Prepared for the University of Waterloo Faculty of Engineering

Academic Exchange to the University of Leeds, U. K.

prepared as a requirement of

Gen E 303 International Studies in Engineering

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

Prepared by K. B. Le-Duc ID: 20070103, Section: 001 engmail: kleduc 4A Electrical Engineering

Tuesday, May 10, 2005

Barry Le-Duc 1099 Upper Wellington St. Hamilton, ON L9A 3S5

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

Dear Dr. Roe:

My report, entitled, "Academic Exchange to the University of Leeds, U. K.," was prepared as a requirement for the International Studies option (Gen E 303).

This report outlines my experience as an exchange student to the University of Leeds, from September 2004 to January 2005.

This report was written entirely by myself and has not received any previous academic credit at this or any other institution. If there are any questions or concerns feel free to contact me.

Sincerely,

Barry Le-Duc E.C.E. Student ID 20070103

Table of Contents

		of Figuresiii of Tablesiv
1	I	NTRODUCTION1
	1.1 1.2	Purpose of the Report
2	P	REPARATION2
	 2.1 2.2 2.3 2.4 2.5 2.6 	Decisions concerning the Exchange2Application Timing and Contacts2Course Equivalency4Financial Costs4Medical Insurance and Visa5Arranging Travel and Accommodation in Leeds5
3	S	CHOOL TERM – UNIVERSITY OF LEEDS
	3.1 3.2 3.3 3.4 3.5	Registration and Introduction Week8Course Arrangement8Academic Life at Leeds9The City of Leeds and Entertainment10Course Grading11
4	T	RAVELLING12
	4.1 4.2 4.3	Travelling Information and Tips12Travelling around the British Isles13Travelling Destinations and Costs14
5	R	ECOMMENDATIONS AND CONCLUSIONS OF EXCHANGE IN LEEDS
	5.1 5.2	Overall Impression of Leeds Exchange

List of Figures

Figure 1: Residence Locations	6
Figure 2: Leeds England	7
Figure 3: Electrical Engineering Time Table with Equivalent Waterloo Course	
Figure 4: The City of Leeds in Relation to the University of Leeds	
Figure 5: Map of the British Isles and Distance to Major Locations	

List of Tables

Table 1: Stream Switch	3
Table 2: Course Equivalency for 3B Electrical Engineering (*Computer Engineering Option)	4
Table 3: Table outlining Initial Cost Estimates for Exchange	5
Table 4: Grade Conversion from the University of Leeds	8
Table 5: Grade Conversion to the University of Waterloo	11
Table 6: Travel Destinations and Rough Costs	

1 Introduction

The objective of this report is to highlight my exchange to England at the University of Leeds for my 3B academic term during the Fall of 2004. I first decided to go on exchange when I was enrolled in my 2B term in the Electrical Engineering program at the University of Waterloo. It was my objective for this exchange to enhance my technical expertise, and add to my understanding of another culture while gaining an appreciation for the role that engineers have in Europe. To complement this exchange, I decided to take a co-op work position in Hermosillo, Mexico which would facilitate this option as well as enhance my understanding of the role that engineers play in the global community. However, this report will focus on my experiences with my exchange to the University of Leeds and is written as a guide for those thinking of completing a similar exchange.

1.1 Purpose of the Report

With an appreciation of my background, this report should give any engineering student a good understanding of the exchange requirements and what can be accomplished while completing an academic exchange. Initially, I was enrolled into Computer Engineering and completed my first three academic terms in Computer Engineering until I switched into Electrical Engineering in 2B. This better suited my interests and career choices. However, I am completing the Computer Engineering Option and am currently trying to accomplish the International Studies in Engineering Option. Prior to going on this academic exchange, I arranged to work in Hermosillo, Mexico with Magna International with whom I have worked with at various divisions on four separate occasions. This report was written to give a perspective of an Electrical Engineering student who went on exchange to the University of Leeds from September 2004 – January 2005 for the 3B academic term.

1.2 Motivation to Study or Work Abroad

I believed that an exchange to the University of Leeds would provide me with insights into what is taught to other engineering students in a different country. As I had very little experience traveling abroad, this opportunity allowed me to experience another culture first hand. I felt that having a better understanding of what other countries expect of their engineers would better prepare me for the competitive global job market. Similarly, working in another country such as Hermosillo, where they have a different culture and work attitude, gave me an insight into how companies in other countries do business. Likewise, the study and work life of engineers and their level of responsibility also changes from one country to another.

