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University: Nanyang Technological University

During the fall of 2016 I participated in an exchange semester (8^{th} of August 2016 – 2^{nd} of December 2016) at Nanyang Technological University, Singapore. Since the reason that you are reading this report is most likely your own ambition to go on an exchange, I will try my best to provide you with useful information about the overall process and experience.

Preparation

It all starts with your own orientation of the possible destinations and universities. Once you have made a choice of your top three, apply for the exchange programme on the Erasmus School of Economics site and await the results. Once you know your final exchange destination you will have a couple of months to get organized. However, if it turns out to be Singapore you do not need to worry. Nanyang Technological University (NTU) will get in touch with you and send you various emails with all the relevant information. They will guide you through the visa application process, the application for university housing (not guaranteed), explain the procedure of course selection (more on this later) and all other administrative business. The application for university housing is straightforward but not everyone gets a room. To get an idea about the other options, NTU provides you with some links but what works best for most students is to arrive a bit earlier, book a hostel (I recommend the Green Kiwi) and try to find something together with other people. Another option is to use social media to get into contact with others looking for a place. Things that you will need to do by yourself are making sure you have the correct vaccinations & insurance (also those needed for where you might travel), sublet your room in Rotterdam, apply for the OV reimbursement and of course book a flight ticket. Since the preparation process will include many documents it is a good idea to keep them organized.

When packing your bags make sure to bring one or two sweaters because lecture halls are very cold. However, that's all the warm clothing you'll need because Singapore is hot and humid. From November it does rain quite a bit so a rain jacket/umbrella could be useful. Furthermore, a formal set of clothes will be needed as many courses require presentations. Lastly, if you plan to travel it is easy to get malaria pills and deet in advance.

Arrival

Upon arrival, I hopped on to the metro towards the Green Kiwi hostel where I had booked a bed for my first six nights. Looking back this was a good move as I got to know a lot of people. As mentioned before, arriving slightly before the start of the semester is a good idea (I arrived two weeks early). First of all, it will give you time to look for accommodation in the case that you did not get a room on campus. There will be a lot of exchange students arriving around this time and it also is a good opportunity to meet people. Second, there will be various events & parties organized for exchange students which could be worth attending. The university and its faculties organize various events and student organizations throw numerous parties. Furthermore, the process of applying for your matriculation card & student visa will start around this time. Once again, make sure that you can easily access all the necessary documents (the NTU Exchange Portal will be very clear on this).

If you do get a room on campus, the earliest date you can move in is approximately a week before the semester starts.

Courses

The application process for courses is rather different than the process you are used to. NTU will get into touch with you via email and one of the things you will need to do is fill in a list of ten courses that you would like to follow and that have been approved by the ESE exchange coordinator. These courses are then approved (or not) by NTU and out of the list of your approved courses, several courses will randomly be assigned to you. In the case that the university assigns you too few credits (my case), you are not happy

with the courses (pick your ten courses wisely) or you would like to adjust your schedule, the add drop period is your chance! The add drop period takes place during the first two weeks of the semester. Depending on the vacancies, you can add/drop your approved courses or change tutorial groups. Furthermore, additional courses can be approved and added to your list of potential courses. Once the add drop period has ended, your schedule is definite and no further changes can be made. It may all seem a little confusing at first but after reading the available information online it is all quite clear.

My courses: all the courses I followed I intend to incorporate into my elective space. In total I had exactly 24 ECTS.

Energy Economics (HE3010): 3 AU → 6 ECTS (please check the new conversion, I believe it no longer is x2)

Each week consists of a two-hour lecture and a one-hour tutorial. On top of that I would say another 4 hours of self-study to complete assignments (2x), a group project and presentation and two informal guizzes.

