

# **The Feasibility of Establishing an MQP Project Site in Stockholm, Sweden**

A Major Qualifying Project Report

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## **Abstract**

This spring marks the first steps in establishing an official MQP site in Stockholm, Sweden. I and one other WPI senior completed our Major Qualifying Project (MQP) during a 10 week exchange at the Royal Institute of Technology (KTH). This paper describes the Individually-Sponsored Research Projects (ISRP) experience, highlights the benefits of an official partnership between KTH and WPI, and brings up considerations for the future of this project site. By working successfully through the design process and documenting the work during the MF2076 Machine Design Course, the MQP requirements for a mechanical engineering student are satisfied. Establishing an official MQP site in Stockholm at KTH is the perfect opportunity for WPI to expand the experiences offered to its students, and everyone involved is eager to see this project site grow.

## **Acknowledgements**

I am truly blessed to have had this project experience. I've been able to live in a new country, see a new way of learning, and meet so many new friends. My sincerest gratitude goes out to Holly Ault and Lasse Wingård for jumping through all the hoops and paperwork required to make this project experience happen. Thank you to Professor Hansen for guiding me through my International and Global Studies major and always believing in me. Special thanks to Stefan and Kjell-I enjoyed your class and the feedback you gave us. And thank you to my friend Sam, who bravely came along with me on this journey.

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## **Introduction**

This spring marks the first steps in establishing an official Major Qualifying Project (MQP) site in Stockholm, Sweden. I and one other Worcester Polytechnic Institute (WPI) senior completed our MQP during a 10-week exchange at the Royal Institute of Technology (KTH). This project site arose when I began looking for a senior project that satisfied both of my majors: international and global studies and mechanical engineering. There are three options for international studies/engineering double majors. The first would be to find a 4/3 unit on-campus MQP related to both majors. The second is to work on two separate on-campus projects, one for engineering and one for international studies, each worth a full unit, over the course of the year. The third option is to complete a 4/3 unit engineering MQP abroad, and, as an international studies major, this option is the most exciting.

The third option offers a way to fulfil the requirements of both majors while gaining an even deeper understanding of cross-cultural dialogue, teamwork, and cultural experiences. It also helps further the WPI mission to ensure 90% of WPI undergraduates can have a global project experience (*Elevate Impact*, 2015). With these reasons in mind, I was set on finding an overseas project to satisfy both majors and develop my global competency. However, upon attending the Global Project Fair, where all the overseas project sites advertise their offerings, I found my options were extremely limited. Despite being WPI's largest department (WPI Mechanical Engineering, 2018), the offerings for mechanical engineering MQPs were limited to one Beijing project site only available in the summer that did not meet my engineering interests. My heart was still set on an overseas project experience, so I reached out to mechanical engineering professor Holly Ault.

### **The Start of a Project Site**

Professor Ault has a great deal of experience in supervising overseas projects. She served as the director of the Melbourne, Australia site for several years and is currently a co-director for the Copenhagen, Denmark IQP site. She and I set out to create the opportunity for myself and a peer to complete our MQP projects in Stockholm, Sweden. This opportunity grew from Professor Ault's connections made through a KTH-WPI faculty exchange in 1997. In this faculty exchange, WPI professor Holly Ault taught a computer aided design course at KTH for the duration of C-term, KTH professor Lars Wingård (Lasse) taught a similar course at WPI. Lasse currently serves as a lecturer in the industrial production department at KTH. Professor Ault reached out to her colleague and asked if he knew of any

projects we could work on. He found a class in the Machine Design Department suitable to WPI's project requirements taught by Professors Kjell Andersson and Stefan Björklund.

We could not be registered as official exchange students because this exchange has yet to be officially recognized as a collaboration between WPI and KTH. This presented some challenges in the areas of housing, registering for the course, and having access to student resources. However, with the cooperation between the amazing faculty of both universities, Samantha Robinson and I were enrolled as interns in the Machine Design Department, so that we could access this course. The project was approved through the WPI procedure for Individually-Sponsored Research Projects (ISRP).