2 Preparation

Due to the fact that applying to enrol into an exchange program can be a time consuming and complicated process, I suggest start planning to go on exchange as soon as possible even if you are not entirely certain you wish to go. I started planning in my 2B term along with a fellow classmate. Looking back I would have preferred to start in my 1B term so as to facilitate my two options better. Looking for work abroad as early as possible is another obstacle as job opportunities and options may be scarce or hard to obtain.

2.1 Decisions concerning the Exchange

As I wished to follow the curriculum of the E&CE Department at the University of Waterloo as closely as I could, I chose the University of Leeds which was also known for its technical degrees. Through co-ordination with John Medley, Leeds Coordinator, professors from the University of Leeds, and Jennifer Hogg, Study Abroad Coordinator, I was able to compile a course load which fulfilled the requirements of the University of Waterloo for my 3B term. From my research, I discovered that a number of other E&CE students had completed an exchange to the University of Leeds successfully in the past.

When I was planning on going on exchange, I was in 'Excellent Standing' in the Electrical Engineering program at Waterloo and maintained 'Outstanding' work term evaluations for all of my work terms up to that point. I felt that I was an ideal candidate to participate in the university exchange program and would be a model ambassador for the University of Waterloo. I believed that this experience would both be enriching and educational. It is now considered to be an experience which I look back fondly on.

To go on exchange takes a lot of planning and work. Your averages of previous terms are scrutinized to determine if you are permitted to go on exchange. Normally an average of 70% or greater is required from your 1B term up until you go on exchange. Also, in terms of finances, exchanges can be very expensive, however, with proper preparation you will be able to afford to pay for it yourself. Planning ahead as early as possible is the key to maintaining this average and saving enough money from work terms to fund your exchange.

2.2 Application Timing and Contacts

You must apply 6 to 8 months before you decide to leave. This ensures that there will be enough time to complete the paperwork and will help you if the number of students is limited. When I was applying, the maximum number was approximately twelve students for the entire year. Firstly, when applying for exchange I met with Professor Medley, University of Leeds Coordinator. There are many things to consider when choosing where to do an exchange and the coordinators have the most information. If after the interview you decide you want to apply to the University of Leeds, Professor Medley can give you application forms for course enrolment as well as housing. The following information was accurate for Prof. John Medley as of 2002: John Medley PhD, P.Eng (jmedley@mecheng1.uwaterloo.ca)

Professor Dept of Mechanical Engineering University of Waterloo 200 University Ave. W. Waterloo, ON N2L 3G1 Tel: (519) 888-4784

When applying to Leeds, coordination was another difficult task. I quickly found contacts at the University of Leeds who were friendly and helpful, such as Jennifer Hogg, Non-European Exchange Officer. She was extremely helpful in coordinating course approvals and pointing me in the correct direction if I had any concerns. Her contact information is as follows:

Jennifer Hogg (j.hogg@adm.leeds.ac.uk)

Non-European Exchanges Study Abroad Office University of Leeds Leeds, U.K. LS2 9JT Tel: +44 133 3434046

http://www.leeds.ac.uk/studyabroad

Another great help was Dr. Stavros Iezekiel who was in the Electrical and Electronics Engineering Eepartment at the University of Leeds. Dr. Iezekiel was be able to approve me for all of my electrical courses and was able to point me in the right direction for other department course approvals.

> Dr. Stavros Iezekiel (<u>s.iezekiel@ee.leeds.ac.uk</u>) Institute of Microwaves and Photonics School of Electronic and Electrical Engineering University of Leeds Leeds, UK, LS2 9JT Telephone 0113 343 2088 International +44 (0)113 235 2088

The University of Leeds operates on a two semester per year schedule. Semester 1 begins late September and ends late January. Similarly, Semester 2 starts at the beginning of February and ends in June. Three to four weeks are given off during the month of December, which can be used for travelling or studying. Timing was a major concern when applying to Leeds. Because I wanted the exchange to disrupt my original study program as little as possible, I chose to do only one semester of academic exchange with Leeds and subsequently worked in Mexico. Going on exchange caused me to change my stream, which I had to have approval for by the Co-op and E&CE Departments. Table 3 depicts my stream switch

