EXCHANGE SEMESTER - FONTYS UNIVERSITY OF APPLIED SCIENCE, EIDNHOVEN, NETHERLANDS

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Introduction

How I decided to apply for the Erasmus experience?

A good friend of mine who finished KEA Web Development, went as an Erasmus student in the Netherlands, Amsterdam for his 2nd Top-up semester. How he experienced Erasmus and the Netherlands from a social, cultural and educational perspective opened my interest and curiosity in pursuing a semester abroad as an Erasmus student as well.

My priorities for the Erasmus school application were:
1. Amsterdam, Netherlands
2. Eindhoven, Netherlands
3. Dublin, Ireland

These priorities were the result of the good impression about Netherlands which my friend described, the level of spoken English I would expect from these places as well as my personal belief that Ireland and Netherlands are places with a high international rate and cool social environments. Maybe one would ask why Ireland and not England for example, and to that I would answer, and I'm probably jumping to conclusions here, that England might be overrated plus the entire Brexit was taking place during that period of time. Also I've visited a bit of England in the past as a tourist but never Ireland or Netherlands.

My first priority was the school in Amsterdam because my friend was still there as a fulltime employee, because it is an international capital which I had never visited and because the school I applied for had a web development approach which I was and still am interested in since I am thinking of doing a top-up in web development at KEA after the AP-degree. **My second priority** was **Eindhoven and Fontys** because this was another school with which KEA had agreements with and because (and this played a significant role) on their website you can clearly see what courses you will be having , with a pretty decent if not complete description of each package of courses and each course.

I had to admit that one of my frustrations before filling in the priority school application was the foggy situation given by the lack of clarity and information regarding the courses one would/could get during the Erasmus.

Maybe many people think, "oh, who cares! I'll manage somehow! I'll be an Erasmus and people don't expect things from Erasmus students! It's like vacation…".I cannot stress how good it is to know your courses upfront and as much as possible about them.
I mean if one just goes on Erasmus because one wants only the cultural experience and has no interest in combining that with good useful courses, then my advice would be to just book a one week or two weeks' vacation.

Why I chose Fontys University of Applied Science in Eindhoven?

One of the main reasons of choosing Fontys, was the clarity of courses offered for Erasmus. I placed Fontys as my second option though because I was willing to sacrifice this advantage for a city like Amsterdam but in the end I was nominated for Fontys and now I am very grateful that this happened.

Information about all exchange programs (not only IT related) can be found here, while the ones offered for ICT (Information and Communication Technology), among which one can find Software Engineering, here.
I studied ICT and Software Engineering courses for my exchange semester. There are different packages offered for this study area. A package consists of the courses that one will pursue during the semester. There were 4 packages in total when I applied for ICT and Software Engineering, the first consisting of courses offered to first year full time students as well and then the fourth consisting of courses offered to full time students that are in their 3rd or 4th year of education as ICT and Software Engineering students.
More about the packages they offer, can be found here.

Experiences at the host university

A description of the subjects you studied, with references to the learning agreement, the course unit titles and the course descriptions, which can be included as appendices.
A description of the teaching methods and of the teachers – anybody you can recommend?
A description of what you learned.
Comment upon what was useful for you and what maybe was less useful.

Below there is a snap shot of the courses which I studied here. There might seem many but in reality the semester is divided into 2 blocks of 7 weeks each. In the first 7 weeks (first block) the courses offered were: OOD1, NETWS, SD1, UID and WEB3 while in the other 7 weeks (2nd block) the rest of the courses were in play: OOD2, SD2, CRY, EDB4 and CSA.

