

**EXCHANGE REPORT****Name****Year and term for exchange**

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2020 HT2019

Exchange university

Nanyang Technological University

Degree programme

Bioteknik, civilingenjör 300 hp (Master Medicinsk Bioteknik TMBIM)

Between East and West

Before departure

The decision to go on an exchange at a different university was something that I went back and forth on for several months before deciding to go on the exchange on the last day for applications. I knew I wanted a change of scenery and experience a different culture while studying abroad. This is why I wanted to go to Asia and Singapore, providing a non-existent language barrier and a sleuth of different cultures present in the country proved the most interesting option. Other options like Hong Kong and Tokyo were in consideration but Singapore took preference due to its similarities to western cities. I chose Nanyang Technological University for its high university ranking and high prestige in the Asian region. I was hoping to experience the forefront of my field and possibly meet some interesting people within the biotechnological field. The preparation was relatively simple as my chosen university had an online platform for the application. They were even tied to the immigration agency of the country, so the visa application was included in the application to the university. I had some vaccinations relevant to the region and packed a light suitcase before departing.

Upon arrival

I arrived approximately 2 weeks prior to my courses starting. I took this time to get myself situated in my accommodation provided by the school and getting to know my roommate and the school grounds. The final steps of the school registration occurred during this period and some introduction events held by the school were hosted. They provided proficient information and if there were any questions you could get help from the NTU global personnel. I spent the first days exploring the city and reading up on my upcoming courses and the available university clubs and activities.

Financials

Having gotten no scholarship for this trip I relied on the standard student loan and study grant by CSN in addition to my own savings and this was enough to sustain myself during my study period. There was even some money to travel during the calm periods of the academic year. There were some mandatory registration fees with the school, but they were relatively minor in comparison to what the tuition fees for non-Swedish students were. The school had canteens which provided cheap food. As the accommodations cooking appliances were limited to hotplates and microwaves, I decided to eat at the on campus canteens for most of my meals. Your choice of meals decide how expensive it is and there are both cheaper and more expensive options depending on how exotic you want your meals to be. From economic chicken rice to Mala hotpots there are plenty of options depending on the budget. Eating out on the town is similar in price to Stockholm.

Accommodation

During the application to the school you can choose to get accommodation on campus as well. There are 20 something buildings around campus, built between 1954 and 2019. These offer double and single rooms of varying sizes and equipment. I myself got a shared double room in one of the older buildings. If you're given the choice I would recommend a single room in one of the newer buildings as some of the old ones lack air-conditioning. On the flipside these accommodations are quite cheap. As cheap as student apartments in Stockholm if not cheaper if you go for one of the double rooms assuming you don't mind the lack of privacy. Between 1500-3500 kr per month on campus and the prices for rooms offcampus can be around double the price on campus depending on your preferred housing area.

University and studies

The university is very large in size both geographically and in the provided courses. However, there are some restrictions for exchange students so be sure to check that the courses you want to read are available to exchange students before you apply. The studies differ quite significantly to KTH and is more like the University of Stockholm in style. The courses span the entire semester instead of the semester being split into two periods. This means that the examination period features more exams over a shorter time than I was used to at KTH. The courses are graded in a different manner as well with the exam accounting for a smaller part of the grade (30-50%) and project work and reports determining a larger part of the grade. This helped to ease me during the examination period as I could earn points towards my grade during the entirety of the semester. This also helped in keeping me engaged during the entire semester.

