

# **ERASMUS Report:**

## **University of Westminster, London**

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### **ERASMUS Report: University of Westminster, London: Semester 3.**

The following report highlights my reasons for going to the University of Westminster in London, the courses offered, extracurricular opportunities that arose during my stay and some general advice.

#### **Reasons for going**

**Location:** I am actually a British citizen studying at KEA, so my reasons for choosing London are perhaps slightly different from others who selected London in the past. I had my own accommodation within 1.5hrs of the university and also realised that I only needed to attend 2 days per week, therefore there was not much of an issue with transport costs or requiring nearby accommodation. At the time of writing, I would expect London rooms to be about 25%-50% more expensive than Copenhagen, depending on quality and location of course.

**General Course Content:** The content of the course was very similar to that taught at KEA, there were 3 courses, Construction Site Practice(CSP), Construction Technology 2 (CT2) and Design Studio (DS) (double the ECTS points of the other courses).

**Industry contacts:** The university is in the heart of the city, and surrounded by the headquarters of leading construction and architecture firms. The final year students also have their work assessed by employees at Foster + Partners hence I was expecting a high standard.

#### **Course Structure**

Of the three courses on offer two, CT2 and CSP were class room based, whilst DS was mostly self-taught.

#### **CSP**

**General:** This was a very well structured course, we generally had about 1.5hrs per week of lectures, in addition to this there was approximately 1hr of seminar sessions per week interlinked to the coursework. Typically, in the morning we were lectured about a particular aspect of the construction site such as crane technology and operations, and in the afternoon we were given a task on selecting the appropriate crane for a particular job. This involved open discussion with other students and the lecturers. The learning outcome of the seminar was similar to the requirement of the coursework. For example, in the coursework we were asked to plan the demolition an old doctor's surgery and rebuild a new one; this involved the use of a crane. Knowledge attained from the seminar on "crane selection" was directly relevant to crane selection for the task set within the coursework. This was quite important as the coursework accounted for 35% of the unit.

**Coursework:** The coursework was an amalgamation of what was discussed in the seminars. It involved one high level report and a detailed report which incorporated the use of Microsoft Project. As just mentioned we were tasked with planning the demolition of an old doctor's surgery and replacing it with a new and larger one. The report required us to explain processes such as creating a safe site, planning when materials should arrive and how to select specialist equipment such as cranes, excavators, scaffolding and connection to utilities. All subject matter was explained in the seminars, so if you simply attended these you would have enough information to write a good report.

**Examination:** This was straight forward and nothing to stress about. It was only a 1hr exam, largely multiple choice. It is easy to get a pass by going through lecture notes, this can be quite dry, however the university makes available past exam papers which makes it difficult to get less than an A grade.

**Software:** Microsoft Office (basic and not taught) and Microsoft Project (basic level but was taught)

**Extra Curricular Events:** Links with industry paid off as we were able to have a guided tour of a construction site in London mid operation. Most personal protection equipment was provided, however we did of course need our own safety boots.

We were also given the opportunity to go to "Constructionarium". This is part of a charitable fund sponsored by Byrnes Brothers and various other UK construction companies. We were tasked with building a 1:20 scale model of an oil platform, whilst this seems small, it was still 4mX4m and at least 8m in height when completed. This was a really unique opportunity as we experienced how a project should be planned, carried out and physically put together. The majority of the work was labour intensive, however we learnt about processing times, site safety and equipment handling, creation of form work for concrete, creating structures out of rebars and curing times for concrete. 95% of the work was carried out by students and was very tiring. Fundamentally we created a concrete box with a platform on top. This was made in a dry dock which was later flooded enabling the platform to float. We were able to pull this out to the middle of the dock, which was in itself challenging as it involved floating nearly 20 tonnes of concrete. The platform was then aligned to a specified location and sunk by flooding the concrete container. The structure worked and 16 students were able to stand on top of the platform.

This was a great learning experience as we were able to put directly what we had learnt in the classroom into practice. I doubt many other universities in the UK offer this. The fee was £50 and included travel, 5 nights accommodation (equivalent of a 2 or 3 star hotel) and 3 meals per day.

**Overall:** I felt that this unit was very well taught, whenever I asked questions, I got a detailed response. I could see that the teachers were motivated and enjoyed discussing industry issues and problems.

