

**“How does the experience of your course compare with any expectations you may have had?”**

Fresher’s week. Every other person I met would ask me my name, where I was from, and what I was studying. “Biology” I’d answer for the last question.

Up until then, for me, studying biology involved learning interesting facts about animals, plants, ecology or molecules. I was in no doubt that at university this would be much the same. Just as A-level was an extension of GCSE, higher education would involve learning more facts, in more detail, and being one step closer to the actual research that gives rise to cutting edge science.

So naturally, I expected the course to be like any other biology course: comprising of classes and lectures (usually an hour long), coursework (experiments where temperature is always a controlled variable), and a field trip (probably somewhere in Wales). I wasn’t wrong, but there was a lot more to it than just that....

The lectures weren’t just packed with bullet points about biology; they have been as diverse as the content they contain. Some have comprised of just a slideshow (including holiday snaps!) of the weird and wonderful organisms that roam the Earth. I’ve watched videos of the cellular processes that lead to muscle contraction, and of very clever New Caledonian crows completing difficult tasks (as if something out of The Generation Game!). One lecturer’s handout often involved “filling in the blanks” rather than continuous note-taking, and used the most striking imagery to convey information. Forty minutes into any lecture and the average student’s concentration will start to dip slightly. It was at this point that one lecturer, when describing the many foods that can be obtained from plants, would aptly hand out chocolate, olives, pistachios and tortillas in each of his lectures, thus sustaining his audience for the remainder of the lecture.

Accompanying the lecture program are weekly tutorials with an essay. The tutorials usually comprise of one tutor and two students intellectually considering a topic in biology. Totally unscripted and always thought-provoking, the often passionate discussions that arose from tutorials cannot be matched by any other aspect of the course. I was surprised by the amount of interaction between students and tutors, as a result of these weekly sessions, all of which has proven invaluable in my development throughout the course.

As with most sciences, lab work is essential, but doing several practicals a week for a whole term was more intense than I had expected. Although sometimes exhausting, the practical side of the course was mostly quite refreshing from the usual lectures and textbook learning. Getting to grips with the principles of population genetics was mainly due to being able to test the theory using different populations of mutant fruit flies. Dissections helped me understand the physiological structure of different animals. Some dissections involved plucking pheasants to reveal the layout of their muscles, or exposing a squid’s inkjet (and becoming sufficiently covered in ink) to learn about its defence mechanism.

The course fieldwork allowed experiments and ideas to be tested in the natural environment. Having been on a few fieldtrips at school I had some idea of what to expect on the first year fieldtrip to Pembrokeshire (southwest Wales!): there would be rain (there was), insects would be collected (they were), and students would employ new sampling techniques (we did). But this trip was different in terms of its structure. Every day was devoted to a different area of biology. One day we would go on a “fungal forage” in the woods, another day we examined the diversity on the rocky shore, the next we looked at succession on the sand dunes or the distribution of trees in a forest. Maintaining the variety of activities from day to day meant that nobody lost their enthusiasm to get involved in the different fieldwork and allowed a broad range of topics could be covered.

In my second year I was fortunate enough to go to The Algarve in Portugal to study the vegetation of the Mediterranean flora (and yes, it did rain!). We studied the diversity of the plants, from exotic looking euphorbias, to more traditional elegant daffodils, and even rare species of orchids. We learnt not only about their structures but their evolution and how they have come to be the way they are. Learning through

fieldwork or lab work extends beyond anything that can be covered in lectures. Not only does it involve exposure to new material and development of new skills but, more importantly, it helps by making you think as a scientist: establishing new ideas and testing them.

Coursework is almost an inevitable part of any biology course, so having to do a research project in my final year was just as expected as doing the exams at the end. I investigated the role of cannibalistic interactions among locusts on their collective movement. This was a chance to use all the skills and knowledge that I had gained over the course of my degree to complete an independent research project. I prepared, carried out, analysed and wrote up the entire project.

My findings were significant and actually improve our understanding of the collective behaviour of locusts. Given the devastation caused by locust plagues in parts of Africa, the implications of the results and further extensions of my project are immense. Although it's just a stepping stone in the advances of animal behaviour, I had made a contribution to the world of science.

My biology course had not only allowed me to continue studying biology at a higher level but allowed me to become a scientist. Every part of the course had contributed to my development as a scientist in some way. It is this aspect of the course which I never thought I would experience and it was an unexpected pleasure.