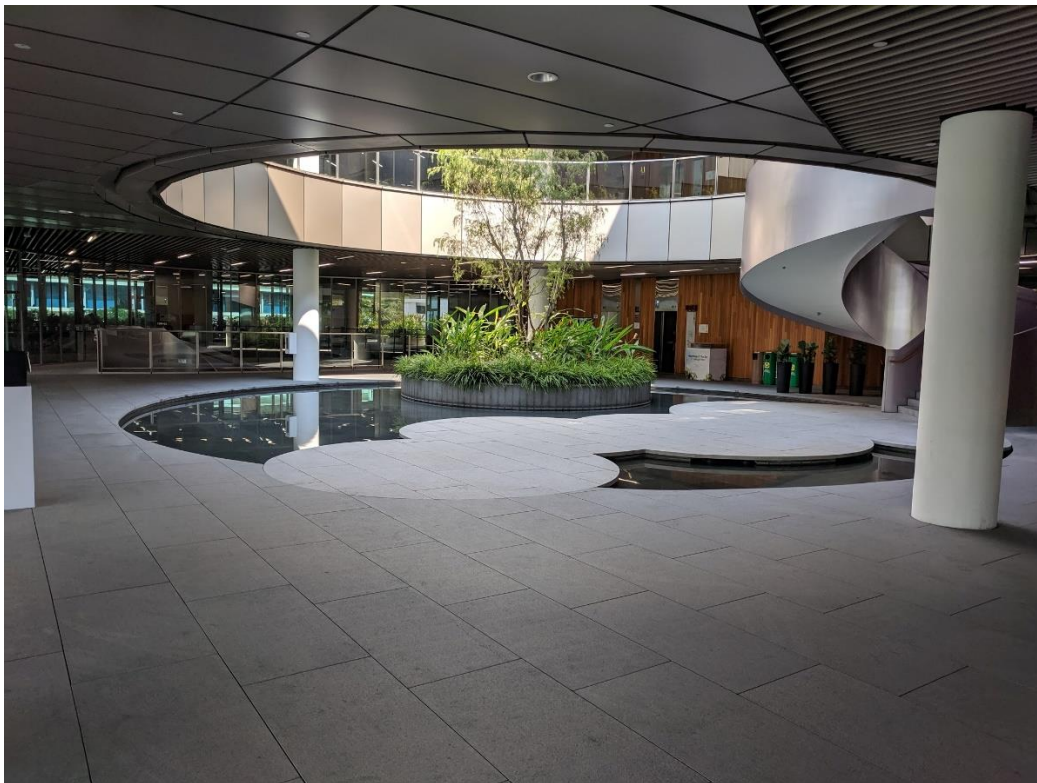


Figure 1 Entrance to the Arc at the NTU campus



Figure 2 The inside of the Hive at NTU campus

Courses

The courses I took while in Singapore deviated somewhat from the courses available here at KTH. I took a signals course called Signals in Biosystems (BG3103) Which didn't give me a whole lot outside of learning to do calculations that engineers already use computers for anyway. The course didn't contextualize the material to the biotechnological field as a whole and most of the course consisted of learning how to do Fourier transformations by hand. While I'm sure that its useful in the context of creating signal conversion software I didn't feel that it gave me a lot. In addition, I read an advanced immunology (Current Topics in Immunology, BS4004) course which was beyond the scope of my base knowledge going into it which made the course quite difficult in the beginning. This course was similar in content and construction as a course you would read at Karolinska Institutet. Due to this we were taught about the current findings at the forefront of the immunology field and how to extrapolate and interpret data from new articles. This was very fulfilling, and I took a lot from the course. The course was taught by five different professors with different fields of specialty. I also enrolled into a brand new bioinformatics course called High Throughput Bioinformatics (BS4017) which I took to replace my mandatory bioinformatics course at KTH. As the course was new it was a little confusing at times but we were allowed to work with unpublished data from the university and how to use some bioinformatics pipelines. A very giving course in my opinion. In addition, I took a project course called Medical Device Design (BG4102). The course was very hands off where the students were sorted into groups of 8 or 9 where the objective of the whole course was to construct a medical device. You were given a number of options from a heartbeat monitor to a breathalyzer. And then from scratch build it in a way that your group saw fit. As all group members knowledge of actual product development and construction was very limited it did take a fair amount of work to get the device built. Lots of trial and error but it was fun in its own way. As the only exchange student in the class I also got to hang out with the local students more than I would have expected which was also a very fun experience. In addition, I also took a sustainability course (GC0001) to gain some insight into the sustainability mindset in the south east Asian region. The course was relatively short but provided some valuable insights.

City and country

Singapore is as I expected relatively western in culture and construction. It sits very comfortably between the east and west culturally speaking. This varies from place to place naturally. Venture into places like Chinatown and little India and the conception that the country is a western country might be turned on its head. Because of this you can explore different cultures at your leisure while traveling the city. Most of the residential areas are more eastern in culture while the commercial and business districts are more western. The people are very friendly and helpful and I was able to make a lot of friends among the local students. Singapore is a very unique city architecturally and historically so there is a lot to see and do in the city. And as the country isn't very big it is quite easy to get to know the country much more deeply than you would another larger country. As the culture was relatively western I didn't experience a whole lot of culture shock. However it begs to be said that I've been in Asia and south east Asia multiple times prior which might have mitigated the culture shock quite a bit. Your mileage may vary on that point, but I expect getting used to Singapore is easier than other countries in the region as everyone speaks English from the get-go.



Figure 3 The inside of the Changi International Airport



Figure 4 The treetop walk at the Changi International Airport

Leisure and social activities

Once I got to Singapore I wanted to meet and hang out with the local students in favour of hanging out with people from my own school and country and I did so primarily through the various clubs on the campus. There are a wide selection of clubs on the campus for everything from sports to music, art and culture appreciation. I decided to join the E-sports club C3 and the shito-ryu karate club. Both of these were very fulfilling and fun and allowed me to meet new and interesting people. The E-sports club by extension allowed me to meet a large number of people in the Singaporean fighting game community (colloquially known as the FGC). I spent a great deal of time with the FGC both at the school and at various arcades and gaming dens. I made lots of friends and I felt like I grew a great bit as a person while doing this. I even travelled to the Philippines for a major tournament called the Rev Major with some of the people from the E-sports club. In the Philippines I also made some new acquaintances among the locals. I also got to accompany other students from my courses on various events around Singapore. I was very pleased by my decision to hang out with the locals more than with other exchange students as I was able to live more like one of the locals in Singapore which made my stay much richer. I also travelled to Tokyo on my way back from Singapore, traveling on your way back from the exchange is something I highly recommend as there will be a gap of a month between the end of the Singaporean school semester and the semesters at KTH.



Figure 5 The Venue of the E-sports tournament Rev Major 2019, Manila, Philippines



Figure 6 The venue of the E-sports tournament South East Asian Major, Singapore

Other recommendations and observations

As for other recommendations, make sure to explore and experience the city! I spent more time than I would like to discuss with the schoolwork than I probably should have. But go out there and meet new people and see new things. I have to admit that I was firmly outside of my comfort zone the entirety of the trip. But I think that was for the better in the end. Make sure to see the neighbouring countries as well as it is very cheap to do so!