

King's Student Perspectives Biological Natural Sciences

Rebecca, 2nd year

Where did you go to school and when did you start thinking about studying in the UK?

I went to high school in the United States (in Ohio), and honestly had never seriously considered attending a UK university. The thought first entered my head while discussing university applications in my AP English class: I suggested I'd sent a joke application to

whichever university Douglas Adams attended. But when Wikipedia informed me that he in fact went to Cambridge, the joke somehow started to turn into reality! Though the awesomeness that is The Hitchhiker's Guide to the Galaxy should probably not guide the choice of a university, I'm glad that it led me to consider applying to Cambridge in the first place and gave me the opportunity to find out more.

When the time came to making a final decision, my top two options were Stanford and Cambridge. Had I chosen Stanford or any other US university, my undergraduate major – neuroscience - would have been one that is popular among pre-meds (students hoping to apply to medical school after graduation). I've heard from multiple sources that the pre-med

environment in America is

quite unfriendly, so I took the chance to avoid it entirely by coming to the UK.

When I researched Cambridge, I also realised that this option would provide the opportunity to experience life in a different country, to meet people from all over the world, and to live and study in a place with 800 years of history and tradition.

How did you find the application process?

In the summer before my last year of high school I wrote the bulk of my university applications. The Cambridge application, it turned out, was simpler than that for American universities: my US applications had to stress my leadership skills and other such vague



Rebecca at a themed dinner in King's Hall.



View from King's Chapel roof

attributes, but for Cambridge, I only had to discuss those aspects of my life and personality that related to Natural Sciences (neuroscience in particular), the course I planned to study.

Selecting a Cambridge college proved the hardest part of the application process for me. I had to choose one out of 29, and had no one to ask for advice. To narrow down my choices, I decided to consider only those by the river Cam. Doubtless, this was a trivial criterion, but it did make my list shorter! Indeed, whether it is early morning kayaking, picnics on the banks (the grass by the river), and even simply pausing on King's bridge on my way to lectures, I love the proximity of the river. Other than that, scrolling through webpages, as well as wandering around on the virtual tours (since I couldn't visit in person), something just clicked for King's.

Now that I've spent two years at King's, I'm not disappointed with my choice.

Unsurprisingly, King's is indeed beautiful, but it is more than that. The porters are incredibly helpful and friendly, even after the second or tenth time I locked myself out of my room in first year and had to borrow a key. My Director of Studies has also always done everything he could when I've had any struggles with my work. And even for non-academic problems, I've always felt that King's cares about us - help and advice is always available here.

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King's is right in the centre of town. While this means a lot of tourists outside as the town centre is busy, it also makes life a lot easier. The extra minutes of sleep before 9am Saturday lectures in first year were certainly a luxury I wouldn't want to give up! And proximity to NatSci lectures and practicals meant I could run back to King's for lunch (or to my room if I forgot a lab book) even when I only had a brief break.

What is the teaching and assessment like?

Unlike US schools, which allow two years of classes before choosing a major, Cambridge requires students to commit to a particular subject from the start. While some students do switch subjects later in the course, this is most frequently limited to changes between quite similar subjects, and it can be rather



King's students on the riverbank, enjoying some nice weather.

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difficult from what I can see. Within Natural Sciences, however, moving from physics to chemistry or biology, etc, is much simpler because the flexibility is part of the course design, and many students' interests do change as they discover new material and areas of study within the sciences.

I already knew that I wanted to study neuroscience for the rest of my life before even coming to King's, so choosing a subject was not a problem for me, though my interests did change slightly, migrating toward molecular neuroscience from psychology.

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Cambridge academics differs from teaching in America in other ways too. For instance, our grades depend almost entirely on one set of examinations at the end of the academic year (late May / early June each year). As a result, when lectures end in December, at the close of Michaelmas term, we don't have to stress over finals (or midterms before that, either) - a fact I made clear to American friends moaning about their end-of-term exams. However, when I came home to the US for winter break, it was their turn to mock me--while they had the chance to take those few weeks to relax and put away their textbooks, I had to comb through my notes and write essays for the classes that would not end until June.

The mode of teaching is different here as well. Unlike American classes that follow textbook material, our lecture resources are notes handed out in lectures themselves. Lecture notes reduce the pressure, since otherwise we would worry much more about scribbling all the lecture information into a notebook. However, while understanding the textbook information may be enough to do well on American university exams, lectures and handouts are far from sufficient in Cambridge. Though nothing is formally required, additional external reading is necessary to earn top marks on exams. What is more, this extra information should come not from textbook material

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but from current research. I like the Cambridge system because it allows us to focus on the parts of the course that most interest us, helps us to really understand how the lecture material fits into the scientific world, and prepares us for future research careers.

How do you find supervisions?

In order to make sure we have everything we need to know ingrained in our minds, we attend supervisions (teaching in small groups) for each subject within Natural Sciences once a week. These are [almost] always enjoyable meetings, often infused with conversations about the supervisor's own research or extending beyond the material we learn in class. Supervisions are a chance to ask questions, clarify concepts, and toss around ideas.