	UNIVERSITY of WATERLOO													
2001/2002		2	002/200)3	2003/2004		2004/2005		2005/2006					
FALL	SPR.	SUM.	FALL	SPR.	SUM.	FALL	SPR.	SUM.	FALL	SPR.	SUM.	FALL	SPR.	
1A	C1	1B	C2	2A	C3	2B	C4	ЗA	C5	3B	4A	C6	4B	ELEC
1A	1B	C1	2A	C2	C3	2B	C4	ЗA	3B	C5	4A	C6	4B	BARRY
WAT	WAT	Coop	WAT	Соор	Соор	WAT	Coop	WAT	Leeds	MEXICO	WAT	Соор	WAT	Location

Table 1: Stream Switch

2.3 Course Equivalency

Finding equivalent courses to match the curriculum of Waterloo is considerably difficult and, at times, frustrating. To do this, I spent many hours researching the University of Leeds website for description of their courses:

http://webprod1.leeds.ac.uk/banner/modulesearch.asp?Y=200405&T=S&L=UG&Z=/

I then compared these courses with Waterloo course descriptions found in Yellowbook:

http://www.ece.uwaterloo.ca/

> Undergraduate Programme > Yellowbook (Course Information)

As I understood that I was not able to take the equivalent courses to ECE362 and ECE332 at the University of Leeds, I anticipated enrolling in these courses during my 4B term at Waterloo. To replace these courses I chose two 4th year TE equivalent course at Leeds. Table 1 show the courses at the University of Leeds I was able to find and their equivalent courses at Waterloo. I was able to get the following courses approved prior to my leaving for England.

Table 2. Course Equivalency for 5D Electrical Engineering (Computer Engineering Option)								
N	Aterloo Courses for 3B	Leeds Course or Action Taken						
ECE302	Seminar	Taken Remotely						
ECE318	Communication Systems	ELEC1400	Communications					
ECE332	Electronic Circuits		Taken in 4th Year					
ECE362	Energy Systems And Components 2		Taken in 4th Year					
ECE380	Analog Control Systems	ELEC2110	Control Systems					
ECE391	Engineering Design Concepts		Taken Remotely					
C CSE	Classical Studies Course	CLASS1520	Greek Mythology through Art					
WKRPT400	Work Term Report, Engineering (In 4A)		Taken Remotely					
ECE104	Numerical Methods	MATH2600	Numerical Analysis					
ECE354*	Computer Operating Systems	COMP2600	Computer Operating Systems					
ECE427	Digital Systems Engineering	ELEC2620	Microelectronic Applications					
ECE471**	Electromagnetic Waves	ELEC3300	Radio Prop. and Antennas					

Table 2: Course Equivalency for 3B Electrical Engineering (*Computer Engineering Option)

2.4 Financial Costs

Travelling and studying in another continent can be very expensive, especially because the Canadian dollar sits approximately at 2.5 CAD = 1 GBP and 1.7 CAD = 1 EURO (2005). However, with adequate planning you will be able to prepare for theses costs. Due to the fact that I would be studying in the UK for four months, I used the following table as a guideline for how much I would need to save to go on exchange. I knew that I would be paying the University of Waterloo for tuition, as is the agreement between the two universities. Table 3 is only a rough guide which I used and some more exact figures can be found later in this report.

	CAN \$	Notes
Housing	\$2,500.00	Average Leeds Residence
Tuition	\$4,500.00	University of Waterloo Tuition
Plane	\$1,000.00	
Food	\$1,000.00	
Travel	\$6,000.00	Can be adjusted to fit your needs
TOTAL	\$15,000.00	

Table 3: Table outlining Initial Cost Estimates for Exchange

Furthermore, obtaining an ISIC, International Student Identification Card, is also a good investment. You should be able to get one at the Travel Cuts in the UW Plaza for approximately \$17. This will allow you to acquire reduced prices for tickets and admissions while travelling. Also purchasing several passport sized photos is a wise idea because they come in handy when trying to get student documentation made and are often cheaper when you buy them in bulk.

