

EDINBURGH COMMENTS FALL 2023

Adele Basturk 25' - Physics Caltech/Physics Edinburgh

Studying physics in history-rich Scotland is an adventure. Many famous physicists lived and studied here: James Clerk Maxwell, Max Born, Peter Higgs just to name a few. And my favorite non-physicist, Sir Arthur Conan Doyle, also graced Edinburgh with his presence once upon a time. Beyond the endless famous academic name-dropping that I could embark on in these comments, Edinburgh is an amazingly international university city full of amicable people, medieval architecture, castles, breathtaking geological formations, and temperamental weather.

The physics courses at the university rely much more on one's ability to study independently rather than having to complete a long set each week. The structure revolves around lectures and weekly tutorials during which students collaborate on problems with the aid from graduate student TA's and the professor. On another note, if you have any interest in astrophysics, I strongly recommend taking or auditing an astronomy course at the Royal Observatory. The architecture is quaint, like most of the buildings in Old Town, and the location is stunning, offering beautiful views of the city on one side and quintessential green rolling Scottish hills on the other.

In addition to a strong science program, Edinburgh has many more course options in the social sciences and humanities when compared to Caltech. Unlike other study abroad programs, the Edinburgh program allows one to take up to two social science or humanities courses, if chosen correctly. So, if you are in need of social science (or humanities) credits at Caltech, this program is a good option.

Going to Scotland means taking on the personal challenge of confronting a much colder and rainier climate, interacting with an eclectic set of study paths, and acclimating to the UK culture. While the bus system is convenient and free, with a YoungScot card, for those who like to leave their home closer to class time, I highly recommend cycling. Fair warning, the roads are hilly and rarely pothole-free, but cycling to the King's campus in the morning is sure to wake you up more than any cup of Nestle coffee. If you think you know what an English or Scottish accent sounds like, wait till you hear about 20 variations. If you are a keen hiker, join the Hillwalking Club and travel to the Highlands every weekend. Play a sport? Join one of the numerous university sports teams or play intramural. Society (club) culture here is vibrant to say the least. Want to learn how to sprint run a 5k with a map? Join Orienteering. Whether you enjoy sports, arts, history, drinking a pint with a mate while wondering how you are in a pub on a weekday, or meeting people from the most unimaginable mixes of nationalities and ethnicities, Edinburgh is the place for you.

Neha Dalia '24 - CS Caltech / Informatics Edinburgh

I have always wanted to study abroad but was a bit unsure at first since I lost my freshman year to the pandemic. So, I wasn't sure if I wanted to study abroad my senior year. I decided to still study abroad since it would give me a very different experience compared to Caltech. I have traveled abroad before but haven't lived abroad for this long so I thought doing so would give me an experience I wouldn't be able to get otherwise.

Edinburgh is a beautiful city and there is lots to do here. It is a great size since it is large but still walkable. The buildings look straight out of a movie, and everything looks so gothic and medieval. There are many places to explore like the Edinburgh Castle, the Arthur's Seat hike (which is just a 20-minute walk from Kincaid's, my residence hall), New Town, and Old Town. Everything is extremely walkable from Kincaid's which is very convenient. Countless restaurants, cafes, and grocery stores are in walking distance, so it has been great exploring the food in the area especially since we are off the meal plan here. Kincaid's is situated in a great location. We are also right on the Cowgate which is the street that a lot of Edinburgh's night life is located on. Also, since I am an Informatics (CS) major at Edinburgh, all my classes are within a 15-minute walk from Kincaid's which is especially convenient.

I have really enjoyed my classes here since unlike Caltech, we don't have weekly sets here and instead the coursework is more independent. So, I have had more time to focus on doing the class readings and delve further into what interests me. I am taking one humanities and one social science class here and both are quite interesting. One of them is called Seoul, Shanghai, and Edinburgh and the other one is Economic and Political Geography. I have enjoyed taking both classes since they are both courses that aren't offered at Caltech and since the classes here contain students from all over, it is interesting hearing the other students' perspectives on various social issues and class content.

