

Prepared for the  
University of Waterloo  
Faculty of Engineering

# Academic Exchange to the University of Leeds, U.K. and 8 months in Europe

Prepared as a requirement of  
GENE303  
International Studies in Engineering

Prepared for  
Professor P. H. Roe  
Director of Engineering Exchange  
University of Waterloo  
Waterloo, Ontario

Prepared by  
Daniel Weisser  
dweisser@engmail.uwaterloo.ca  
4A Electrical Engineering

June 26<sup>th</sup>, 2007

Daniel Weisser  
209 Welborne Avenue  
Kingston, ON, K7M 4G5

June 26<sup>th</sup>, 2007

Dr. P. H. Roe  
Department of Engineering Exchange  
University of Waterloo  
Waterloo, Ontario  
N2L 3G1

Dear Dr. Roe:

I have successfully completed my 3B academic term on exchange at the University of Leeds, U.K., followed by a term in Europe. Please find enclosed my report entitled: "Academic Exchange to the University of Leeds, U.K. and 8 Months in Europe", which was prepared as a requirement for the International Studies Option (GENE 303).

This report outlines my experience as an exchange student at the University of Leeds and in Europe from September 2006 to April 2007.

This report is entirely my own work. Also this report has not been previously submitted for any academic credit at the University of Waterloo or any other academic institution.

Sincerely,

Daniel Weisser  
I.D. # 20146432  
Encl.

## Table of Contents

Table of Contents .....	iii
List of Tables .....	iv
List of Figures.....	v
<b>1. Introduction .....</b>	<b>1</b>
1.1 Purpose and Objective of Report.....	1
1.2 Reasons for Choosing to Study Abroad.....	1
<b>2. The Process.....</b>	<b>2</b>
2.1 Deciding When and Where.....	2
2.2 Application Process.....	3
2.3 Selecting Courses .....	3
2.4 Financial Preparation.....	4
2.5 Documentation and Legalities.....	4
2.6 Housing and Residence .....	5
<b>3. The Journey Overseas.....</b>	<b>6</b>
<b>4. The University of Leeds.....</b>	<b>8</b>
4.1 Introduction Week.....	8
4.2 Lectures at Leeds .....	10
<b>5. City Of Leeds .....</b>	<b>12</b>
5.1 Shopping .....	12
5.2 Entertainment and Night Life .....	13
<b>6. Travel .....</b>	<b>15</b>
6.1 Within the U.K. ....	15
6.2 Around Europe .....	15
<b>7. Working Abroad and Living in Europe not as a Student .....</b>	<b>19</b>
7.1 Opportunities Challenges and Obstacles.....	19
<b>8. Recommendations and Conclusions .....</b>	<b>21</b>
<b>References .....</b>	<b>22</b>

## List of Tables

Table 1. Course Equivalencies	3
Table 2. Weekly Class Schedule	10

**List of Figures**

Figure 1. Location of Leeds [1] .....7  
Figure 2. Leeds University Campus [2] .....9  
Figure 3. Leeds Farmers Market..... 13  
Figure 4. Karlstein Castle ..... 17  
Figure 5. Charles Bridge (Karlův Most) ..... 17  
Figure 6. Prague in the winter..... 18

# **1. Introduction**

This report is intended to outline my experience over the 8 months that I spent in Europe. The first 5 months were spent as an International Exchange Student completing my 3B Electrical Engineering term at the University of Leeds, U.K. Following that I spent 3 months volunteering at an Architecture firm in Prague, Czech Republic.

I first decided to participate in an International Exchange in my 2A term. However it was not until 2B that any considerable thought was given to the topic and an attempt at completing the process was initiated.

## **1.1 Purpose and Objective of Report**

This report will focus on the Exchange Program process and what to expect as an international exchange student. My experiences beginning from the application process to what I decided to do following the end of the academic term are explained and described in order to help prospective students make their own judgments and decisions. This report will be tailored specifically to the experiences I encountered while applying and studying at the University of Leeds.

## **1.2 Reasons for Choosing to Study Abroad**

I had many reasons for choosing to do an International Exchange. The most significant was the desire to experience another culture first hand. I was interested in experiencing another culture in all aspects, including academic and social. This would not only be a great cultural experience, but would allow me to see the expectations and opportunities for engineers that are available in other countries outside of Canada.