2.5 Medical Insurance and Visa

Documentation, identification and insurance are necessary while travelling. Firstly, a valid passport is required to go on exchange outside of Canada. This process can take up to two months to complete. Therefore, it is a good idea to start the process early. Secondly, medical insurance is partially covered by OHIP, if you are from Ontario, for a duration of 7 months abroad. If, however, you are spending more time than this abroad you must inform the OHIP office so that they may suspend your coverage. Additional or supplementary coverage is recommended and will be an extra cost. I was covered under my mother's health insurance plan and, therefore, I did not need to pay for supplementary health care. Finally, Canadian citizens, studying in the UK for six months or less do not need a student VISA. When arriving in the UK you will have to convince the immigration that you are in the United Kingdom to study for six months or less. Even though you do not need a visa, if you feel you wish to work in the UK, you may wish to consider applying for one. You may need to go to a UK consulate in a major Canadian city. The following is a website for more Visa information:

http://www.ukvisas.gov.uk/servlet/Front?pagename=OpenMarket/Xcelerate/ShowPage&c=P age&cid=1006977149962

2.6 Arranging Travel and Accommodation in Leeds

Purchasing the ticket to get to the UK can be an exciting but scary task. It is important for you to investigate the lowest fares for the plane ticket as this can save a significant amount of money. One place to try is Travel Cuts, which is located on or near any university campus. For Waterloo, the Travel Cuts is located in the UW plaza. They offer student discounts when flying to England and are very informative. They are also one of the most competitive agencies in terms of travel prices for students.

When applying to live in residence, I chose Montague Burton. Living in residence at the University of Leeds can be expensive, and was even more than my initial estimates. It cost approximately \$3 181.54 (CAD) for residence at Montague Burton for Semester 1. This is including a 100 GBP (app. \$250 CAD) deposit for the room. Toiletry items as well as any cooking equipment you require must be provided by you. Each flat is shared between five

flatmates, who each have an individual room with a sink. The common areas include the kitchen, washroom and hallway. Ensure that you have a clear understanding with your roommates with respect to cleaning responsibilities and where everything should be located. Ensure that you have at least six passport sized pictures of yourself because the university residence requires them. They also come in handy for other documents such as student rail cards which can save you significant amounts of money. The Montague Burton residences are fairly nice and the tenants are provided with a bed (bedding will cost about 30 pounds extra), a plastic chair, a notice board, a wardrobe, a waste-paper basket, a room and security key, a study table, a bookshelf, an arm chair and a bedside unit. You will have to provide anything else you require. The residence has a central mail drop centre and front office where you can ask questions. Also, there are laundry facilities in the residence which will cost you about 1.40 pounds to wash and about 0.80 pence to dry. There is another laundry about 7 minutes walk away with comparable costs as to the ones in the residence.

Figure 1 depicts the locations of all of the University of Leeds residences in relation to the campus. Montague Burton, which can be identified in Figure 1, is only a 5 minute walk from either the Electrical Engineering building or the main lecture hall. It is about a 30 minutes walk to either the train station or the bus station which are about 15 minutes from each other. It takes about 20 minutes each way to get to the closest grocery store by foot. The Union is the equivalent to Waterloo's SLC and contains pubs, student supplies, liquor stores, a photocopying hut, and an STA Travel store. This travel shop was invaluable when planning weekend trips.