Additionally, with the extra time from not having weekly problem sets I have been able to explore a lot of Edinburgh and the neighboring area. Kincaid's is walking distance from Waverly Station (central train station) and not too far from the Edinburgh Airport, so it is very doable to do weekend trips and day trips as flights are pretty cheap and the bus is free if you have the YoungScots card. Glasgow is only 1 hours away by train and is known for its concert scene. Additionally, there are many beautiful hikes and nature areas that you can bus to. For example, the Pentlands hike and Portobello beach are just a short bus ride away.

Edinburgh is a much larger university (26,000 undergrads and 15,000 grads) so there are many more events that you can attend and societies (clubs) that you can join. You will also meet many people here whether it be through your flat, Welcome Week, or societies that you choose to join.

I would highly recommend studying abroad if it is something that interests you. I believe that it has given me many experiences and perspectives that I wouldn't have gotten otherwise.

Anwasha Das '25 – CNS Major and Math Minor Caltech/ Informatics Edinburgh

Attending the University of Edinburgh has been a great change of pace from Caltech. I still get to take classes relevant to my major and work towards my degree, while in a completely different backdrop.

One of the main reasons I chose Edinburgh was the classes. By virtue of being much larger than Caltech, there is a greater variety of classes offered, a lot of them being interdisciplinary. For example, I'm taking Computational Neuroscience and Human-Computer Interaction at the Informatics department. It has also been nice to take classes at a high level across various departments. For example, I'm also taking Honors Analysis and Principles of Economics, both in departments other than Informatics. The assessment structure here looks very different than Caltech. There are fewer assignments, so there isn't the constant pressure of problem sets like Caltech. However, each assignment makes up a greater percentage of the final grade, and greater independent work is expected (for example, collaboration is limited, and resources such as office hours are scarce since you have tutorials weekly or bi-weekly). While different, I'm taking this to be a valuable learning opportunity in learning to manage my time better, as well as having the time to better understand the material. Thus far, I've been enjoying the content and pace of my classes.

All Caltech exchange students live in Kincaid's Court, which is conveniently located for everything imaginable. The main campus, where most of my classes are held, is a 5-minute walk. Princess & Leith Street, where most tourist spots are located, is only a 15-minute walk. And the Cowgate, the hub for nightlife in Edinburgh, is right around the corner. I live in a 12-person flat, mostly composed of first-year students from the UK. While different than the house experience at Caltech, I've quickly grown to like this arrangement. Having a single ensures I have my space when I need to, but I can always step into the kitchen and have a great conversation with one of my flatmates. A quick sense of community has grown within our flat, and we hang out several times a week together: eating dinner together every day, going out every weekend, and even celebrating birthdays together.

I've been particularly enjoying having the time to pursue my hobbies (both old and new) and appreciate the people I've gotten to know through them. I joined the Pole Dance Society and have been attending classes at least twice a week. I even signed up to perform at a showcase. Dancing here has given me the opportunity to ground myself with something familiar, while also meeting an incredibly diverse group of people: from my pole partner who's a law student in Denmark to one of my instructors who's pursuing a Ph.D. in math and is also my tutorial leader for my algorithms class. I've also

been climbing/ bouldering at the Pleasance Gym (U Edinburgh) regularly with two other exchange students from UCSB, and have grown very tight with them.

Being able to do some light travel alongside everything, such as a weekend to London, a day trip to Glasgow, etc. has also been quite nice. While I am bound by visa restrictions, visiting other European countries is definitely a popular option amongst exchange students. The Erasmus Student Network (ESN) also has some great travel options, and I'm excited about joining some of their trips later in the semester.