Energy economics studies how we use and produce energy with the help of micro-economic methods. After a brief introduction into the technical aspects of energy, the course analyzes the coal/electricity, oil, natural gas, LNG markets using the corresponding market structures. For example, the course will use monopoly theory to analyze OPEC's behavior. Furthermore, the course also covers the production and allocation of exhaustible resources over time and takes a brief look at the relationship between energy use and GDP. In the end, the objective of the course is for the students to gain an understanding of the various energy markets from the economist's perspective.

Personally, I think this course was worth my time! I enjoyed the fact that it used the economic concepts I learnt in Rotterdam to analyze a specific industry. However, since the course covers a lot of concepts, an in-depth look was not always possible. I would also say that the amount of study material was a bigger challenge than the level itself. Assignments and projects are a big part of the course and these were quite interesting (analyze your own household electricity consumption, oil trading and a project of your own choice). In short, if you enjoy micro-economics and are interested in the energy industry you will enjoy this course.

Business Finance (BU8201): 3 AU → 6 ECTS

Each week consists of an online lecture/activities (2 hours) and a one-hour tutorial. Besides that, another 2 hours of self-study to complete the tutorial assignments, group presentation and midterm.

The course objective is to provide students with an understanding of fundamental concepts like time value of money and risk & return. Furthermore, the course covers project evaluation, capital structure, dividend policies and the valuation of stocks and bonds. Each student will need to present one of the tutorials with his or her group.

If you have not noticed already, the above description looks a lot like the Finance 1 course outline. With the exception of a couple of topics, this course largely overlaps with Finance 1. Therefore, I would advise students to follow another course.

Money & Banking (HE2007): 3 AU → 6 ECTS

Each week consists of a two-hour lecture and a one-hour tutorial in which students present the tutorial questions. 3 hours of self-study are needed to answer all the tutorial questions/prepare your presentation and to cover the relevant weekly material.

The first part of the course examines the banking/financial industry from an informational perspective. The concepts of moral hazard and asymmetric information are used to analyze the structure/behavior/business of banks and the financial system. The second part of the course takes an indepth look at monetary economics. Concepts covered in this course are: the financial system, the role of money, interest rates, financial crises, monetary theories (Keynes, Friedman), transmission mechanisms of monetary policy etc.

This course was very interesting. The information approach to analyzing the structure of the financial industry was eye opening and the course definitely sparked a profound interest in monetary economics. The professor himself was able to relate the theory to the real world through his own experience and he encouraged the students to try this themselves through the tutorial and exam questions. One way we did this was through studying the Great Depression and the Global Financial Tsunami (as the professor put it). However, the tutorials were a bit of a mess. The student's presentations were always interrupted by the professor in order to provide additional information. Not a bad thing in itself, but many students were clearly annoyed by this and we would always run out of time. This resulted in doing the last 3-4 (out of 12) tutorials in the last lecture. The course materials were challenging at times and the range of concepts was once again quite large. The exam allowed you to pick 4 out of 6 questions, which in my opinion gave the students a nice advantage.

Game Theory and it Applications to Social Sciences (HE3002): 3 AU → 6 ECTS

Each week consisted of 2 hours of lecture and a one-hour tutorial. In order to fully grasp the concepts and complete the tutorial questions I would say another 3-4 hours of self-study per week.

The objective of this course is to familiarize students with the basic concepts and methods in game theory and train them to solve for equilibria. The first part of the course covers non-cooperative game theory. The games are characterized by the amount of information known to the players and by the timing (simultaneous or sequential). This part of the course covers static games with complete/incomplete information and dynamic games with complete/incomplete information and their equilibria. The second part of the course is taught by a visiting professor and it covers cooperative game theory. The main difference is that cooperative game theory analyzes the behavior of groups of people instead of individuals. The final grade consists of two assignments, a mid-term and a final exam.

This was my favorite course. Applying mathematics to 'games' in which individuals/businesses try to optimize the outcome was challenging and I learnt a lot. Often the hardest part was reformulating the story into a mathematical formulation for which you could solve. Furthermore, the concepts we learnt were applied to real life situations. I particularly enjoyed this because game theory can become quite abstract and the applications give an impression of how game theory can be of use. The professor was good and always took his time to help you individually. During lectures and tutorials, the professor would often cover problems that were tough but in the end the mid-term and exam were easier. I'd recommend this course to anyone who is reasonably comfortable with numbers.