The hard work of paving the way for an official, off-campus MQP site has resulted in an enlightening project experience, both academically and culturally. The establishment and promotion of Stockholm as an official WPI MQP project center for mechanical engineering (ME) majors provides significant benefits for WPI seniors. This location offers ME students more options for overseas experiences than just the Interdisciplinary Qualifying Project (IQP) in the junior year. It also helps to meet the rising demand by seniors double-majoring in international studies expand their global pursuits. This paper describes the ISRP experience, highlights the benefits of an official partnership between KTH and WPI, and identifies a number of considerations for the future of this project site. This paper can be used as a reference for the Interdisciplinary and Global Studies Division (IGSD) when developing projects at this location or when making handbooks or guidelines for future students about what to expect and how to prepare for MQP's in Stockholm.

## **Suitability of KTH as a Partner University**

KTH is perfectly suited to partner with WPI in an official MQP exchange program. These schools share many similarities that make the implementation of this project site possible. Since its establishment in 1827, Kungliga Tekniska Högskolan, or the Royal Institute of Technology, has been consistently ranked as one of the top 100 engineering universities in Europe (Ranking Placement for KTH, 2018). The high ranking of this university pairs well with WPI's status as one of the top 100 best colleges in the U.S., as ranked by the U.S. News and World Report, and one of the best not-for-profit research universities (About WPI, 2018). The schools also have similar core principles, as reflected in both their mottos. KTH's school seal reads "Vetenskap och Konst", meaning "Science and Art", and WPI promotes the words "Lehr und Kunst", meaning "Learning and Skilled Art," or more colloquially, theory

and practice (About WPI, 2018). Both mottos reflect the focus of promoting well rounded, engineering students.

In addition, KTH prides itself on its focus towards solving unique engineering problems through interdisciplinary research teams and collaborations with public and private organizations. The collaborations with different companies in the machine design course MF2076 offer project opportunities well-suited for MQPs. In my experience I know that WPI students can excel in this KTH project course, putting the project-based curriculum taught at WPI to work in a global context.

Another interesting benefit of this partnership is both schools work on a quarter system. Having terms that line up almost perfectly allows for a much simpler scheduling process for the WPI senior wishing to complete their MQP in one-term. KTH's academic year schedules can be found through the link listed in Appendix A.

## **Suitability of the KTH Project Course as an MQP**

MF2076 Machine Design Advanced Course meets the needs of an MQP. It is a part of the Machine Design master's program taught by professors Kjell Andersson and Stefan Björklund. According to Professors Andersson and Björklund, they can easily support up to six WPI students at a time, spread out over the different project groups. The course takes place over two semesters, with the design work being completed in the spring and the prototyping in the following fall semester. This ISRP took place during the design portion of the course in the spring semester.

### **PQP Requirements**

The first semester at KTH starts around the same time as WPI's C-Term. During this term, project descriptions are sent out and students write a brief statement ranking their project interests. Once the groups are assigned the sponsor is contacted to get more information on project specifications, so the research and development can begin.

The work needed during this first term can be addressed in a one-sixth unit PQP. Much like the ID2050 course utilized for IQPs, this PQP would consist of some preliminary research, Skype meetings, and cultural work to better prepare oneself for working in Sweden. By the end of this PQP period, the KTH teams have begun their background research and completed a project plan, including a Gantt chart and project charter. Since the WPI students are not physically present to work with the team, the WPI students must be sure to stay active in the group's chats, asking for work, completing background

research, and participating in the Skype meetings. There are weekly Skype meetings with the KTH professors, and outside Skype meetings depending on the group's needs. Communication with team members can be difficult during this period, but it is important to establish oneself as an active member of the group. During my own PQP experience, my team created a group message. I made sure to consistently ask for updates and tasks. I would find research articles and send them to the group as well as help edit the project plan. By establishing a method of communication the group was comfortable with, I was able to contribute to the team and stay updated without being physically present.

Additional preparation work WPI students should consider is a refresher course on MatLab. Engineering students at KTH use MatLab to a greater extent than WPI students. To prepare for the assignments and work done during this project course, students should take the MatLab SESA sessions offered by WPI and investigate how MatLab is used to optimize systems and solving systems of equations in matrix form. I took these courses before going to Sweden, and I was grateful for the refresher as many of the KTH assignments required MatLab knowledge.

## **D-Term Requirements**

The main design work occurs during D-term, the term spent Stockholm working at KTH. This term is spent working to complete a concept design and design report, culminating in a final presentation. The beginning of this term consisted of multiple talks with our sponsor company, even going to the company headquarters to discuss the project constraints and expectations. After understanding the requirements of the design, we began to brainstorm. Most groups have these discussions with their sponsor and began brainstorming during C-Term, however my team's sponsoring company was not available until the beginning of D-Term.

