

學校簡介

瑞典皇家理工學院 (Kungliga Tekniska högskolan, KTH) 成立於1827年，為歐洲頂尖的理工大學，同時也是瑞典最大的工學院。學生就讀於工業工程與管理學院 (School of Industrial Engineering and Management)，其中可研修能源科技 (Energy Technology)、工業經濟與管理 (Industrial Economics and Management)、機器學習 (Learning in Engineering Sciences)、工程設計 (Engineering Design)、材料工程科學 (Materials Science and Engineering) 與製造工程 (Production Engineering) 相關課程。課程包含講授、個人作業、小組專案報告、研討會、實驗實作、客座演講與實習等，提供學生多元學習管道，培養全方面學術與實作知識與技能。此外，皇家理工學院學制彈性，可衝堂選課，增加學生修課意願。

國外研修之課程學習（課內），另外推薦受益最多/最喜歡的課程

學生選修四堂課程，分別為線上學術英文寫作 (English for Academic Studies (online))、工業管理 (Industrial Management, Basic Course)、科技創新與創造管理 (Management of Technology Innovation and Creativity) 與全球能源市場移轉系統 (Global Energy Markets and Systems in Transition)。以下逐一說明課程內容。

（一）、線上學術英文寫作

課程由淺入深，每週提供架構性的學術寫作技巧線上課程，學生可彈性運用時間閱讀課程講義，完成每週學習進度。課程段落之間有隨堂測驗（選擇題、文章寫作與影片寫作）供學生檢視學習成效，可即時瞭解自身學習狀況。

（二）、工業管理

課程包含三大模組，工業價值創造 (Industrial value creation)、產品成本 (Product costing) 與財務成本會計 (Financial accounting and corporate finance)。課程為教授講授為主，小組報告、模擬測驗為輔，測驗依照三大模組進行測驗，於模組課程授後約一週內進行考試。

（三）、科技創新與創造管理

課程主要針對創新進行講述，以學術角度解釋創新種類、效益與運用，並同時搭配研討會進行實際應用，教授帶領同學針對研討會主題進行討論，學生可於研討會中發表意見外，還可聆聽同學們不同面相之見解，藉此精進自身語言表達能力與邏輯思考。最後，該課程要求小組針對現有公司並依照課程大綱撰寫一份創新報告，考驗學生對於實務與理論的掌握。

（四）、全球能源市場移轉系統

課程主要針對全球能源市場進行教學，課程架構包含學術理論，說明能源市場價格反應機制、能源轉移機制與科技發展驅動方向。其中，課程研討會提供學生一個開放且包容的討論空間，學生需根據研討會主題製作相關報告書並呈現於課程中，最後根據（教師與同儕）課堂回饋進行後續修改完成最終專案報告書。

國外研修之生活學習（課外）

國外研修之生活學習(課外)

瑞典皇家理工學院之課程皆具有一定水準的壓力，面對如此的壓力，學生常利用課餘時間至圖書館或咖啡廳唸書學習，並於閒暇時間去近郊自然風景區欣賞風景放鬆自我，另外，透過學校課程與活動認識新朋友，拓展交友圈。因宿舍有共享廚房，學生也故此習得日常烹飪技巧。

交換/研修之具體效益（請條列式列舉）

- （一）、增進英語語言能力（口說、寫作、閱讀、聽力）
- （二）、增進商業管理能力與團隊溝通能力

- (三)、 拓展交友圈與國際視野
- (四)、 增進廚藝與日常生活自理能力
- (五)、 增進旅遊規劃與執行能力

海外生活期間是否曾遭遇困境，及是否解決問題? 如是，請說明如何解決問題;如未解決，請說明事件最大的啟發及思考未來可以怎麼解決?

冬天路面結冰行走不便，摔傷尾椎，造成行走稍微不便。解決方案為去買靴子，於下雪天避開結冰路面，以警慎小心的態度步行。

海外生活期間是否曾遭遇文化衝擊，您如何去面對及適應?

無，適應良好。

海外生活歷練是否為您人生帶來不一樣的改變或者個人特質上的轉變，最大的成長是什麼?

懂得理解文化差異，與人維持健康且舒適的距離。

您認為獎學金對您海外研修最大的幫助是什麼? 有無獎學金是否會改變您的出國計畫?