## **2. The Process**

The procedure of going on exchange was long and a well thought out process. It started in 2A, with the initial thoughts that an international exchange may be an opportunity that I would like to pursue. It was many days of speaking with other students and doing research on the internet until a final decision was reached.

### **2.1 Deciding When and Where**

Having talked to students who had gone on exchange in the past and judging what was available; it soon became evident that for an electrical engineering student, the best choice for going on exchange was during the 3B term. So it was a relatively easy decision to make, when I chose to take my 3B term to go on exchange. Deciding where to go on exchange was a much difficult decision and required a lot of research and deliberation.

Originally I was very fixed on going to Australia and spending a term there. The allure of sun, warmth and sandy beaches was very tempting, especially considering it would replace a winter term in Waterloo. However after researching every possible way of taking a term on exchange in Australia, it became apparent that it would not be possible. The timing of the terms, and the fact that 3B and 4A were in consecutive terms for electrical engineering, would not allow for an exchange to Australia. After Australia was eliminated as an option, the real process of choosing a location began. There are many choices and great opportunities on many different continents and regions of the world. The final list of options was reduced to appropriate universities in Germany, England, France and Singapore. Ultimately the University of Leeds was chosen due to location, language requirements and due to the fact that it was the most attractive options based on the courses available.

## 2.2 Application Process

The application procedure is a long process that should be started early. There are many considerations that need to be taken into account when applying, and many forms and signatures that need to be filled out. It is not a matter of a few days, and can take several weeks to get all the information together and set up all the required meetings to obtain all the necessary approvals and signatures.

## 2.3 Selecting Courses

One of the advantages of choosing the University of Leeds was that in previous years other electrical engineering students had chosen to do their 3B terms there, so some of the initial course equivalency work and matching up was done. Although I was only able to fully complete one 3B course, through careful course selection and planning, I was able to complete two 4th Year Technical Electives and one 4th Year Core course for electrical engineers and also a CSE, as can be seen in Table 1.

**Table 1. Course Equivalencies**

<b>University of Waterloo Courses</b>	<b>University of Leeds Courses</b>
ECE 380	ELEC 2110
ECE 391	Taken remotely
ECE 477	ELEC 3410
ECE 427	ELEC 2620
ECE 318	ELEC 1400 (challenge for credit)
ECE 471	ELEC 3410
2 <sup>nd</sup> Year PSYCH Course	Psych 1260

As can be seen from Table 1, I also took a course in Communications that was deemed not to be an appropriate match for ECE 318, however I was able to challenge for credit in that course and only write the exam. Taking the three 4th year courses and the CSE allowed me to free up my



fourth year schedule a considerable amount. This was necessary in order to schedule in the remaining 3rd year courses I would need to complete.

## **2.4 Financial Preparation**

This was one the bigger obstacles when planning the exchange. It was clear from the beginning that this experience would be one which would cause a considerable amount of financial strain. However, if planned correctly and ahead of time, the financial set back is almost minimal and a small price to pay for the valuable experience. While I was in England over the 5 months, the exchange rate varied from 2.12 to as high as 2.33 (1 British Pound = 2.23 Canadian Dollars)

## **2.5 Documentation and Legalities**

When entering the UK as a student, you do not require a visa if your stay is less than 6 months. I had originally only intended on staying in the UK for the 1 term, therefore I did not obtain a visa. If you are however going for a full academic year, you will be required to obtain a student visa. I was also a special case, since I have Czech citizenship, and I am therefore a member of the European Union and am allowed to work and live in member countries. Therefore I would have not needed one regardless, however I entered the UK as a Canadian Citizen as requested by the University of Waterloo. Also when entering the UK, be sure to bring your acceptance letter, as customs will require some proof that you are in fact going there to study. While in Europe I was able to go on a few trips and when returning to the UK, I never had any problems re-entering, however a fellow student from the University of Leeds was once questioned rather thoroughly for not having any proof that he was a student.

Another consideration is what you plan to do after the academic term is over. If you are considering a coop term abroad, you may need to consider a work permit prior to arriving in Europe. If you initiate this process after you leave Canada it will be much more difficult.