The rest of the term is then spent evaluating, refining, and completing the design. Weekly meetings are held Professors Andersson and Björklund to discuss progress and problems encountered during the design process. The final design is then presented near the end of May, and the design process is written up in a final report. By working successfully through the design process and documenting the work, the MQP requirements for a mechanical engineering student are satisfied. Additionally, the international studies requirements are fulfilled through participation in multi-cultural teams, with many members of these teams coming from countries all over the globe.

In addition to working on the main design project, MF2076 consists of several home assignments and labs. These assignments include 3D modeling in Solid Edge, analyzing and optimizing



systems in MatLab and ADAMS<sup>1</sup>, and measuring voltage across a strain gauge. These assignments were challenging and taught us a lot. Although we had less experience with the software compared to the other students in the course, the assignment allowed us to learn how to use several programs and software.

Once an official partnership is made, WPI students will easily be able to register for other courses in the KTH catalog. Currently, I am taking a manual machining course, building upon the CNC skills I acquired at WPI. This course is easily manageable with the MF2076 course load, and I believe future students could manage to take MF2076 in conjunction with one to two other KTH courses due to the fact that the KTH term lasts slightly longer and the background work for MF2076 should be completed in the PQP course. Students wishing to take one to two other classes should choose courses that don't require a large portion of time, as the design work for MF2076 becomes progressively more work intensive and time consuming.

As a second semester senior, the pace and material of this course was challenging in a very positive and rewarding way. Due to the amount of initiative and learning required, I would recommend this project experience only to *senior* students wishing to complete their MQP. Although a D-term project may be enticing to juniors who want to graduate early, junior level students may not have fully developed the skills needed to keep up with the pacing and new material.

### **Considerations of a D-Term MQP**

This course offers an amazing MQP opportunity, but some aspects of a D-term MQP should be taken into consideration for any student wishing to apply to this site. The first is the submission of e-CDR forms. KTH begins in D term one week later than WPI, and the spring holidays celebrated in Sweden cause for the term to end several weeks later. This means that the MQP finishes roughly two weeks after the final eCDR deadline. The student will, however, be able to complete the requirements before the official end of D-term, so they would still graduate in D-term, but their completion of degree requirements will have to be recorded by the registrar in a unique way. Sam, Professor Ault, and I discussed the eCDR timing with the registrar before starting the project to discuss the options available for students in this situation. The first is to retroactively change the MQP from incomplete to complete. The second is to have the student registered in "ghost classes" the following fall semester and then "graduate" with the fall semester early graduates. This option would require a note from the registrar

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<sup>1</sup> ADAMS is a multibody dynamic simulation software used to analyze the movement of dynamic systems.

stating that all degree requirements were completed should the student need confirmation for an employer before the fall “graduation” date. Faculty and the provost should prompt the registrar to declare a formal policy for dealing with the e-CDR submissions from this site.

The second point students should consider is their willingness to miss commencement. Seniors participating in this project will be unable to participate in the commencement ceremonies due to the timing of the course. Any student wishing to apply for this MQP should understand and accept they will not be able to participate in events such as Senior Week and graduation festivities.

One solution to these timing issues would be to look into participating in the second half of this course. The second semester of MF2076 Machine Design Advanced Course occurs with the detailed analysis and building of the prototype. This MQP would be geared towards mechanical engineering students with manufacturing and prototyping interests. It occurs across the A and B terms of the following fall. Thus the student would likely have to complete a full semester exchange the first semester of their senior year. Preliminary work would have to be done in the summer to review the designs and acquaint themselves with the needed background research. Professors Andersson and Björklund stated that students could jump into the course at any time, given the background work is completed to the weeks before, however this would require a significant amount of planning and discussion between the WPI center director and the KTH professors (Andersson, 2018).

### **Considerations for Future Participants**

This site is a great opportunity for WPI students, and everyone involved in the creation of this site is excited to see how it grows. After this individually sponsored research project, WPI and KTH hope to reach an official agreement to establish this site for years to come. Professor Ault is looking forward to the further development of this site (Ault, 2018), along with the professors at KTH who say any student with the “right attitude and initiative” are welcome contributions (Andersson, 2018). It is important to consider what attributes contribute to the “right attitude” when choosing future students for this project. Unlike IQP, this project experience requires the student to be engaged with the local student community. There would be only a small number of other WPI students there, so only hanging out with other WPI students is extremely limiting. Students must be comfortable with new situations and extroverted enough to comfortably meet new people.

