in Him that you will end up wherever is best for you. Try your best, work consistently and don't waste time worrying if you are good enough because all it does is knock your confidence. If you have any questions try and ask people who are in a similar position to you and have succeeded, and the process has its ups and downs so make sure to be kind to yourself and look after your mental and physical health throughout the year.