Finances

Singapore is known to be one of the world's most expensive cities and I believe this comes down to two factors: rent and (alcohol is very expensive too). Your budget and actual expenditure will thus depend on campus housing (or not), how often you go out and the amount of travelling you intend to do. Furthermore, the amount spent during an exchange varies greatly amongst students. The following overview will give you an insight into my spending and funding. Keep in mind that there will always be unforeseen costs, especially at the beginning. The amount can vary but don't be surprised if they sum up to 200-300 euros.

Expenditure Type	Amount in Euros
Weekly Expenditure	130
Rent *	835
Flight	850
Green Kiwi Hostel First Week	100
Host Institution Fees + Student Visa	250
A Weekend Trip	200-300
Recess Week Trip (9 Days)	575
Travelling After Semester	40-50 a day

Weekly expenditures include food, going out, mobile phone, public transport trips to the city center and small activities like a day to the beach. Food on campus is around 3,50 for a meal, mobile phone was 10 a month, going out includes drinks of approx.10 euros and an entrance fee that can range between 5-20 euros, public transport around 5 euro per week. The host institution fees include those for the sports facilities and a basic health insurance.

Funding	Amount in Euros
Studiefinancering	280 a month
OV Compensation	100 a month
Holland Scholarship	1250

^{*} I was lucky enough to get on campus housing and this amount is the one time bill I had to pay. Off campus housing is a lot more expensive.

Daily Life

Singapore is, without a doubt, a fantastic exchange destination. A modern, green, organized city in the midst of the chaos of South East Asia. The mix of the people and their cultures make for a vibrant city, their kitchens for great food and the architecture ensure an amazing surrounding. The view of the financial district never gets boring! Furthermore, everything in Singapore is very well organized. You'll never see a cleaner city and the public transport is efficient and timely.

Nanyang Technological University is one of the three universities in Singapore. Its huge campus lies in the west of Singapore and it houses around 11,000 people. In order to support all the 33,000 students, the university has numerous canteens, supermarkets, shops, barbers, bus lines and extensive sport facilities. In theory you would not need to leave campus for anything. The big downside is that it takes around an hour to get to city center. However, this has its upside as well because city center is expensive.

As mentioned before I was lucky enough to get a room on campus. I shared my room with a local student and lived in a hall that housed around 400 students. The halls have a canteen, shared bathrooms, television rooms, washing facilities, study areas and a common area. It was an experience to live on campus because it made it easier to hang out with the local students and join their activities/sports.

A normal day for me started with my lectures and tutorials. In the afternoon I would study and once it had cooled down a bit outside I would go to one of the outside "gyms" for a workout. I was able to squeeze all my courses into three days which gave me the opportunity to travel in the weekends or attend one of Singapore's many events. I visited Malaysia and Thailand in the long weekends and went to Cambodia during the recess week. After the semester I travelled to Myanmar. Singapore was a perfect hub

to come back to after travelling! Besides the travelling, I went to the Grand Prix of Singapore and the Rugby 7s tournament organized by the Singapore Cricket Club.

Other weekends were well spent on exploring Singapore. If you ask a local what to do when in Singapore, they will always answer "just food". I would disagree that it is the only thing out there but it is definitely a very important aspect of Singapore. Check out Tekka Centre, China Town, Satay by the Bay, Newton Circus and you'll understand why (try and find a bit less touristy spots as well). Furthermore, the city is known for all its parks and gardens and these are indeed a nice place to hang out! One of my favorite things to do was to check out the rooftop bars and enjoy the view. It's something special!

All in all, exchange in Singapore is something to never forget! Studying abroad, travelling, exploring new cultures and getting to know people from all over is a lot of fun. Enjoy it to the fullest!