Working with students from all over the world creates a different working atmosphere. I found that my group was very non-confrontational, would not work on weekends or after 5:00pm, and did not

like to make hard and fast decisions. Students must recognize and respect these cultural differences while also being able to direct and take charge when necessary and be forward about what work needs to be done. I recommend meeting with the group early on and setting very clear expectations on what the final deliverables for the term will be, as communication can be difficult if groupmates are holding different expectations.

## **Resources and Accommodations**

Stockholm is a wonderful city for students. Student apartment complexes are conveniently located and allow opportunities to meet plenty of other young adults. Stockholm is a pedestrian- and bicycle-friendly city with an excellent public transportation system. Once students get their metro card, they will have no trouble navigating the city.

### **Housing**

Since we were working at KTH as interns instead of official exchange students, we were unable to be supplied housing by the university. Thankfully, Lasse found some of his students able to sublet their rooms in Lappis. Lappis is a student apartment complex, mainly housing foreign exchange students. It is located a short walk from a metro station and bus stop, making it extremely easy to get to KTH and around the city. The apartment consists of one room with a personal bathroom/shower. The kitchen is shared among the residents of the entire corridor. The shared kitchen presents many opportunities to meet other students from KTH as well as the adjacent Stockholm University. As a resident in these apartments, WPI students can expect to participate in chores in the shared kitchen as well as find themselves making close friendships with the people on their floor. These students come from all over the world, and I have had an amazing experience to get to meet so many different people.

Creating an official exchange would make this process of finding suitable housing at Lappis and other student apartments even easier. If officially recognized as exchange students, KTH would ensure that the students have housing. Stockholm's unique housing market makes KTH supplied rooms especially appealing as Stockholm has a shortage of affordable housing. The city has a queue system where those who wish to have a first-hand lease have to wait on average of nine years (Savage, 2016). As a result, residents must hop from sublet to sublet. This process is made simpler by KTH supplying the housing contracts, and they are currently working on building additional student housing for the future.

## **Transportation**

The transportation in and around Stockholm allow for students to experience all the region has to offer. The SL public transport system links the city with a network of buses, trolleys, trains, and ferries--all easily accessible through the SL Access Card. This transport card can be purchased at a discounted student price for varying durations of time. Traveling outside of Stockholm on the commuter trains requires an extra ticket, but is just as easy. High-speed trains connect Stockholm to other Scandinavian cities such as Copenhagen, Denmark, where IQP students are also working on their projects during D-term and A-term. Flights to neighboring European countries are abundant and cheap, with a high-speed train connecting the airport to the central train station. Students will have no trouble getting around Stockholm and traveling during breaks.

The tunnelbana (metro) stations are not only clean, on time, and offer a variety of convenience stores but they also highlight some unique art pieces. Every station in Stockholm has been decorated by a different artist. During the summer, guided tours take visitors around the metro system to showcase each station's art. Although these tours are not running during the time WPI students would be working on their projects, a self-guided tour is easily found online. This tour is a nice way to explore the many stations Stockholm has to offer.

## **Swedish Culture**

The Swedish culture makes for a relatively smooth transition for students on exchange. Swedes are exceptionally polite; they are very helpful when you need to ask for directions or need assistance. Something to note is that Swedes, although polite, may not be as warm and easy to form friendships with as the other international students. Swedes are known for being closed off to strangers and may take some time to engage in meaningful friendships. For example, my groupmates are all Swedish. They are extremely sweet and helpful, but have not been receptive to my attempts to hang out with them outside of the classroom. This is completely opposite in comparison to the other international students I have met, who have always been welcoming and open to hanging out in social situations outside the classroom.

Even if they do not hang out as freely as their foreign counterparts, it has been a great experience to work with my Swedish groupmates. One aspect of Swedish culture that I have found particularly suitable for American students is that of fika. Fika is a Swedish coffee break, similar to British tea time. Unlike the British tea time, however, fika can take place at any time and involves strong coffee

and a kanelbulle (cinnamon bun). Coffee is extremely popular in Sweden, with Sweden having the third highest coffee per capita consumption in the world (Ferdman, 2014). Students should be sure to take advantage of the fika culture via the student coffee and pastry discount at the convenience store chain Pressbryan.

