

**Exchange university**

Instituto Superior Técnico

Degree programme

MSc Electric Power Engineering

Exchange semester in Lisbon



Before departure

I knew I wanted to do an exchange somewhere in Europe but I was not sure which country. After looking at different possible universities and saw that Instituto Superior Técnico (IST) in Lisbon seemed to have interesting courses that could fit in well with my master in electric power engineering at KTH. Lisboa also seemed to be a great city for Erasmus students with lots of activities and opportunities for travel. Going on exchange inside Europe meant that it would be possible to get the Erasmus grant but it also made the preparations very easy as no visa was needed.

Upon arrival

I arrived in Lisbon a few days before the beginning of the welcome week organized by IST. The welcome week was really well planned with lots of fun activities which gave the opportunity to get to know a lot of other Erasmus students as well as see the city. The welcome week included for example a Lisbon tour, a welcome dinner, a surf lesson, and a campus tour. The mentors also held an introduction of the university page and how to use it for exam enrollments and how to create your own schedule. The university's student organisations sometimes host barbeque evenings on the campus and IST also have some different sports clubs which students can apply to join.

Financials

In general most expenses are cheaper in Lisbon than in Stockholm, for example eating out at restaurants or other social activities. I received the Erasmus grant during my exchange semester as well as the full CSN loan, which was sufficient for the exchange, but in hindsight I might have also applied for the extended CSN loan for exchange studies as I did a lot of travelling around Portugal.

If you are 23 or under you can get a metrocard for free and otherwise the card is 40 euro per month, which allows you to take all public transport in Lisbon.

Accommodation

I got my accommodation through the website Uniplaces and paid 590 euros per month, which included cleaning and all bills were included. When talking to other students, the rents seem to range between 350-650 euros a month. The earlier you try to book accommodation, the better place you can get for a good price. I was lucky with my shared apartment as it was newly renovated and in very good condition, but in general the conditions of rooms in Lisbon are lower than what can be expected in Stockholm.

I stayed in an area called Areeiro and can really recommend it. It is on the green metro line which I found to be really good, and it is very close to the university. It took me about 10 minutes of walking to reach the Alameda campus where I had all of my classes.



University and studies

The university is divided into two campuses, which should be noted when applying for courses as they are very far from each other. I went to the Alameda campus which was relatively big and close to the city center. All courses are supposed to be in English but if you are the only Erasmus student in your class you might have to tell the teacher to speak in English or they will automatically do it in Portuguese. A lot of the Portuguese students will also ask questions in Portuguese but other than that I had no trouble with the language of my chosen courses as all the material was in English.

I did not have to study as hard as in KTH as I found the courses to be a bit easier. There is a language course offered but it is not one of IST's courses but still gives you 6 credits. During my semester the language classes also took place in the IST Alameda campus, but I don't know if that is always the case.



Courses

It is mandatory to take at least 51% of your courses within the master program of which you are enrolled at IST, but other than that you can also choose some courses from whatever program you want. All my courses were within the electrical and computer masters program that I was enrolled in, except for the language course. You cannot see the schedules of the courses when you apply which makes it a bit of a gamble if they will overlap or not. However, during the introduction week you will have to puzzle together your own schedule as the courses offer a few different slots for every element, for example the lectures may be offered two days a week but you only pick one of them.

For me it was relatively easy to find courses matching with my master at home as IST offers a lot of courses in the electrical and computer master that fits well into Electric Power Engineering at KTH. All of the courses I chose from at IST was 6 ECTS, which meant i needed to pick five courses in total for the whole semester.

Control and Optimization of Electric Power Systems

I read this course during P4 and thought it was a relatively well structured course. I had taken a course in control and optimization (reglerteknik) at KTH previously, which was very lucky as it gave me a much better understanding of the contents of this course even though it is not stated as a prerequisite. The course evaluation consisted of two 45 minute tests, which together represented 50% of the grade, and a final exam of 90 minutes which represented the other 50%. I had gone to all the problem classes which made the exams pretty easy to pass. Overall I think it was a very interesting course which gave me a better theoretical understanding of electric power systems.