All lecturers for this unit had at least 10 years of industry experience and were able to teach at an advanced level.

## CT2

**Course Structure:** This was primarily a series of lectures approximately 1.5hrs per week on technologies applied to build to PassivHaus standards or zero carbon emission houses. Again this course was taught very well, the lecturer was very well educated and demonstrated enthusiasm for teaching which is particularly important for this course as there are a lot of calculations. The calculations are generally very basic and it is more important to understand what and why you are calculating something rather than the mathematics itself.

The lecturer also often compared theory learnt in classrooms with real life practice and discussed modern products that are on the market. Again I was able to ask questions and get a detailed response.

**Coursework:** This was not too complex, and was interlinked with the project in the DS module. Fundamentally we had to apply the materials and technologies used to build to zero carbon emission houses. Data from the products was fed into a program that calculated whether the house was built to zero carbon emission standards. The report required us to discuss this.

**Examination:** None

**Overall:** I believed I learnt a lot about the fundamentals to build to PassivHaus standards and developed good understanding of the technologies involved. The course is actually taught over 2 semesters however the semester I attended provided me with enough information to build on should I pursue a career in building to zero carbon emission standards. There was no industry contact at my level for this course, however the lecturer was highly knowledgeable in explaining how to use the software and allocated at least 2 hours privately for the ERASMUS students explaining it.

## DS

This was largely an individual project. The ERASMUS students were given an average project from a previous semester and asked to design the construction aspect of it. For example, develop the key junction, decide on materials and where necessary change the layout.

There was little tuition for this subject and no software was taught to any of the students. Whilst some University of Westminster students used Revit the majority use AutoCAD.

There was the option for ERASMUS students to work together as a group however as there were only 2 of us it was decided not to.

During the semester, an architect from Fosters did come and visit the students to provide a critique on their designs. Also there was a visit to the Fosters' office followed by a presentation about some of their latest works. This was particularly useful as the architect clearly explained how the structures were manufactured and their complexities.

**Overall:** This course is down to the individual. However, the university does have a very good library and manufacturing facilities which include 3D printers and laser cutters. The design studio course is taught in a very similar to that of KEA.

**Coursework:** Design portfolio approximately 20 to 30 pages

**Examination:** None

## Overall Experience of the University and London

**Costs:** London is an expensive city but has a lot to offer. Accommodation and transport will be your biggest expenses closely followed by transport. Renting a room in zone 2 which is within 30 mins commute from the university is about £650 per month. You can do food shopping for about £50 per week, but eating out will escalate your food bills as it can be more expensive on average compared to Copenhagen. Transport is generally more expensive, it used to cost me about £8 per day to get in and

out of the city. I don't recommend cycling, whilst there are cycle routes, they are not as well developed as Copenhagen.

**Quality of teaching:** The lecture based courses are very good and easy to understand regardless of level. Course structure and reference points were provided for most aspects of the classroom courses. Unfortunately, I cannot compare these courses to KEA as I had only done 2 semesters at KEA at the time of writing this report. CSP and CT2 offered some software tuition, but it would have been good to get a little more depth in the softwares used.

**Teamwork:** In general, the courses are not geared towards teamwork as they are at KEA. This can be a bit frustrating as it does not reinforce learning very well. Especially if you have a problem with using software such as Revit it may be difficult to resolve a problem as the teachers did not know it. However, there are opportunities to do extracurricular projects such as Constructionarium as mentioned above and FabFest (fabrication festival) which is a competition for model making.

**References and guidance:** The university has a very good library and also provides specialist magazines such as Detail and Architects Journal. I felt all of the staff were approachable and made time to meet and discuss with you any issues I had.

**Further opportunities:** The university has good contacts with industry, and while these are primarily offered to the university's own students there are summer internship opportunities. In addition, with a good Revit portfolio it is possible to get work in the industry at undergraduate level. This can easily enable you to live in the city which would otherwise be almost impossible without savings and the grant money.

The university also allows use of the fabrication facilities which includes laser cutters, 3D printers and other general workshop tools.

**Other requirements:** You will not have to spend money on other materials, for example model making or technical equipment. The university also provides you with a small budget for printing, which should suffice for most of your project work.

Overall the experience was well worth it, and I did find it beneficial for my education. If you have the opportunity to go, just take it and work out the practical things later.