## **Language**

The prevalence of English speakers makes Stockholm a desirable site for an MQP. The masters courses at KTH are all taught in English, so it is not necessary to know Swedish to complete the project and assignments. Even in communications outside of school, Swedish is not necessary. In every store and situation that I have been in, everyone has been able to speak fluent English. Although knowledge of Swedish is not a requirement for participation in this project site, students should try to complete some brief study of the language. The street signs and some menus are only offered in Swedish, making it helpful to know basic words. Furthermore, it is an important part of engaging in a culture to try to know at least the basic phrases of the language. Thus, I would recommend basic Swedish lessons during the PQP period. These lessons should include basics such as numbers, food items, and phrases such as “thank you very much”, “excuse me”, etc. Duolingo was the program used by Sam and I, and it has proved sufficient for understanding the language basics.

## **Tourism**

There are many places to explore in Stockholm. Gamla Stan, or the Old Town, is a must for visitors. Here students can enjoy walking around the cobblestone streets, looking through the many gift shops, and trying unique restaurants. Aifur is a Viking themed restaurant in Gamla Stan that, although pricey, is worth experiencing. Waiters dress like Vikings and traditional live music is played, creating a fun atmosphere for a night out in Old Town. Less expensive than Aifur is a popular burger restaurant called Barrels, Burgers and Beer. The burgers offered at the restaurant are, in my opinion, some of the best in Stockholm. Near this area there are several museums such as the Royal Palace and Nobel museum.

Close to Gamla Stan is an area with several museums of note. Tourists to Stockholm must visit the Vasa Museum. The Vasa was a ship that sunk right as it set sail in the 1700s. The ship was later raised, and is now in the museum along with the history of the period and how the boat has been preserved. Next door is the Nordic Museum. The information inside this beautiful building provides a great overview of the culture and history of Sweden. To learn about Sweden’s military history, I

recommend the Army Museum. It has many interesting displays that lay out the history of Sweden during times of war and peace. A guided tour at City Hall is worth the trip. The impressive and lavish architecture combined with the extensive knowledge of the tour guides put this guided tour at the top of the list.

In late May, when the weather is warmer, the oldest open-air museum in the world, Skansen, is a great place to visit. Skansen has traditional Swedish homes on display along with actors dressed to the period, speaking about the old way of life. The zoo area houses animals native to Sweden such as moose and reindeer.

### **Spring Holidays and Events**

Spring in Stockholm is an enchanting time. When I first arrived, it was cold, dark, and snow still covered the ground, making the transition from the end of winter to the beginning of spring even more spectacular. People emerge from their rooms to grill and play outdoors. With the springtime comes several holidays students should take advantage of over the course of their project.

The main holiday during this season is Easter, which includes nearly a full week off from school. A pastry that should be tasted before Easter is the semla. This bun was originally eaten for Fat Tuesday, a celebration before the Christian season of Lent. Filled with cream and almond paste and topped with powdered sugar, this bun is only sold from December to Easter—so travelers during this season should be sure to try this Swedish delicacy (Hincks, 2018). Besides the Fat Tuesday buns Swedes celebrate Easter through gathering with family in the countryside. Traditional meals include pickled herring, salmon, potato dishes, eggs, and lamb (Tidholm and Lilja, 2018). One uniquely Swedish Easter tradition resembles American Halloween celebrations. In the countryside on the Thursday before Easter, children dress up like witches and ask neighbors for Easter sweets. This fun celebration stems from the belief held long ago that on this day witches would fly to the mountains to meet with Satan. Fires would be lit to scare off these witches, resulting in the tradition of lighting bonfires in the days before Easter (Time Inc., 2009).

Traditional Easter events can be found around Stockholm, such as the Easter market in Skansen—however it is more popular for students to travel during this time. I went to Tallinn, Estonia, and I highly recommended this destination. The ferry that goes between Stockholm and Tallinn is recommended by many students I have met here. Tallinn has a beautiful Old Town, medieval museums, and a lively nightlife scene.

