

## **Alice Kutsyy '24 – Mechanical Engineering Caltech/Mechanical Engineering Melbourne**

Today is the end of week 10 at the University of Melbourne, meaning two weeks of projects, a week to study, and then finals. The next two weeks are going to be busy with essays and group projects that have been in the works for months, so I will likely be spending my days with some local coffee in the university library, which I have found I love studying in. In the evenings, I have found a passion for dancing as the large collection of dance studios around has pushed me to try something new. And on the weekends, I will continue to go out and unwind with my friends or spend the day exploring the local city and beyond. It's been very easy to explore Melbourne – the tram system is very extensive and can get me basically anywhere I want to go.

I've really enjoyed experiencing Australian culture, as it is so different than back home. I was prepared for some things, like driving on the wrong side of the road, but little things surprised me when I first came here, like how the birds sound like they are screaming instead of singing. We worry about deer crossing the road, here wallabies are the issue (pronounced wallabee not wallabye, I learned they are very particular about that one). The local restaurants are mostly southeast Asian cuisine, as it is the closest area to Australia. So, there are lots of good Thai, Indian, Malaysian, ect. restaurants around (there is no dining hall, but I hate cooking and budgeted more towards food, so I have been enjoying trying all the local restaurants). More interestingly, there is a huge boba obsession here, way more than LA – and that's saying something. In a 1-mile radius from my accommodations, there are 42 boba shops.

The workload is significantly lighter, which leaves more time for exploring and partying. At Caltech, people pretty much work 24/7, taking a night or two off every week. Here, that's completely unheard of – I typically work in the day between classes and put my work away at dinner time. This does mean the classes feel less in depth than Caltech classes (say, not going over proofs or why theorems are true), but the more surface level approach allows me to learn about many different topics in a much shorter amount of time – for examples, I have gone through 3 different types of material models built up from quantum mechanics, statistical mechanics, and probability theory. While I don't know the actual code being run in these simulations, I still know what they are simulating and how to manipulate the inputs to give the data I need. At Caltech, each of these models could be their own course.

Being a bigger school, there are classes offered here that are not offered at Caltech, so this has given me a chance to explore the more niche areas of my field. I am doing the materials science track of the mechanical engineering major, and while Caltech offers many interesting materials classes, it doesn't compare to the selection here. Currently, I am taking a biomaterials class which talks about the way that the body interacts with implants made of different materials – something that does not have any close

equivalent at Caltech. Also, these classes still count toward my graduation, as all majors require a certain number of “advanced electives” within that major, and I am fulfilling those required credits while abroad.

The lower workload means that I have been able to go out basically every weekend, whether that be a trip to Philip Island or just exploring bars with friends. Since the drinking age is 18, there is a huge culture of going to bars and clubs on the weekend, which I have never been able to experience in the States. However, the culture is mostly to go drink and unwind, not to get sloppy drunk, as alcohol is just a normal part of the college experience here. Also, it still surprises me how early nights here end – people go out at around 8 pm and are back by midnight, which leaves plenty of time to sleep and get up the next day.

Towards the end of the semester, there is a week and a half long break. I was able to take this time to explore New Zealand, which is such a beautiful place but very far away from the States. While some people traveled with newfound friends, I elected to travel alone and really enjoyed it. Both Australia and New Zealand feel much safer than the USA and (follow basic safety common sense) I never felt in danger. Traveling alone is not something I would have thought about before coming here, but I had a great time and will likely travel alone again in the future!

The biggest challenge for me was being so far from home, but it was an experience that I needed and was able to grow a lot from. Because of the time change, most people in California go to bed at around 5 pm Melbourne time, meaning in the evenings I can't text anyone from back home. This forced me to either make friends to hang out with in the evenings or to simply enjoy my own company. I used to hate spending time alone, but I have come to see it as a good way to recharge (and reignited my love for reading) and have grown confident in going out and exploring by myself. Additionally, I have always had my parents close by to support me, as I live a 6-hour drive away from Caltech, so I could drive home for a weekend if I needed to. Here, I don't have that safety net – if I am having a hard time for whatever reason, there is no one to take care of me and nowhere to run to. This forced me to learn to help myself in these situations and I feel a lot more resilient mentally than before this trip.

Melbourne is a “normal” university relative to Caltech, so I feel like I can get a more stereotypical college experience. It is fun to try, but it also reaffirms my choice in Caltech – at the end of the day I miss the random 3 am nerdy physics discussions and building random stuff with my house. Studying abroad means I don't feel like I have missed out in any traditional college experience and has made me appreciate Caltech's culture more. While it can be hard at times being so far away from everyone I know, I am so happy I came to Australia.