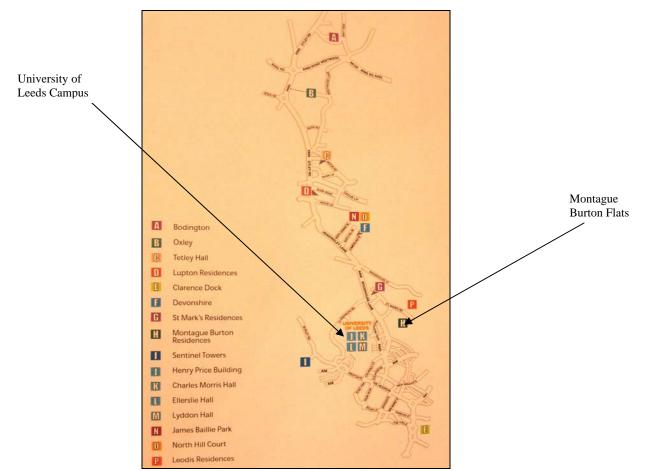


Figure 1: Residence Locations

3 School Term – University of Leeds

Once all the planning was completed, I was anxious to leave for England. I travelled to England via Air Canada from Toronto, Canada. This flight left at 8:30 pm Toronto time and I arrived into Heathrow Airport in London at 9:00 am. Great Britain is 5 hours ahead of Toronto and the flight took 6.5 hours from Pearson to Heathrow. Upon arriving in London, I took the underground tube (app. \pounds 3.5) from Terminal 1 on the Piccadilly (North/East) line which took me directly to Kings Cross train Station in London. Then I went up to main level to the actual train station. I then purchased a student rail card for approximately $\pounds 20$ (since I already had a passport sized picture) and then bought a ticket to Leeds for £40. It costs money to use a public washroom in the UK and most of continental Europe. After reading on the main arrival and departure board for which platform the train was leaving from I boarded the train for Leeds. The distance between London and Leeds is an approximate 2.5 hrs train ride. Upon arriving at the Leeds train station, I took a cab to the Montague Burton Residences. It was a strange feeling to be in a completely new place and then be driven on the left hand side of the road. The taxi cost about £4-5 and if you are packing lightly, it is only a 20 minute walk from the train station to the Montague Burton Residences. If you happen to arrive during intro week there should be a shuttle bus at the train station that can take you to your residence.

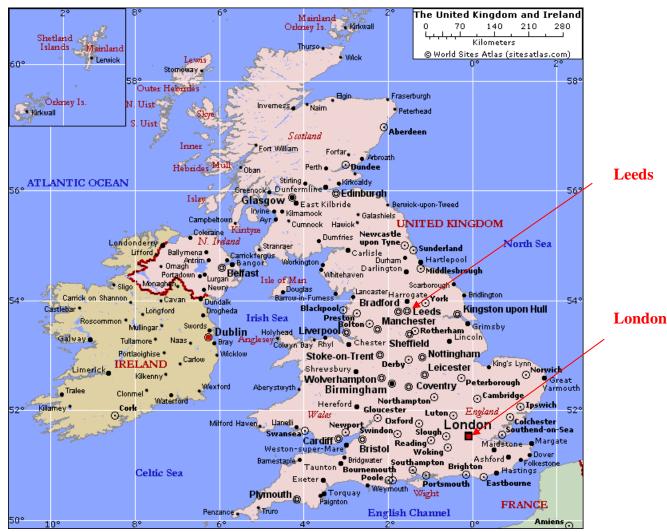


Figure 2: Leeds England

3.1 Registration and Introduction Week

Registration and Introduction week begins one week before classes begin. However, as I had already been through first year and frosh week before, I decided to take the 5 weeks before leaving to work at a previous coop placement to earn money for a laptop and the exchange. I was told by my classmate that, generally, introduction week included meeting many international students, getting an orientation of the campus and going out partying. This may be heavy on the pocket book but I bet a lot of fun.

Once I was there, I had to register for my courses. Registration for courses can be a long process in which you must wait in many queues to sign up for your courses and get your student card. It is a good idea to go on the first day of registration to avoid missing classes which you would like to take. I happened to get there on the second day and found out that the Spanish class that I wanted to take was full. Any core Electrical courses should be signed up through Dr. Ezekial and everything else including Math and Computer courses will have to be signed up with the respective faculties or in the main hall during registration. Also, ensure that you have paid Waterloo for the semester tuition fees, and go to payments to ensure that you are recorded as paying.

3.2 Course Arrangement

A typical University of Leeds course is 10 credits, which is equivalent to 0.5 credits at the University of Waterloo. Students at the University of Leeds take approximately 60 credits worth of courses. Exchange students from Waterloo normally take 50 to 70 credits worth of courses during their terms. The Leeds courses that will correspond to Waterloo Electrical Engineering courses can be found in the Mathematics or Electrical and Electronics Engineering departments. The workload at Leeds was less than that of Waterloo because there are no lab components, few assignments and less lecture hours. I was able to study without purchasing any books and studied from the exams of the previous years, which were posted on the internet at the following site:

http://www.ee.leeds.ac.uk/intranet/student/

Table 4 depicts the general grade conversion from the University of Leeds to the North American standard.