Another event students should take advantage of is Kulturnatt. This occurs during a spring Saturday and it seems all of Stockholm participates. During this evening, from 6:00pm to midnight almost all of the museums are open for free. We utilized this night to explore some of the more expensive museums. Other than the Kulturnatt, there are some museums that are free during certain times. The Natural History Museum and the Swedish History Museum are great museums that are always free. The Technology Museum is full of interactive exhibits and is free on Wednesday nights.

At the end of April on the eve of May 1<sup>st</sup> is a large celebration called Valborg. Since the medieval ages Valborg has been a time of celebration. It marked the imminence of spring and bonfires were lit to scare away predators as animals were let out to pasture (Tidholm and Lilja, 2018). Swedes continue the tradition of lighting large bonfires, with the holiday now associated with large gatherings of students, drinking and merriment (Edström, 2018). The college town of Uppsala hosts events and festivities for the five days leading up to Valborg. Students come from all over to visit Uppsala, see the boat races, giant bonfires, and drink with friends. On this night, Skansen hosts a bonfire and traditional music. Students receive free entry—so they can go look at the animals during the light hours and in the evening enjoy the music and bonfire lighting.

## **Safety**

As cities go, Stockholm is extremely safe. The general crime rate in Sweden is lower than that in the US (Sweden 2018 Crime & Safety Report, 2018). The main train station plays the announcement “be aware of pickpockets” often—a good reminder in any city. I have never felt safer walking through a city at night as I have in Stockholm. If students exercise the normal amount of caution that should be used in any metropolitan area they will be more than safe. However, if an emergency does arise, it is good to know the emergency number is 112.

## **Budget**

Stockholm is known for its high prices, so students should budget similar to the London or New York City project sites. However, Sweden offers many discounts and deals for students, so participants should be alert to these discounts and always ask if there is a student price. The budget included in the appendix is an estimate of what I have spent during my time here. Students can think of ways to save money such as more homemade meals and drinking less coffee at cafes. As part of the PQP process, I encourage students to make their own budgets, looking at conversion rates and general prices near the time of departure.

## Conclusion

Establishing an official MQP site at KTH is the perfect opportunity for WPI to expand the experiences offered to its students and everyone involved in the current ISRP is eager to see this project site grow. An additional project center helps fulfil WPI's mission of having 90% of students complete an overseas project in addition to accommodate the growing number of international studies double majors. Not only does the project work fulfill MQP requirements but the cultural experiences offered by studying in Stockholm are extensive. Museums, neighboring countries, restaurants and events are all easy to access through Stockholm's public transportation system, and the city is extremely safe.

One of the most valuable lessons came from working with non-WPI students brought to light some differences in schooling. Sam and I noticed that our group members sometimes struggled with the open-endedness of these projects. Throughout the course of the project they brought up their concern about not having discrete guidelines for the project requirements, report, and problem. This is something I had not realized WPI had prepared me so well for. WPI's project-based curriculum continuously challenged me with open-ended problems with no one solution. I had practice defining problem requirements and understanding how to present the information, where my KTH counterparts were a bit hesitant and less confident without strict guidelines, as they have had more classes with structured home assignments and tests. Since I had only previously worked with other WPI students I didn't realize these project skills weren't universal. As a graduating senior, I am grateful for this revelation. Now, after completing my MQP abroad at a different university, I understand just how much WPI has taught me.



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## **APPENDIX A: KTH Academic Schedule**

Academic years at KTH consist of two semesters, each consisting of two terms. Calendars for current and future academic years can be found at the link to the KTH website listed below.

<https://www.kth.se/en/student/schema/lasarsindelning-for-undervisning-och-examination-1.1007>

## APPENDIX B: Budget Sheet

<b>Flights</b>	
Round Trip, BOS-ARN	\$700.00 (Price Varies)
<b>Housing</b>	
Lappis Apartments, 3-mo sublet	\$1,250.00
<b>Home Goods</b>	
Ikea room furnishings	\$50.00
General supplies (toilet paper, detergent, toiletries)	\$40.00
New Outfit/shoes	\$60.00
<b>Transportation</b>	
Access Card + 90-day plan (student price)	\$200.00
<b>SIM Card and Data Plans</b>	
1 SIM Card and three 1 mo. plans	\$65.00
<b>Groceries</b>	
Groceries	\$500.00
<b>Museums</b>	
Vasa Museum, Nobel Museum, Royal Palace, etc.	\$45.00
<b>Restaurants and Drinks:</b>	
Restaurants	\$125.00
Alcohol	\$200.00
Quick Lunches/Lunch on Campus	\$75.00
Fika	\$75.00
Snacks	\$100.00
<b>Travel</b>	
Copenhagen, Denmark (3 days)	\$300.00
Tallinn, Estonia (4 days)	\$700.00
<b>Misc.</b>	
Souvenirs, (mis)adventures, etc.	\$215.00
<b>Total:</b>	<b>\$4,700</b>