## **2.6 Housing and Residence**

The university of Leeds makes available to students several residences all with unique features and amenities. There are many options, including self catered or with a meal plan, different types of rooms, with individual washroom or shared washrooms, and varying distances to campus. I lived in Montague Burton Flats, which was one of the closest residences to campus as well as being self catered. The flat included a large kitchen and nice fully furnished rooms that even included a sink. There was a convenience store 3 minutes away that had food in case of emergencies, and a full size grocery store within 15 minutes walk.

### **3. The Journey Overseas**

The journey overseas is the first big step you will make when you realize that you are in fact about to live and study in another country and it becomes more than just paper work. Booking a flight is the first step. There are of course the major airlines, such as Air Canada, however I flew with Zoom Airlines, Canada's low cost international airline. However I have been informed that starting in 2009 Ryan Air will extend their services from Britain to North America, and could provide a cheap alternative to the major airlines. However keep in mind most of the cheaper options also have approximately half the luggage allowance, which is significant when packing for the next 4 to 8 months of your life.

When travelling, make sure you have your passport and proof that you are in fact a student who has been accepted to a British university as this letter will be requested of you at customs. Also it is advisable to plan your entire journey out. I made the error of only planning as far as the arrival airport of Stansted, London, which was in fact 45 minutes outside the city. Luckily the train system is well designed and efficient so I was able to make the 3.5 hour journey to Leeds with almost no major setbacks, however there were plenty of opportunities where things could have gone wrong, solely for the reason that I was in a foreign country and completely unprepared. The location of Leeds can be seen in Figure 1.



Figure 1. Location of Leeds [1]

## **4. The University of Leeds**

Upon arriving to the Leeds/Bradford Airport, or the Leeds Train Station, an International Student Committee from the University of Leeds is there to welcome you. They will take you to the Main Residence Office to pick up your keys and then take you to your residence. This is very helpful and all you need to do is inform the International Office of your expected arrival time and date. I definitely recommend doing this as it eliminates a lot of the stress of travelling in a foreign city with heavy suitcases.

### **4.1 Introduction Week**

International students are invited to move into their residences two weeks in advance. This is to allow for an International Students week which deals with many of the issues an international student might deal with while in England; setting up bank accounts, getting accustomed to the culture and language, and even possibly helping registering with the police (applicable only to citizens of certain countries). This first week, the majority of students on campus will be international student and many of the events and tours of campus and the city will be tailored to international students. A map of the campus can be seen in figure 1. I definitely recommend taking part during this week, since you familiarize yourself with your surroundings and it is a great opportunity to meet fellow international students such as yourself.