Leeds grade	Recommended US grade
Above 68	А
64-67	A -
60-63	В +
54-59	В
49-53	В -
44-48	C +
38-43	С
36-37	C -
34-35	D
Below 33	Fail

Table 4: Grade Conversion from the University of Leeds

3.3 Academic Life at Leeds

Courses at Leeds were less intensive than at Waterloo. I was able to enrol into 7 courses and still had only 15 hours of classes a week. Figure 3 shows my schedule at the University of Leeds for my 3B term. Most courses do not have a lab component. Teaching at Leeds is different than at Waterloo in the fact that less homework is assigned and generally 20% of your mark is determined by your midterm or coursework (assignments) and 80% is evaluated by the final exam. A pass is approximately 40 per cent. The marks achieved at Leeds are not recorded on your Waterloo transcript and there is also a conversion if you should be applying to graduate school. Most of the time you will not be allowed to view your exams and many times the solutions are not posted. This education was not as stressful as Waterloo, however, there will be gaps in your foundation which should be filled by studying once back in Canada.

3B ELECTRICAL SCHEDULE								
	Monday	Tuesday	Wednesday	Thursday	Friday			
9:00-10:00				COMP2600 RSLT18				
10:00-11:00			ELEC1400	ELEC3300 AGILENT	ELEC1400 AGILENT			
11:00-12:00			EE357		MATH2600 RSLT14			
12:00-1:00				ELEC1400 AGILENT		LECTUR		
1:00-2:00						TUTORIA		
2:00-3:00	ELEC2110 / MATH2600 RHODES / RSLT11	CLASS1520 TEXTILES		ELEC2620 AGILENT		SEMINA		
3:00-4:00	ELEC2110 RHODES			MATH2600 RSLT2		LAB		
4:00-5:00	COMP2600 RSLT24	ELEC3300 AGILENT						
5:00-6:00				ELEC2620 AGILENT				
	Leeds Course	terloo						
CLASS 1520 Greek Mythology Through Art			-	Int OP / CSE				
COMP 2600Computer Operating SystemsMATH 2600Numerical Analysis		ECE 354	Comp OP / TSE 1B					
ELEC 1400			ECE 104 ECE 318	3B				
ELEC 1400 Communications ELEC 2110 Control Systems			ECE 310 ECE 380	3B 3B				
ELEC 2010	Microelectroni		ECE 380	TSE				
ELEC 3300	Radio Pro		ECE 471	4A				

Figure 3: Electrical Engineering Time Table with Equivalent Waterloo Course

3.4 The City of Leeds and Entertainment

Leeds is a great city for students and those who wish to experience another culture. Leeds has many clubs and events which make it a very fun place to be. From Leeds, you are only a train away from other cities and exciting venues. For example, a classmate and I went to see a football game between Lyon Olympic and the world famous Manchester United in a Champions League match. Man U won 2-1 in a very exciting exhibition of football at its best. This cost us approximately £35 and we had to know a member of the Manchester United Fan Club to get tickets. Figure 4 illustrates the layout of the city of Leeds

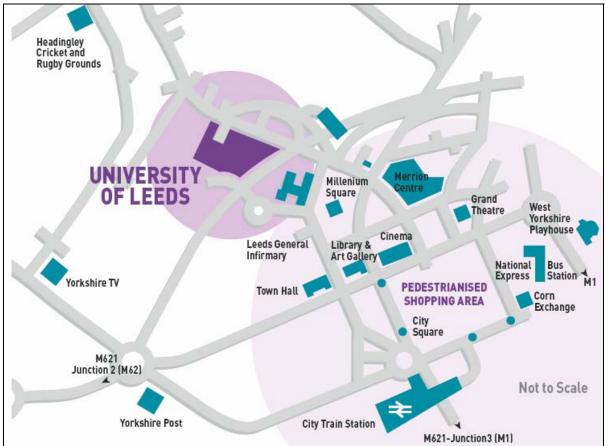


Figure 4: The City of Leeds in Relation to the University of Leeds

Leeds is a large city of approximately 400 000 to 700 000 people. A large portion of the population is comprised of students studying at the University of Leeds and Leeds Metropolitan. The city of Leeds has a movie theatre and art gallery. Among these attractions, Leeds boasts a world class armoury which was my personal favourite place to visit. Leeds also has an excellent indoor open market, which is the largest in all of Europe. You can find many cheap deals on groceries and other everyday necessities. Leeds has many bars, pubs, and clubs which is fun for anyone who likes the nightlife. They also have an extensive music scene. I went to see a Fat Boy Slim concert when he played at the University of Leeds Refectory. The following website is a good guide for music lovers:

http://leedsgigs.co.uk/

3.5 Course Grading

While in Leeds, you must not forget about your studies. As stated earlier, the marks are determined usually by 20% for an in semester test (midterm) or coursework (assignments) and 80% is based on a final examination. I attended most of the lectures, and tutorials, aside from when I was travelling. Additionally, I studied for finals using exams from previous years posted on the electrical engineering intranet website. This, along with my notes, was a good guideline for the final examinations. Table 5 can be used as a general guideline for those who intend on applying for graduate school. Otherwise the courses are appraised upon a pass/fail basis. The final transcript from Leeds is sent to Waterloo some time in June.