## **APPENDIX C: Notes and Observations for Future Project Site Participants**

A note on future International Studies Projects:

Future International Studies majors making use of this project site can be able to study in detail these cross-cultural interactions. Sweden offers other studies for international studies majors. It has been interesting to see how Sweden has handled social issues like gender equality; I have seen several gender neutral/multi stall bathrooms. I went to a women-in-tech event and it was amazing to hear how Swedish men talk about gender equality in a respectful way. In my own cultural bias, I was notably shocked when I first saw so many dads pushing strollers and out with their kids, as in America it is more common to see mothers out with their children. These sorts of cultural differences and how they affect gender identity and expression could be an interesting topic for student's project.

Other studies include how Sweden has dealt with the influx of immigrants and refugees. Understanding how this has affected Swedish identity would be very interesting to investigate. Museums such as the Police Museum, and the Swedish History Museum, and several other museums I've been to all have exhibits with a welcoming and unique exhibits on diversity in both the past and present. The Police Museum has an exhibit on hate crime in Sweden. Investigating how such a homogenous state deals with different people would be very interesting.

A note on laundry, recycling and groceries:

Laundry is free for students living at Lappis. Each building has its assigned laundry room. Appointments are scheduled for two-hour slots on the machine in the laundry room. Scheduling about four days early will ensure a slot at a reasonable time. Residents can schedule laundry up to four times a month. Detergent can be purchased at the ICA grocery store on the Lappis campus. This grocery store is good for last minute snacks or urgent items, however for better priced groceries most students go to Liddl, Willy's or Hemkorp. Students should explore several grocery store options to find their favorite. The ICA that is on the Lappis campus is a great place to return cans and bottles. The Swedish can return system is much more worthwhile compared to the can return system in Massachusetts. The machine inside the ICA takes any can or bottle that says "pant", and these deposits can sometimes be worth \$0.25. So, if the student has a party with their corridor mates, they can deposit the cans and have enough to buy their coffee and kanelbulle the next day. Pressbryan offers a student discount of half price coffee and kanelbulle—a classic fika tradition.

A note on restaurant outings:

Going out to eat can be very expensive in Stockholm, but there are some restaurants that are a must! On Thursdays there is the traditional Swedish meal of pancakes and pea soup. The Chestnut Tree restaurant in Gamla Stan offers this meal with large portions for a decent price. Student restaurants on the KTH campus are also a good choice to get decent food at reasonable prices.

Travelers cannot leave Stockholm without having Swedish meatballs. Meatballs for The People offers extremely high-quality meatballs. The price is a bit high, but the meatballs and lingonberry sauce are worth it. For the American food craving, Barrels, Burgers, and Beers is a burger restaurant in Gamla Stan with reasonable prices and delicious burgers. The local Swedish beef used has an amazing flavor.

A note on drinks:

Stockholm has an interesting alcohol monopoly. There is only one chain of stores where alcohol can be purchased. These stores, called System Bolaget, are pricey and have limited weekend hours. Cheap beers can be found at bars students frequent.

A note on Transportation Cards and SIM Cards:

The Access card grants access to the metro system, the buses, ferries, trams, and commuter rails.

Purchase the student card at Universtetet station by Lappis and say student price to get the discounted price without a valid international student ID card.

Comviq offers cheap data plans. Month to month plans can be purchased at 7-11 Convenience stores.

A note on Home Goods:

No trip to Sweden would be complete without going to Ikea. On weekdays, there is a free bus that goes directly to Ikea. Go here to get the necessary sheets, cookware, trashcans, etc. A Tupperware to bring lunch to school is a necessity with the high out to eat prices. Before buying other things such as plates, cups, and utensils, check to see what common items the corridor kitchen offers—with a shared kitchen every corridor is slightly different in what common items are offered.

A note on professors:

It is common throughout Europe to call professors by their first names instead of by their title and surname.