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The nature of the supervisions depends on the supervisor and on the students, of course. As students, we definitely have input into the style of our teaching, and the help that we want to get (specific topics, questions etc.). I have to say that while supervisions are considered “work” - after all, we have to prepare assignments ahead of time and answer questions about lecture material - they are both casual and enjoyable. I tend to view them more as meetings with others who share my interests, and I relish the chance to quiz supervisors on topics I didn’t think were well enough explored in lectures, and just to chat about the areas of research that fascinate me.

Since we are encouraged to read papers rather than only lecture notes and textbooks, this prepares us for graduate school and a research career, while keeping us up to date with the current opinions in our field.

What is difficult?

Someone once told me that studying at Cambridge is “blood, sweat, and tears”. Well, he wasn’t wrong! To make the most out of Cambridge academics, you do have to work hard. As the cliché goes, you get out, as much as you put in. Cambridge Natural Sciences seems to be set up in a way that teaches us not only learn new information, but also to think like scientists. Many individual courses that you take as a NatSci are “essay subjects”. While, at first, I was uncomfortable with the idea of writing science essays, this is in fact a vital skill for a researcher, who needs to learn to write papers, keeping them clear, logical, and interesting. Furthermore, since we are encouraged to read papers rather than only lecture notes and textbooks, this prepares us for graduate school and a research career, while

keeping us up to date with the current opinions in our field. Finally, practical classes are often long and fast-paced, but I find that they help us to think “on the spot” and to deal with the slip-ups inherent in lab work.

There are multiple ways to do well, whether this is adding extra material, providing extra deep analysis, linking information from different modules or courses, or questioning the lecture material.

Another aspect of Natural Sciences at Cambridge is its flexibility. Basically, I found that we get to decide how much work we want to do. Very little is “required”. On the one hand, this is wonderful. If you don’t find something interesting, it is rarely essential, so you can spend more time on the more interesting material. This year, I only studied in depth the topics that interested me, and still got a first class in the end-of-year exams. There are multiple ways to do well, whether this is adding extra material, providing extra deep

analysis, linking information from different modules or courses, or questioning the lecture material, etc.

All this flexibility can also mean instability though. Coming from the US, from a high school with endless homework, tests, and reports, as well as strong competition between students, the first year timetable and workload could at first glance seem “easy” in comparison.

However, even though Natural Sciences is one of the subjects at Cambridge with the most contact hours, much of the work you do is still independent - revising lecture notes, reading papers (which provide extra information, can help understanding subtle points, and can even spice up an essay), and trying to really understand how the information comes together. Since the only exams are at the end of the year, there are few formal “progress checks” to ensure that you’re doing enough work on your own (though you can always speak to a supervisor if you’re unsure how it’s going).

Finally, independent thinking is rewarded much more in Cambridge than in high school or other universities. I find this undoubtably positive, but in my first year, I was not confident enough to question the lecturers, find flaws in experiments, suggest my own theories, etc – it all takes a bit of getting used to. In exams, such risks make essays stand out, strengthening analysis. Even if your own theory is not fool-proof, bringing it up shows that you have thought about the material in greater depth, and that you are truly thinking like a scientist.

How do you find the balance of working and doing other things?

To make the most of Cambridge academics, you do have to work hard. But studying pays off with much more than end-of-year grades. I’ve found that the actual process of studying gets more enjoyable in itself as you get into the subject, so you should not be afraid of having to work hard. In second year, we got to choose courses that were more specialized and more in-depth than first-year courses, which also helps this process. Of course, to enjoy the work, you have to really love the topic so it’s important to think carefully about your choices!

Beyond enjoying your work, it is certainly possible to strike a balance between doing different things. Even

with the busy schedule of Natural Sciences, I still have time and energy left over to make the most of non-academic Cambridge. I’ve rarely parted with my sketchbook in the last couple of years, and though my paints were far away in the US, I

often spent my afternoons sketching in the King’s fellows’ garden. When I wanted a walk, or if the pencils weren’t enough to capture the colourful spring at King’s, I would take my camera on a stroll.

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King’s Fellows’ Garden



A sketch from King’s - we often have cows between the river and the back gate!



A starter at a formal dinner



Formal dinners (which sometimes have a theme) are enjoyable social occasions

King's also has weekly formal dinners, for which it is definitely worth taking time off.

From the few times I've been at other colleges' formal meals, and from conversations with friends, I can safely say that King's formals are the best: the food is exquisite (if at times the chef is a bit too creative for some tastes), and there is often music during and after the meal.

Outside of King's, the Cambridge Union holds talks and debates on a range of topics. Though membership is not a cheap decision, I have never regretted it. And if you cannot find something of interest in the 600 or so societies currently available, you are always welcome to start a new one.

Sometimes, it is nice just to take a break to hang out with friends -- lunch at a cafe between lectures, coffee on a gloomy day, or even sitting on the floor in someone's room. I've had the some of the most interesting conversations of my life in staircases and hallways!



A hallway inside the Keynes accommodation (one of the more modern parts of College)



Bodley's Court in the early evening (one of the older parts of King's)

A note to current King's Natural Scientists

If you would like to write about your experiences of studying Natural Sciences at King's for our prospective students to read, please email Kristy in the Admissions Office for further details:
undergraduate.admissions@kings.cam.ac.uk