Of everything exciting going on, I love the balance (and consequently healthier lifestyle) that studying abroad has encouraged me to chase. I'm able to get my eight hours of sleep, exercise, eat healthier, travel, and frequently call my friends back at Caltech, all while keeping up with schoolwork. These good habits are something that I hope to bring back to my remaining time at Caltech.

Shivansh Gupta '24 - Computer Science Caltech/Informatics Edinburgh

I can confidently say that studying abroad at the University of Edinburgh has been one of the best decisions I have ever made. In the past 2 months, I have had the chance to experience so much that I would not have been able to otherwise at Caltech. I think a lot of it has to do with the scale/size of the university. The University of Edinburgh is home to 25,000 undergrads and 16,000 postgrads. While I appreciate the small, tight-knit community that I have fostered at Caltech, I have found that being part of such a large university to be thrilling. To start off, there are SO many active clubs and societies here (around 290) — you can discover them for yourself at Welcome Week, but a lot of these have weekly events that you can go to hangout with friends and even meet new people. I'm an active member of the A Cappella society and the South Asian Student Association. However, it's really easy to selectively attend events from societies you don't attend consistently — for example, I go on hikes with the hillwalking society whenever I feel like it. Coming in, I was aware that such a large student body would require me to be proactive when meeting people, and I'm so glad I was because I found a group of close friends who I hang out and explore Scotland with.

That brings me to Edinburgh itself — I, along with all the other exchange students from Caltech were placed in Kincaid's Court, which is in the heart of Old Edinburgh. Literally from Kincaid's, there are so many shops and restaurants, a museum, and a castle literally 20 minutes away from you. Sure, it's a bit noisy at night with all the partying outside, but I wouldn't trade accommodations even if I had the choice. Edinburgh is so pretty, and I would even recommend getting the YoungScot card to explore other areas like Glasgow, St. Andrews, Leith, and Inverness. I would also recommend getting involved with the university's Erasmus Student Network (ESN) and International Student Tours (IST) as they offer day trips and tours to other parts of Scotland. I was able to go to the Isle of Skye through IST, and I had so much fun viewing Scotland's beautiful landscapes.

As for the academics, I finally feel like I have the time to slow down and ingest the information that's being delivered in lecture! The two classes I love the most are Secure Programming and Computer Security. As a computer science major who is interested in cybersecurity, these classes have given me the chance to explore an area that isn't really offered at Caltech. I also really appreciated that many of the computer science courses leaned more towards the practical than the theoretical, especially because it gave me insight into how something may be directly applied. In all of my classes, I typically have around 2 weeks to complete an assignment, which is an ample amount of time. For CS classes, the coding assignments are much shorter, but do an excellent job of rehashing the key ideas covered. I am a big fan of this format, especially because I think that you will grasp much more if you are less stressed and not overloaded with work. I am so grateful that I have time to time to attend nearly all of my lectures, review the material after, and still have time to myself to hangout with friends, go to the gym, and get a sufficient amount of sleep every night. Studying abroad at Edinburgh has been really transformative in that aspect, and it has shown me that a very healthy work-life balance while you're in Scotland!

Tessa Pierce '25- Biology Option Chemistry Minor Caltech/Biology Edinburgh

Studying abroad has been a goal of mine for a long time, since the beginning of high school, if not earlier. To the point that the availability of study abroad programs was one of my criteria when applying to college. I didn't have a location picked out, but I knew I wanted to have the experience of doing a term abroad. I selected University of Edinburgh as it was one of only two programs that had an equivalent course for an option requirement, but I have enjoyed it due to the rich culture and architecture, and the expansion of perspective that the experience has given me.