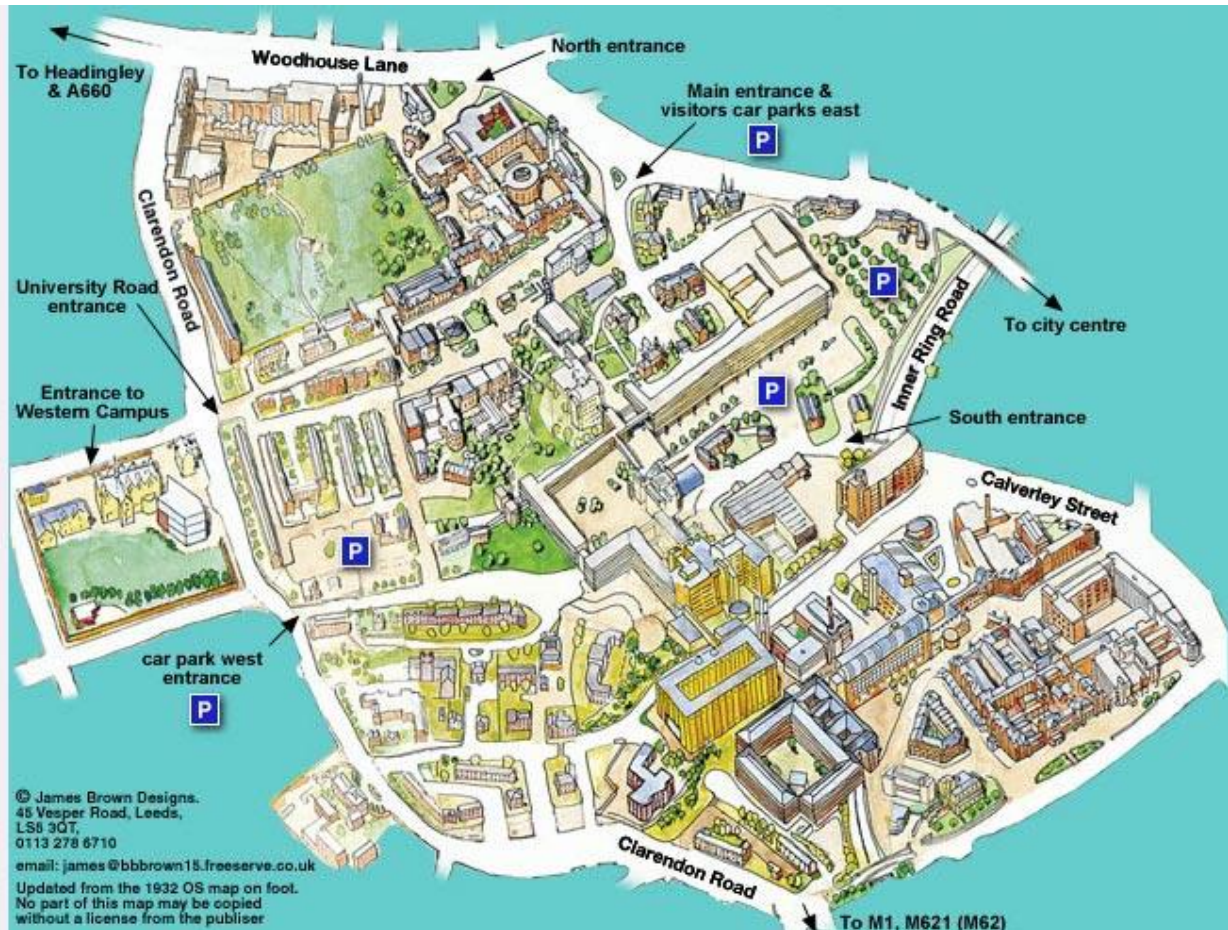


Figure 2. Leeds University Campus [2]

Following the International Students Week is a week for all the first time students. It is their equivalent to Frosh Week, although it is referred to as Freshers Week. During this week there are further tours of the campus, as well as Clubs and Activities Day, when all the various organizations and clubs have booths set up, so you can go learn about what they all have to offer. As well as several expositions, this is also the time when you get our student ID card, and finalize your course selection. In some instances you may need to go to the Faculty office of the courses you are signed-up for to complete the process. Even though you may think you have already signed up for courses months ago online, as I was led to believe, this may not in fact be the case. When I checked my courses that week, I had only been signed up for one of the six courses I had planned on taking. It was a slight inconvenience, but a relatively easy process, to

go to the Electrical and Electronics Engineering Office and sign up for all my courses in a matter of minutes.

## 4.2 Lectures at Leeds

My schedule at Leeds was spread out over the entire week and over the entire day. At Waterloo it seems they try to plan it so that all your core courses are group together either in the morning or the afternoon. This did not seem to be the case at the University of Leeds. Also the fact that I was taking courses from 3rd year and 4th year did not help. My weekly schedule can be seen in Table 2. Lectures tend to be twice a week, or a double lecture once a week. There was also a 3 hour lab session every other week.

**Table 2. Weekly Class Schedule**

	Mon	Tues	Wed	Thurs	Friday
9:00	Psych				
9:30					
10:00			ELEC1400	ELEC3300	ELEC3410
10:30					
11:00	ELEC3410	ELEC1400	ELEC1400		
11:30					
12:00				Psych	
12:30					
1:00				ELEC2620	
1:30					
2:00	ELEC2110				
2:30					
3:00					
3:30					
4:00		ELEC3300			
4:30					
5:00					
	Elec1400: Communications				
	Elec2110: Control Systems				
	Elec2620 Microelectronic				
	Elec3300: Radio Propagation				
	Elec3410: Optical Fibre Tech				

Lectures at Leeds are very different from Waterloo. The most important thing to know is that arriving to lectures late is not acceptable. Most professors get very displeased if a student enters the lecture late. Some will go as far as making the student apologize to the rest of the class. This took a little adjusting to, since at Waterloo it is not uncommon to see people strolling into lectures half way through. However it was a habit that was easy to get into relatively fast. This is not to say the professors are not friendly people, there are more than willing to help you and are easily approachable, but this is just typical British behaviour at universities that shows the professor respect.



