

Physics At Warwick,

so far



Hi everyone reading this, I'm Josh, an MPhys student here at Warwick who at the time writing this has just finished my second year. I'm Japanese and British mixed and have grown up in England, going back to Japan most years for a short period. I play the piano, and competitively swim. FYI, most of these photos you can double-click as they're slideshows.

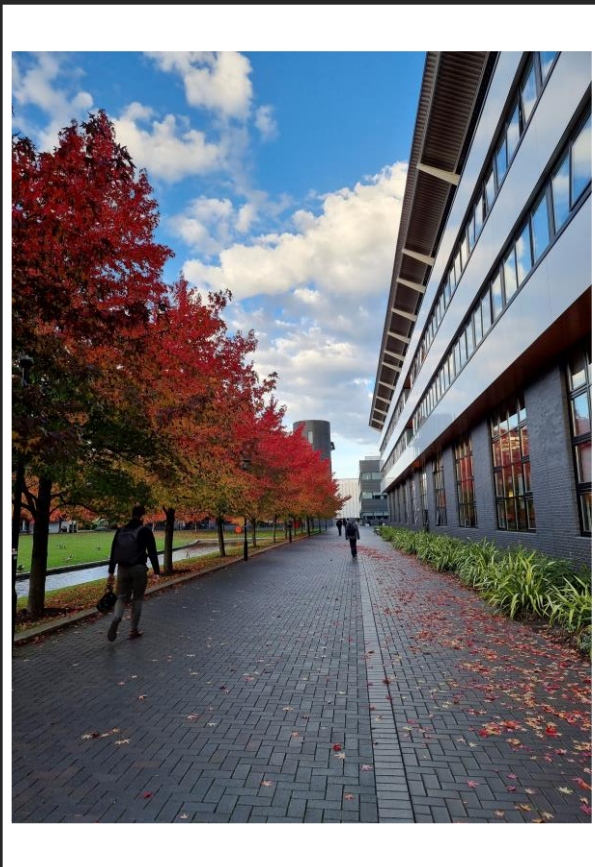


You've likely looked at all the university ranking tables to help decide where you want to go, so here's some extra info to give you a slightly better understanding of what goes on at Warwick. What made me reconsider and put Warwick as my firm choice were size and connections.

Campus is large, and so is the cohort. So, making friends shouldn't be a major worry, although it always is! Size comes with the bonus that there's lots of study spaces, not just the main library. The sports centre is also very well equipped, so there's opportunity to explore my sports interests to a high degree.

Warwick University has some great research connections with institutions across the globe, and these can become excellent opportunities to build research connections. A good example is the URSS, which allows undergraduate students a research opportunity under an academic at the university. Exchange programmes are available, however are quite limited due to the low demand by physics students for international exchange.

⁽¹⁾ The less appreciated entrance to the physics department; A faster entrance for when I am inevitably rushing to labs. ⁽²⁾ Materials & Analytical Science Building. ⁽³⁾ Warwick Arts Centre.



⁽¹⁾ The Path adjacent to the WMG centre, opposite the Zeeman building. ⁽²⁾ Looking down the FAB. ⁽³⁾ Walking towards the Sports and Wellness Hub. ⁽⁴⁾ Inside.

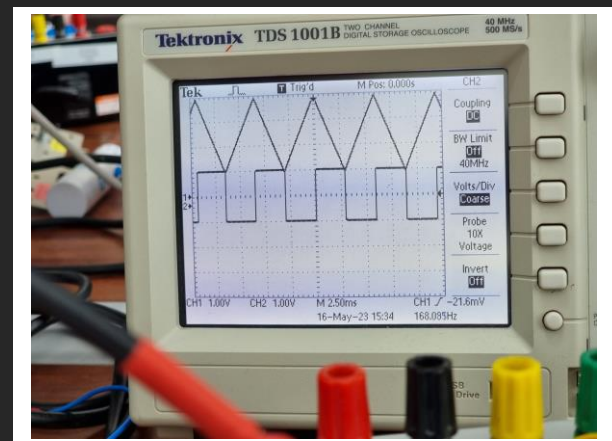
A large part of the transition to university is learning how to learn, effectively. In a nutshell, this means testing different methods of learning and sticking to what works for you. For me, I rely heavily on flashcards and writing out as much information on a topic as I can remember, practically turning the entire syllabus into flashcards. I found the teaching style is much more comprehensive than A-level meaning there weren't nearly as many potholes in my understanding than during A-levels. Here's an example of a

flashcard – they're on the longer side.

- YEAR 1	0	251	499
+ PX153 - maths for physicists	0	34	86
+ PX154 - Physics Foundations	0	51	131
+ PX155 - Classical Mechanics and Special Relativity	0	111	3
+ PX156 - Quantum Phenomena	0	42	94
+ PX157 - Electricity & Magnetism	0	6	95
+ PX158 Astronomy	0	7	90
- YEAR 2	74	511	438
+ PX262: Quantum Mechanics and its Applications	20	162	9
+ PX275: Mathematical Methods for Physicists	12	90	76
+ PX282: Stars and the Solar System	0	0	313
+ PX284: SM&TD	28	163	8

My Anki flashcards for year 1 and 2. The last two are a prompt and the surrounding information around it.

Experiments are more elaborate, and much more rigorous than in A-level, particularly in error and result analysis. I should also add much more interesting. Here's a couple slices of the labs – standard physicsy stuff.



⁽¹⁾ Oscilloscope reading of a simple transistor circuit. ⁽²⁾ Estimating diffraction grating parameters.

Learning how much more physics there is than I initially thought, and the many big projects around the world that are trying to understand the world around us,

like the Super-Kamiokande and [T2K](#) experiment in Japan, only increases my appreciation and fascination for the subject. These experiments are detecting neutrino interactions, trying to observe apparent CP violation from neutrino flavour oscillation, and also act as a supernova detector.



Personally, first year was more challenging than the second, largely because of the drastic change in learning and living style. Getting used to new notation and methods of

approaching physical systems is the main challenge of first year, and a visual representation of this struggle may be of use. But of course, it is all in the art of the pursuit of knowledge, so we can (somewhat) justify this to ourselves.

In the first and second year, there are scheduled weekly meetings with your assigned tutor, an academic in the department. My tutor has been the lovely [Professor Ana Sanchez](#); we mainly go through problems and monitor progress in a group of five peers. But it's also an important point of contact for any potential academic and well-being issues which may arise. Going through

feedback with the academics who marked them, for example for lab reports is a good way of just showing your face around and getting to know some of the researchers and their research at a surface level. You never know, you may have an interest in their research which can influence which modules you decide to take in later years, as this was the case with me. Even though taking all of them can be initially tempting, over-CAT-ing can be hard to manage unless you are set on taking all those modules.

Finally, being part of UWSWP (University of Warwick Swimming and Water Polo), pool and gym sessions are a large time commitment. Also regularly tutoring makes each day quite full and tiring, but of course fun and totally worth the effort. One big tip is to make sure you make time for yourself and value friendships you make throughout your time at university, wherever you go, as the degree isn't the only thing you're going to university for. I've made some of my closest friends through the clubs and societies I'm in, so I'm a huge advocate of joining a society once you join uni. If there's one thing to take away from this, it would be that.

Thanks for reading

- Josh