The two biology electives I enrolled in are Molecular and Synthetic Plant Biology, and Molecular Microbiology. Both were very interesting, with emphasis on laboratory components and scientific communication. I was well-prepared for these classes after two years of biology at Caltech, so the shift in focus from problem sets to essays and presentations gave me an opportunity to develop skills that I am not as strong in. The option requirement I pursued was Quantum Mechanics, an equivalent course for Ch 21a. Physics is rather challenging for me, so without the resources of office hours and recitation, I initially struggled a bit. But it was relatively simple to connect with Dean's Tutors at Caltech for help, and despite slight differences in the course materials, this program continued to be a valuable resource despite not being on campus. I saved my favorite course for last, a social science course called Creating Edinburgh: The Interdisciplinary City. I love this class! The topics focus on a different aspect of the city and its culture each week, and the assignments mainly involve going for a walk on a predetermined route while considering the discussion questions and reflecting in weekly tutorial sessions. It has been a very unique way to explore the city, and I have appreciated the guidance while learning about the environment.

The large university setting is an interesting change of pace from Caltech. There are so many student societies to engage with. I've joined the Craft Society and Biology Society, and I will be going on one of the tours outside of the immediate Edinburgh area with the Erasmus Student Association. Between the societies and classes, I've been able to meet other students and make friends, which adds perspective to the experience overall. Due to the large population of students in Edinburgh, the city has a college-town feel, and there are plenty of things to see and do. The city itself is beautiful and there is so much history and architecture to appreciate. Study abroad students from Caltech stay in the university's residence hall Kincaid's Court, which is very close to the city center, so it is only a short walk to many of the main attractions. For STEM students, many classes are held at the King's Buildings campus, which is a bit of a commute away, with only one shuttle bus arriving in time for 9am classes.

It's definitely different from Caltech and required some adjustment, but studying abroad is truly a once-in-a-lifetime experience. Not only in the duration of time spent living in a different country but doing so within the framework of a university. I have gained valuable perspective and experience throughout the program, and the juxtaposition has allowed me to see Caltech in a different light as well. I have more appreciation for things that went unnoticed before, and I have made many meaningful connections. Overall, as both the culmination of a long-term personal goal and learning experience, I would highly recommend study abroad to anyone who is considering it.

Dennis Raush '24 - Information and Data Science Major, Astrophysics Minor Caltech / Informatics Edinburgh

I have spent most of my life living in Southern California: the first 18 years were growing up in San Diego, and the last 3 have been studying at Caltech. As much as I feel at home in the constantly warm weather and coastal culture, it certainly has grown to feel monotonous — I decided that I wanted a taste of life in a different direction, which led me to study abroad at the University of Edinburgh (UoE).

Academically, I've been pleasantly surprised by the caliber of education at UoE, which offers a distinct approach compared to the structured rigidity of Caltech. While I had grown accustomed to the rigorous weekly problem sets and a strong emphasis on theoretical understanding at Caltech, UoE's approach feels more flexible. Instead of conventional problem sets, UoE classes present challenging problems through weekly "tutorial sheets," which are then discussed in small-group tutorials. These discussions with my peers consistently prove to be insightful and enriching. The contrasting educational philosophies between Scotland and the United States even extend to our approaches to problem-solving, fostering a deeper understanding and appreciation of the subjects I am studying. Interestingly, I find that my academic workload is similar to what I experienced at Caltech, but the flexible structure at UoE enables me to allocate my time more efficiently and gain a better grasp of the course material.

Moreover, my experience studying abroad at UoE has allowed me to explore courses that Caltech doesn't offer due to its smaller student body. One of my highlights has been the *Musical Applications of Fourier Theory and Digital Signal Processing* course, where I've had the opportunity to apply the theoretical knowledge I gained at Caltech to a practical domain: creating and understanding sound.

Every day in Edinburgh, I encounter individuals who are passionately dedicated to fields I've only briefly explored through Wikipedia articles. I share a living space with students studying Classics, poetry, and music, and our morning coffee chats never fail to astonish me. Through society events, I have met people who share the same niche interests as me and connect with them on a personal level. As much as I love the tight-knit community at Caltech, being welcomed into a much larger community at the University of Edinburgh has been an unparalleled experience.