Software Engineering - Intermediate (S3-S)

Module name	ECTS	Code
Object Oriented Development	6	OOD1,OOD2
Networks for Software Engineers	3	NETWS
Cryptography	3	CRY
System Development	6	SD1, SD2
Databases 4	3	EDB4
User Interface Design	3	UID
Web Development 3	3	WEB3
Client Service Applications	3	CSA

Some very important things which I was not aware of until my intro weeks were:
- System development course is divided through the semester into two sub courses: SD1 and SD2. I f you do not pass SD1, you can still attend SD2 but the ECTS points from SD1 will not be transferred to KEA.
- When you fail a course, you do not receive the amount of ECTS points from that course and so instead of receiving 30 ECTS points as required by KEA, you will receive only the ECTS points from the courses which you have passed. This means that you will either have to come back for re-exams and hopefully pass them, or go back to Copenhagen and take on extra courses at KEA, somehow. This is tricky since KEA is only offering 10 ECTS points courses. At this exact moment, as I am writing this, I am in the situation of not have passed SD2 and CSA. Meaning that overall I am receiving now only 24 out of 30 ECTS points.
- The grading system starts from 1 to 10 and the minimum passing grade is 5.5, if not mentioned otherwise. There were courses such as cryptography which would made an average final grade based on the grades from the written exam, the first mandatory group assignment and the 2nd mandatory group assignment. Besides that, the minimum required mark for each of these, individually, would be 5 as passing grade. For example, if one would get a 5 in exam, a 7 in the first assignment and another 7 in the second then the assignments and the exam would be considered as passed and the final grade would be (5+7+7)/3 = 6.33 or 6 after rounding it up. Observe that the 5.5 minimum passing grade does not matter for the exam or assignments taken individually. But if one would have 4.4 in exam (rounded up to 4), 9 and 10 in assignments then the course would be considered as failed.
- Also there is a good practice to try and pass the assignments of all courses with mandatory assignments and assignments that will be accounted as part of the grade. Otherwise one needs to retake the course and pass the assignments. In the situation in which one passed all the assignments but failed the written exam – my case with SD2 – then there is no need to attend the

course again and re-submit the assignments. One needs to only take the re-exam and pass it in order to pass the course.
- The overall teaching methods are similar to the ones used in Denmark, and informal approach is implemented.
- I found teachers to be prepared and professional and all administrative problems were solved in a fast and professional manner. Overall, I was happier with what Fontys had to offer.
- The workload was also higher than it is at Computer Science at KEA, in the sense that for each block which has 7 weeks, there are weekly assignments for each course, every week. At a certain point we even had a max of 3 weeks with 2 assignments per course for that particular week (both individual and group) which put a bit of a pressure on all of us. At KEA, the workload is not that high and the focus is also on bigger projects for a wider time span.
- After each block (of 7 weeks) there are exams for the courses of that block. The gap between lectures and exams can vary from 1 day to 1 week but usually one should not expect a wide gap between these. Basically exams follow up closely after lectures. So you either do your assignments & study for all courses during your 7 weeks of lecture or you will need a lot of luck at exams.

The SD course overall is similar to the SWD – software design course from Computer Science, KEA – and it's more a matter of memorizing certain theories and practices. I personally found this course to be too abstract sometimes and full of too much theory which would not be pretty useful for a future software or web developer. The accent was also placed on how we would present – our presentation skills – and how we would analyze some given cases from text book. I would define this course as a mixture between organization, business and some IT methodologies and practices.
The CRY course was interesting for me because we looked into some mathematical theories and equations in order to encrypt and decrypt, understand RSA encryption and decryption and AES encryption and decryption practices. The exam was also on paper, with calculations to be done. We were allowed to only have simple pocket calculators at exam. So a good practice of math, RSA and AES on paper was required. It might sound scary, but after following all classed and putting an effort into all assignments from class as well as practice mock exams before the actual exam, the CRY examination was a nice experience.
The OOD course put a lot of accent on building a project in C# - with visual studio, painting in C# - following the waterfall model methodology where one defines the documentation upfront before the actual construction phase of the system/application.
During OOD1 we established some theoretical and practical background for waterfall as well as painting in C#, while in OOD2, the course consisted only in team work on a pipe network blueprint system where we were supposed to construct the actual application only after submitting the user requirements document and design documentation for the application itself (with UML).
The EDB4 course was interesting and it consisted of working with queries in an Oracle local database software application. The examination was on our computers, using the software.
The same happened for CSA where at exam we had to build an application following certain requirements in such a way so that there would be a client – server interaction.
User interface design was a less structured course where we worked with prototypes for web or mobile applications of our own choosing. The grade was given based on the overall project.
NTWS course is the same as Networking course from Computer Science from KEA. The only mention here is that this course is a lot more practical. This makes this course interesting, fun and easy to learn. I would recommend the Fontys approach to teaching Networking any day of the week. We used a virtual machine to create different nodes, routers and connections between them, as well as assignments that required us to use Wireshark and analyze the outcome.
Finally, WEB3 was a course where we worked in teams of 2 students on a web application using Laravel – a PHP framework, by following the framework's documentation and asking the teacher for input and guidance if/when needed.