## **5. City Of Leeds**

The city of Leeds is located in the center of the England, in the West Yorkshire region, about 3 hours north of London by train as can be seen in Figure 1. The population is approximately 750,000. Leeds is known as the best university destination in the UK, having two internationally renowned universities; University of Leeds, and Metropolitan University. The total student population in Leeds is approximately 200,000.

### **5.1 Shopping**

The University of Leeds is situated close to the City Center, where you can find a wide array of local shops and commercial outlets. Everything from book stores, electronics stores and clothing stores with various European and British fashions could all be found within a 20 minute walk of the university campus.

Also important was the close proximity of Morrison's, the local grocery store. In Europe they do not place as much importance on buying in bulk. Therefore making regular grocery store trips was necessary. Morrison's was a 15 minute walk, which was never so bad, even in the middle of the winter. It was possible to take a taxi for 4 British Pounds, and split 4 ways it came to approximately \$2 a person. However I always managed to carry everything home in a backpack and a few bags. There is also a Farmers Market that runs 4 days a week that provides fresh fruits, vegetables, meat and baked goods, as well as many non-food items at reasonable prices, Figure 3.



**Figure 3. Leeds Farmers Market**

Be prepared to make some adjustments to your eating habits, as some food items seem to be ridiculously over priced. Tropicana Orange juice was more than double the price, bacon was overpriced and a single small pepper came to \$2 Canadian; however many of the regular food including milk, bread, eggs were reasonable priced and possibly less expensive than in Canada. Overall you can expect to spend a similar amount to what you would spend in Canada on groceries maybe a slight bit more.

## **5.2 Entertainment and Night Life**

The city of Leeds has a rugby team, The Leeds Rhinos, and a football (soccer) team, Leeds United. This is a great opportunity to witness English soccer at a reasonable price. Leeds United played in the Football League Championship, which is the second division, however after poor results this past season, they were relegated into the 3<sup>rd</sup> Division, Football League One, so the quality of matches may not be as good as while I was there, however I still recommend it. All the famous teams such as Chelsea, Manchester and Arsenal all play in the first division known as the FA Premier League. Tickets for these events are much more expensive.

Leeds also boasts a vibrant and active night life. There are many traditional English pubs everywhere and night clubs can be found throughout the City Center. Be aware that the term bar does not refer to a drinking establishment; there are only pubs and clubs.

## **6. Travel**

While in England, I was presented with many chances to take advantage of great travel opportunities. England is the country with the most discount airlines in the world, and it is not uncommon to find flights to other countries in Europe for as low as 12 Pounds (\$26 CAD) plus taxes.

### **6.1 Within the U.K.**

When travelling within the UK, there are two main options; train or bus. Unlike in most of North America, the UK transportation does not have fixed rates. If you book your train or bus in advance, it will be at a lower price; the sooner, the less expensive. Sometimes there are even deals for the MegaBus, 1 Pound from Leeds to London. Usually I would travel with the train, as it was faster and more comfortable. When I arrived in Stansted Airport initially I had a Young Persons Rail Card made. This card although it cost 25 Pounds, it saved me 20 pounds on the very first train from Stansted to Leeds. There was also a similar card for the bus, however there were a few different bus companies, and each had their own discount cards, and I did not use the bus nearly enough to have it pay-off. Although regardless of which type of transportation you use, it is worth while to invest in obtaining these student discount cards as they will save you a considerable amount in the long run.

### **6.2 Around Europe**

Traveling in Europe consisted of 2 of 2 main stages; getting to main land Europe, and then travelling around the main land countries.

Ultimately there are two choices when leaving the UK, taking the train under the channel, or flying. A lot faster and cheaper is to fly. There are even many flights operated right out of Leeds International Airport. England has the most discount airlines in the world, and some of the major ones are Ryan Air, Jet2 and Easy Jet. Each of which offer different routes at different times however between those 3 major discount airlines, you can get almost anywhere in Europe. Most

flights originate from London, so you will have to take the train or bus to London, however if possible see if there is a flight to your destination from the Leeds Airport, as that is only a 2 Pounds bus ride from campus.