Samuel Senzon '24 – Physics Caltech/Physics Edinburgh

Growing up in a suburban town and then attending Caltech, a school whose tight-knit community makes it in a way a suburban town in and of itself, I have always wanted to experience living in a larger city. I always longed to be in a place where anything I would need is quick walk away, and in a matter of seconds I could find myself in a large crowd full of strangers, connected by nothing other than our likely touristic pursuits. Happily, I was led to Edinburgh, a city with an exciting clash of gothic architecture, awe inducing nature, and an eclectic mix of inhabitants.

If I had to boil down my motivations for studying abroad into one phrase, it would be "expanding my worldview." And in this sense, Edinburgh is a great option, as it is widely different from Caltech. Not only is the school far larger, but there is a much higher variety of interests in students here as well. The students who I have met study an incredible variety of subjects, everything from computer science and economics to Spanish or Scottish studies. These are people that you would not come across at Caltech, and interacting with such has allowed me to see my own life path in a new light, reexamining and recontextualizing the person that I am and hope to become.

Not only is there a rich diversity in individuals I have come across, but there is additionally a great variety in activities to do and places to see. Sure, there are historic sites in Southern California, but they do not date back over five-hundred years (as far as I know), as many of the sites in Edinburgh and the greater Scotland area do. The University of Edinburgh itself is nearly five-hundred years old. Just a bus ride away from the city (a bus which happens to be not very pricey), you can find yourself at beautiful landscapes in nature or at the ruins of a castle with great historical significance.

In terms of the academics here, they do, in general, differ widely from Caltech in terms of class size, pedagogical philosophy, and workload. Nonetheless, I have by no means found my courses to be a walk in the park. I am taking two physics courses: Introduction to Condensed Matter Physics and Methods in Mathematical Physics (also

known as MoMP). Additionally, I am taking Honours Analysis (not a typo!) and Modern East Asian History. While I certainly can keep up with the material, one difficulty is the transition I have had to make to the European model of making the majority of one's grade based on a final examination. In MoMP, I have nothing to turn in until the final examination. In Condensed Matter and Analysis, I do have weekly assignments that I need to turn in, but these are quick assignments which fall short of requiring a deep engagement with the material. Rather, that onus is on you the student, and this of course offers a great deal of freedom and reduced (required) workload, but all of course comes at the price of self-discipline to self-regulate being on top of your work internally. The truth is, however, that this is a good skill to have and the absence of the, at times, overwhelming stress of Caltech has allowed me to develop and hone my conscientiousness.

Overall, the studying abroad experience has given me a different perspective on the college life, one with more freedom and less structure, that has supplemented to my experience at Caltech and is sure to better prepare me for life in the "real world."

Lasya Tenneti '24 – Computer Science Caltech / Informatics Edinburgh

As a senior applying to colleges, one of my biggest requirements in the schools I was applying to was that they had a study abroad program. To me, studying abroad was an opportunity to experience an entirely new life in a new country, not as a tourist, but as a resident. It was something I wanted to do to challenge myself and push myself out of my comfort zone. The University of Edinburgh seemed like the perfect place to do just that. With an undergraduate student population of 26,000 and a central location right in the heart of the city, there is no better way to have a completely novel and enriching experience.

All Caltech study abroad students are placed in Kincaid's Court, a University of Edinburgh housing accommodation. I am living in a 12-person flat where we all have singles, 4 common bathrooms in the flat, and a common kitchen and living space. My flat consists of 10 freshmen and 1 other study abroad student. The 12-person flats in Kincaid's tend to be popular among freshmen since it is an easy way for them to meet people. Additionally, Kincaid's is located on Cowgate, which is the street that is home to most of Edinburgh's, but primarily the University students' nightlife. The street has tons of clubs and pubs that are open till around 3 AM every night. Nightlife is pretty big here, and living in Kincaid's you are always in the know of what is going on due to its proximity to the action. Kincaid's is also located right in the city center, so it is less than a 5-minute walking distance to tons of restaurants, cafes, and supermarkets. Not being on a meal plan has allowed me to explore the local food scene and also buy local produce and cook for myself.