Renewable Sources and Distributed Power Generation

This was the course which had the most structure to it, which is not very common at IST. Both lecturers were very good and there was always a powerpoint presentation given for every lecture. Every week a new kind of renewable energy was covered which made it fast paced but still not too difficult. There were two minitests every week where one of the tests was a theoretical google form quiz and on the other you were given one mathematical problem to solve. If you passed 5 out of 6 of both of the two types of tests, you had already passed the whole course and did not have to do the final exam at the end of the period. A very general but still interesting course which I would definitely recommend, it could sound a lot with a test every week but the workload was still not too heavy compared to most courses at KTH.

Integrated Electrical Systems of Solar Photovoltaic Technology

This course included both theoretical and practical elements and evaluations. The professor was at times a bit all over the place and the problem classes were not structured at all. However, I am still very happy with the contents of the course and the labs which were included in the course. During the labs we worked in groups testing and experimenting with real solar panels. This might be the course with the most workload out of the 5 I participated in, the evaluation consisted of lab reports for each lab made in groups, a group project as well as a final exam.

Entrepreneurship, Innovation and Technology Transfer

This was a project course where you worked in a group creating a startup. The course had some very interesting guest lectures but other than that most of the work was done outside of class. The professor was pretty demanding which made this a somewhat heavy workload course, but I would guess that also depends on what group you have. There was a presentation every few weeks to show the progress of the course. I am not sure if I can recommend this course as the professor could be kind of mean and loud sometimes.

Portuguese language course

I really enjoyed the Portuguese language course and the teacher was very good and kind. The only negative was that it took place during the evening, two days each week, and that you were not allowed to miss more than 7 lessons in order to get the credits. I had previously planned to take another course at IST but exchanged it for the Portuguese course after arrival.

City and country

I really enjoyed living in Lisbon as it is such a beautiful city with a great social environment and so many fun things to do. It was very easy to get around the city but also to explore the nearby cities, for example by Flixbus which is convenient and not too expensive. There are a lot of nice cities and places to see not that far from Lisbon such as Nazaré, Berlengas and Porto. I also travelled to both Azores and Madeira which were such great trips with so many stunning views and hikes.



Leisure and social activities

There are many things to try and see in Lisbon, one of the most popular activities are of course surfing, which is easily accessible for both beginners and more advanced surfers, and if you do not want to surf, just laying on the beach and watching the other surfers are also recommended. As an Erasmus student it is possible to buy the ELL and ESN cards, which I greatly recommend. The two cards are from the two Erasmus organisations in Lisbon and when buying these you get access to so many activities and trips. Almost everyday there is an activity to join, some for free and some you have to pay for. It is a really good way to meet friends and enjoy everything Lisbon has to offer.

On campus you can book both padel and tennis courts, there are many football fields where games are organized for anyone to join, and if you like bouldering/climbing there are some good places to go in Lisbon.

Sustainability

The public transport is very good in Lisbon and its nearby surroundings, where you can easily take a train, metro or bus anywhere you want to go. Most places and apartments also have some sorting of waste, but not as much as in Sweden. Other than that I unfortunately didn't see many signs of a sustainability mindset in Lisbon or the university. It is possible to take the train from Stockholm to Lisbon even though it could be expensive and time consuming.



Other recommendations and observations

I would definitely recommend travelling as much as possible to see the nearby cities, it is so convenient and the transportation is cheap.

The best Pastel de Nata is found in Belém at Pastéis de Belém, around 15 minutes by train from the city center. If you don't want to take the train, the next best one is bought at Manteigaria.

If you are going to Erasmus corner, take the metro to Baixa Chiado and not to Rossio. This will save you from an awful amount of stairs to climb.