When travelling within a country or between adjacent countries in Europe, I found the best way was by train. In Europe most towns are connected by train, and trains run regularly and on time. Another advantage is that the train station is usually in the center of town, while airports are outside of town and further travel will be required to get into the city center where you want to be. All the trains in Europe in all the different countries are overseen by a European Railroads body; Euro Rail. They offer many great passes and discount opportunities that will pay off if you plan to use the train more than two or 3 times. I managed to save hundreds of dollars through many various travels over Christmas break other travels while in Europe for the 8 months

It is best to view and order Euro Rail Passes through the Canadian version of the website (<http://www.raileurope.ca/canada/index.htm>), as it offers the cheapest prices. However they only ship to a Canadian address, so you will need to order well in advance, and have someone ship the pass from Canada to your European address.

Some of the best cities and countries I visited as a student include Prague, Czech Rep., Berlin and Munich, Germany, Paris France and Barcelona Spain; although there are many others. It is important to have an idea of what you want to do or see while travelling if you do decide to travel during your time off. There are many historical and cultural sites all over Europe. These range from medieval castles to modern day art museums. Figures 4, 5 and 6 are photos from Prague and the surrounding area, where I spent Christmas and decided to work following my academic term in Leeds.



**Figure 4. Karlstein Castle**



**Figure 5. Charles Bridge (Karlův Most)**



**Figure 6. Prague in the winter.**

## **7. Working Abroad and Living in Europe not as a Student**

Upon finishing the term at the University of Leeds in January, I was left with several options; whether to return to Canada or not, and how to proceed to find Coop employment. Having spent the last 5 months in Europe, I had realized this was a once in a lifetime opportunity and it would be great to continue the experience as a working student. Therefore returning to Canada immediate after exams were over was the last choice for me. If possible I would like to remain in Europe and seek employment to earn some extra money and gain valuable experience in working abroad.

### **7.1 Opportunities Challenges and Obstacles**

There are many opportunities to work in Europe, if you are prepared. And being prepared involves doing all the research and paperwork, so that proper documentation and work visas are acquired prior to leaving Canada. There were many opportunities to work in England; however work visas or student visas need to be obtained before hand. I decided to move on to Prague where the exchange rate would be more favourable to a Canadian and where I was following up on a job lead.

Of course in most countries the biggest obstacle will be the language barrier. As I can fluent speak English, French and Czech, I had a few more options than most people. However it was still difficult in some countries, as they are not familiar with Coop type employments for students. In France there are many opportunities, as many University students do complete internships there as part of their studies. The only down side is that a vast majority of these internship type jobs have a duration of 6 months. This was not feasible as I needed to be back in Canada to start my 4A term in 4 months.

England had a similar system to France. Although most English students did not partake in internships, they seemed to be available for those interested. In the Czech Republic, the notion of



internship jobs for students was not well established. It was more difficult to convince employers to consider taking on a student for a short period of time.

Ultimately finding a Coop job in Europe will introduce a new set of problems. The most evident is the legalities of a foreigner working in another country. Visas and work permits will need to be arranged. Furthermore employers will be hesitant to hire a foreign student, as it exposes them to a new set of risks. Also I encountered employers for who hiring foreign students would affect their taxes and insurance, which would also make them less willing to hire foreign students. Therefore finding your own job in Europe may be more difficult than in Canada, however the rewards of working for a term in Europe are worth it.

## **8. Recommendations and Conclusions**

Overall my international experience was great. I would definitely recommend to everyone to think about taking advantage of this great opportunity. Although it may be more work to arrange and organize everything, it is well worth it.

The University of Leeds is a good institution and I enjoyed my time there. Although some people say it is easier, I would tend to disagree with them. The exams may be easier compared to Waterloo standards, but the courses and lectures provide rich opportunities to learn and a slightly different approach to learning which in the end will benefit you as an engineer. Choosing to go to Europe is another choice I am pleased with, as it provided me with several great travel opportunities to see many countries and experience their culture. My employment was also a great experience, although in the end I ended up volunteering, it was valuable to gain some work experience in Europe.

## References

[1] Google, "Google Maps" <http://www.google.ca/maps>, 2007

[2] Leeds University, "University of Leeds Campus Map"  
<http://tldynamic.leeds.ac.uk/campusmap/carparks.htm>, 2007