All of my classes are located on the central campus which is also a 5-minute walk from Kincaid's. I am lucky in that sense since some people have classes that they need to take a bus to. I am taking two informatics (computer science) classes and two

humanities classes. My informatics classes are taught through a combination of lectures and labs. The labs are a way to get practical coding experience and are oftentimes relevant to the homework. The assignment structure is different here; I have 2-3 assignments for each class for the semester. This gives me more time to better understand the material and is a nice change in pace from the weekly set structure at Caltech. My humanities classes are taught via lectures and tutorials. The tutorials are smaller group sessions that are primarily discussion-based. There are a lot more humanities (and social sciences) options here than there are at Caltech primarily because the University of Edinburgh consists of many non-STEM schools as well. This is really nice in my opinion because it allows you to take classes that you definitely would not have the opportunity to at Caltech. For my humanities classes, the assessment is done through 2 essays during the semester.

Outside of classes, it has been great to explore the surrounding areas. I love to go on walks in the Meadows (one of the major parks), go on hikes at Arthur's Seat, or just soak in the beautiful views from the Palace Gardens. The Edinburgh airport and the Waverley train station are both close to Kincaid's, so it is very much possible to do weekend trips to other parts of Scotland and even other countries.

Scotland is beautiful in terms of nature and city alike, and I think if you are considering it, it is definitely a place worth exploring.

Vivian Zhang '24 - Computer Science Caltech/Informatics Edinburgh

I knew I wanted to study abroad coming into college, and I am very happy and grateful that I had the opportunity to do so in Edinburgh.

The city is old and charming, with a vibrant personality unlike any other. Being a much larger school, the university has something to offer for every kind of student and interest. I was blown away at the society fair in the first week by the variety of club offerings and high participation in societies as well. During the first two weeks, most of the societies offer "taster" sessions which I would definitely recommend attending, since they are a free way to try out something you may not be familiar with. I had the opportunity to try out sessions of hillwalking, swimming, badminton, and salsa.

Instead of a closed campus, the university itself is very integrated with the city in a similar way to NYU, which makes for a unique experience since it ensures we spend a lot of time walking around and experiencing the city as well. Edinburgh has a wealth of food, shopping, pubs, museums, parks, and historical sites to enjoy. The Edinburgh Castle, the National Museum, and the site of Tom Riddle's grave are all within a half mile radius of where we are staying.

All the Caltech exchange students live in Kincaid's Court, which is a centrally located student accommodation. Most of us live in 12-person flats, and most of the flatmates are a mix of first-year students and a few exchange students. You definitely get a sense

of independence without a meal plan here, which makes it a good opportunity to cook and try the restaurants and eateries nearby.

Academically, I have found my coursework here different and satisfying thus far. I am taking two computer science courses: Accelerated Natural Language Processing and Human-Computer Interaction. Both courses were topics not offered at Caltech, so studying at Edinburgh gave me the opportunity to explore broader topics in computer science. For Accelerated Natural Language Processing, I find the course to be well-organized, and it offers a comprehensive overview of basic methods and linguistic theory behind the field. In Human-Computer Interaction, I learned about ways to gain feedback for designs and design with users' needs in mind, as well as gained experience using Figma, an industry standard software for design.

Additionally, I am also taking two HSS courses: Economic and Political Geography and Seoul, Shanghai, and Edinburgh: Peoples, Cultures, and Spaces. In both of these classes, I have found the tutorials to be really interesting. We usually have small group discussions with students who are from different parts of the world and are majoring in humanities fields, so hearing their insights and perspectives adds well on top of the course content.

Overall, I love living in a city so unique and different from what I'm used to at Caltech. I've been given a lot of time to explore and grow independence while I'm here, and it's an experience I truly won't forget.