LEEDS MARK	ADD TO GET WATERLOO MARK	WATERLOO MARK
0-34	+15	15-49
35	+16	51
36	+17	53
37	+18	55
38	+19	57
39-43	+20	59-63
44-45	+19	63-64
46-47	+18	64-65
48-64	+17	65-81
65-66	+16	81-82
67-68	+15	82-83
69-70	+14	83-84
71-72	+13	84-85
73-74	+12	85-86
75-76	+11	86-87
77-78	+10	87-88
79-80	+9	88-89
81-82	+8	89-0
83-84	+7	90-91
85-86	+6	91-92
87-88	+5	92-93
89-90	+4	93-94
91-92	+3	94-95
93-94	+2	95-96
95-96	+1	96-97
97-100	0	97-100

 Table 5: Grade Conversion to the University of Waterloo

4 Travelling

A great aspect of studying in Europe was the ability to travel to exciting new countries and places. I chose to travel on weekends and during the four week Christmas break during the month of December. Planning for trips can be tedious and very frustration. I recommend planning for trips as early as possible to minimize this frustration as well as to keep monitoring the following websites as deals and cheaper travel fares can be easily found.

4.1 Travelling Information and Tips

The following information was great for researching possible trip locations. I recommend regularly checking these sites to get the best deals and to properly plan for your trips. There also may be other sources of information which may be helpful. Also, I would recommend going to the STA Travel within the Union on campus. This was an invaluable location to visit as it helped with gauging prices when arranging travel and hostel accommodation.

Travel Websites

Good Budget Airlines

http://www.ryanair.co.uk/ http://easyjet.co.uk/ http://www.jet2.com/cgi-bin/airkiosk/I7/181002i?LS=2&LANG=EN&REF=

Train Information

http://www.nationalrail.co.uk/planmyjourney/time_table/journey_requirements.asp?&T2ID= 3043_2004107194612

Bus Information

http://www.nationalexpress.com/home/hp.cfm http://gobycoach.co.uk/

Hostel Information

http://www.hostels.com/en/index.php http://hihostels.com

General Information

<u>http://www.travelcuts.com/english/html/</u> - Where you can get an ISIC Card <u>http://www.haggis-backpackers.com/</u> - Good Tours on the British Isles <u>http://lonelyplanet.com/destinations/</u> - Information on Countries <u>http://voyage.dfait-maeci.gc.ca/dest/ctry/visa-en.asp</u> - Travel Visa Information

4.2 Travelling around the British Isles

Since Leeds is in the centre of Britain and has a train station, bus station, and airport, you will be able to travel to almost anywhere in the British Isles easily and fairly cheaply. The UK has some of the most beautiful locations in the world and has a great deal of history. Living at Montague Burton Residences meant that I was in a 30 minute walking distance of the train station and bus station. From there, I was able to travel to any airport or major city in England. Figure 5, illustrates the general location of Leeds in relation to other major destinations in the British Isles as well as approximate distances from Leeds. Additionally, all museums and art galleries in the UK are free so you may visit as many times as you wish.

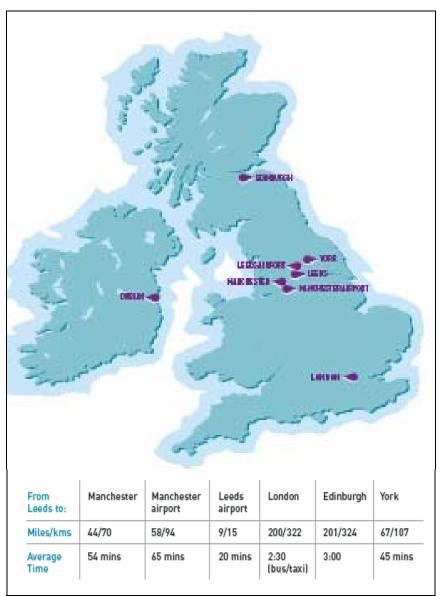


Figure 5: Map of the British Isles and Distance to Major Locations

4.3 Travelling Destinations and Costs

Along with a classmate from Waterloo, who is also in Electrical Engineering, I was able to visit the following locations on weekends and Christmas holidays in Semester 1. Travelling is very fun but time consuming. Be sure that you accomplish your studying during the work week and during the period before final exams. Table 6 outlines the location, date and approximate cost per person of travelling for each trip that we embarked upon.