Social and cultural experiences

If you will be an exchange student at Fontys, socializing and meeting other exchange and fulltime students will be easy, as all first year fulltime students and exchange students are placed in shared apartments (total 3 students per apartment) offered by Vestide (housing

association in Eindhoven). The apartments are all located in the same building which has also a back yard where during summer we all gathered and socialized.

At Fontys there is also Proxy – a student association – formed and ran by fulltime students of Fontys who organized the intro weeks, events and parties where we got to meet each other and socialize.

Eindhoven is a small city, that can be crossed by foot in approximately 2.5 hours. It has a central street called Stratumseind full of restaurants, bars and cafés opened every week day until 2 am and every weekend day until 4 am.

We used to go there almost every weekend – less during winter – and the walking distance from Vestide accommodation was approx. 20 min one way.

Practical experiences

As an exchange student you will be receiving accommodation options from Vestide – as mentioned above – which are around 15-20 min walk from the university.

Bikes are cheaper than in Denmark and Netherlands also nurtures a biking culture, so traveling to the university and back is fairly easy and fast.

It is good to avoid purchasing a bicycle from random people on the street as the bicycle theft seems to be higher in Netherlands than in Denmark and there were cases when students bought a stolen bike from people who randomly stop them on the street and sold them a bike and then ended up in prison for a night or two.

Open market.nl is a good place to buy a second hand bike, as well as facebook groups and bike shops.

Conclusion

Overall, I am very satisfied with this decision of going abroad as an exchange student at Fontys. I think it has been one of the best decisions I've taken so far. I learnt a lot of new things, experienced a different learning system, interacted with many people of different nationalities and made a lot of friends.

Professionally, I managed to secure an internship in a company which I really love and which I find to be quite unique from both a product and company –culture approach.
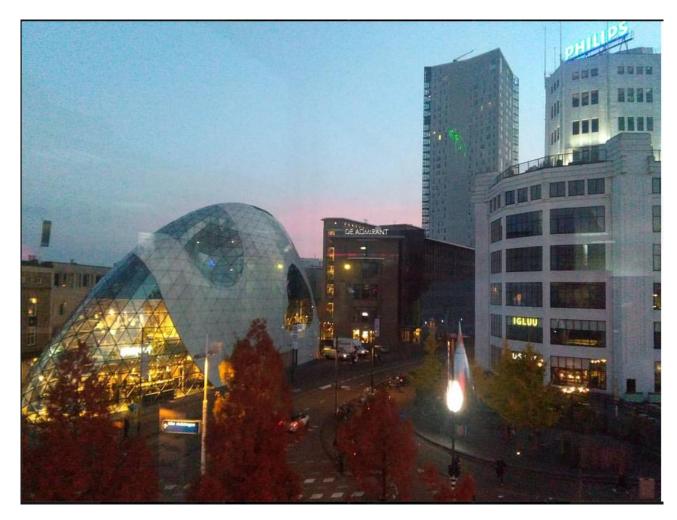
Traveling around Netherlands is fairly easy and can be cheap if one takes advantage of train group tickets and Dutch people are very friendly and similar in culture to the Danes.

Overall I recommend Netherlands and Fontys as locations for exchange due to the security of courses, nicer weather and temperatures in comparison to Denmark, the Dutch building architecture, culture and travel opportunities as well as the high amount of international people – both students and professionals.

Photos

- One of the plenty warm up parties with other exchange/erasmus students at Fontys.

- Center of Eindhoven – Philips Building (Eindhoven is a city that bloomed due to Philips)

- Philips stadium in Eindhoven