	Week	Date	Destination	Co	sts
	1	Sept 27 - Oct 3	Munich, Germany – Oktoberfest	£175.50	\$412.43
	2	Oct 4 - Oct 10	London/Bath/Stonehenge, England	£119.50	\$280.83
SC	3	Oct 11 - Oct 17	Stockholm, Sweden	£152.48	\$358.33
Trips	4	Oct 18 - Oct 24	Liverpool, England	-	
	5	Oct 25 - Oct 31	Ireland - Shamrocker Tour	£214.02	\$502.95
Weekend	6	Nov 1 - Nov 7			
ee	7	Nov 8 - Nov 15	Paris, France	£130.10	\$305.74
3	8	Nov 16 - Nov 21	Scotland - Haggis Tour	£182.05	\$427.82
	9	Nov 22 - Nov 28	Amsterdam, Netherlands	£171.26	\$402.46
	10	Nov 29 - Dec 5	Conwy, Wales	£32.50	\$76.38
	11	Dec 11 - Dec 13	Barcelona, Spain	£152.38	\$358.09
Vacation	12	Dec 14 - Dec 16	Rome, Italy	£135.73	\$318.96
cati		Dec 17 - Dec 19	Athens, Greece	£174.21	\$409.39
Vac		Dec 20 - Dec 22	Istanbul, Turkey	£183.70	\$431.70
	13	Dec 23 - Dec 26	Budapest, Hungary	£208.74	\$490.55
t		Dec 23 - Dec 20	Bratislava, Slovakia	2200.74	φ+90.00
Christmas		Dec 27 - Dec 29	Krakow, Poland	£137.32	\$322.70
ch	14	Dec 30 - Dec 31	Prague, Czech Republic	£74.19	\$174.34
		Dec 31 - Jan 3	London, England	£83.73	\$196.77
			Total	£2,327.41	\$5,469.41

 Table 6: Travel Destinations and Rough Costs

5.1 Overall Impression of Leeds Exchange

Participating in an exchange to the University of Leeds is a once in a lifetime opportunity to genuinely immerse yourself in a culture different from that of Canada. I was able to learn what makes different societies unique and made friends from all around the world. The University of Leeds has an international reputation as being a leading educational institution in the UK and for its high quality of its teaching and research. People are friendly and there are many facilities in the great city of Leeds which will meet all of your academic and social needs from a huge range of shops, clubs and bars, musical, theatrical and sporting venues which are all within walking distance. You are just a train or bus ride away from the numerous historical and famous sites of the British Isles. Studying abroad is an excellent way to spend a semester, where you can travel as well as take courses in subjects which will challenge and interest you.

5.2 Recommendations and Suggestions

Along with my subsequent work term in Mexico, I accomplished a great deal of personal life goals as well as academic achievements by going on this exchange. This experience has taught me to appreciate all of the great prospects that a student at the University of Waterloo has. It has also taught me to embrace every opportunity that presents itself. Although this exchange was very expensive, by carefully budgeting and planning, I was able to visit many countries and enjoy experiences I had only dreamt of. I was able to do things that my busy study/work life would not allow. Additionally, I gained a great deal of knowledge both academically and about the person I am and what my aspirations are. Without a doubt, this exchange was worth the time, cost and effort described in this report. Evaluating my experiences, I believe I made the right choice academically, financially, and in terms of going on academic exchange for a single term and to then work for a term abroad.

I enthusiastically recommend going on exchange, particularly to the University of Leeds. Any fears of being behind academically and the financial cost should not deter you from this endeavour. An exchange has the potential to be one of the best times of your life. Do not worry about missing out by not attending Waterloo for a term because you will be just as good an engineer, if not better, since you will have more perspective and experience.