減低經濟壓力，增加出國意願。

感言及心得感想

經過半年的出國研修，學生成長許多。剛踏入瑞典時，處處皆是驚喜，對任何事物皆感到好奇與興奮，起初總會因不適應想起台灣。待時間過去，學生逐漸適應瑞典的生活、天氣與課程，除了改變自身的生活習慣之外，更是學習如何將台灣文化與瑞典文化融合，找到自己最舒服的生活方式。非常推薦來瑞典研修，瑞典擁有豐沛的大自然，生活步調適中，可幫助身心靈重新找到平衡，達到工作生活平衡。瑞典的官方語言雖是瑞典語，但每位瑞典公民幾乎皆有優良的英文溝通能力，交換學生即使無法講瑞典語，仍可在當地生活，無需擔心語言的隔閡。因此，十分推薦至瑞典研修。

英文心得(包含學校簡介、課程學習、生活學習、具體效益、心得感想等等)

1. Motivation

Sweden is the largest country in the Nordic region and has significant economic effect in the European. At the same time, Sweden has an advanced industrial, biomedical and innovative business environment, enabling Sweden to maintain its international competitiveness. Furthermore, Sweden maintains a large range of forests, lakes and natural areas, people enjoy high-quality living space. There is 8,515 kilometers between Sweden and Taiwan. Such a distance creates mystery and unknowns to me. I hope to broaden my knowledge by studying abroad, understand the different culture and education system of Sweden and other European countries, improve my international competitiveness and the ability of business management, and transform these abilities into employment competitiveness to increase self and social value.

2. Introduction of Kungliga Tekniska högskolan

Founded in 1827, the Royal Swedish Institute of Technology (Kungliga Tekniska högskolan, KTH) is the top technical university in Europe and the largest engineering school in Sweden. I studied in the School of Industrial Engineering and Management, where students can study Energy Technology, Industrial Economics and Management, Machine Learning (Learning in Engineering Sciences), Engineering Design, Materials Science and Engineering and Production Engineering. The courses include lectures, individual assignments, group project reports, seminars, practical experiments, guest lectures and internships, and so on. KTH provides students with multiple learning channels and cultivates all aspects of academic and practical knowledge and skills for students. In addition, the Royal Institute of Technology's education system is flexible, and you can choose courses at the same time, increasing students' willingness to take courses.

3. Study plan

I took four courses, which are English for Academic Studies (online), Industrial Management (Basic Course), Management of Technology Innovation and Creativity and Global Energy Markets and Systems in Transition. The following describes the course content one by one.

I. English for Academic Studies (online)

This course starts from step by step, and provides structured online courses on academic writing skills every week. Students can use their time flexibly to read the course handouts and complete the weekly learning progress. There are quizzes (multiple-choice questions, article writing, and video writing) for students to check the learning progress in real time.

II. Industrial Management (Basic Course)

The course consists of three modules including Industrial Value Creation, Product Costing and Financial Accounting and Corporate Finance. This course lectured mainly by professors. Also, students must finish group project reports and modules examinations. These examinations are conducted according to the three modules, and these examinations will be taken within about one week after the module course is taught.

III. Management of Technology Innovation

This course is mainly about innovation, explaining the types, benefits, and applications of innovation within an academic point of view. The professor leads the students to discuss each topic of lesson in the seminars. Therefore, students got chances to express opinions in the seminars, and also to listen to other perspectives from other students. By doing this, students have a space to improve their language expression ability and logical thinking. This course requires the study group to write an innovation project report for an existing company and according to the syllabus, testing students' mastery of practice and theory.

IV. Creativity and Global Energy Markets and Systems in Transition

The course is mainly aimed at teaching the global energy market and systems in transition. The course structure includes academic theories and practical assignments. Lecturers explained the mechanism of energy price, technological transfer and the development of technology. Also, seminar provides an open and inclusive discussion space for students. Students need to make reports according to the learning objectives and present them in the course. Finally, they will make subsequent revisions to complete the final project report based on feedbacks given by lecturers and peers.

V. Life in Stockholm

The courses in KTH all have a certain level of pressure. Faced with such pressure, I often used my spare time to study in the library or in the café. Also, in my spare time, I highly recommend go to the suburban natural scenic areas to enjoy the astonishing landscapes. Moreover, I expanded my friend zone through courses and activities. Thanks to the shared kitchen in my dormitory, I also acquired daily cooking skills.

VI. Beneficial of Being an Exchange Student

- Improve English language skills (speaking, writing, reading, listening)
- Improve business management and team communication skills
- Expand social boundary and horizon
- Improve cooking skills and self-care ability in daily life
- Improve tourism planning and execution capabilities

4. Reflection

I had grown a lot after studying abroad in 6 months. When I first stepped into Sweden, I was full of surprises everywhere, was curious and excited about everything. At first, I was not get used to Sweden. As time passed, I gradually adapted to the life in Sweden. It is highly recommended to study in Sweden. Sweden has abundant nature and a moderate pace of life, which can help the body and mind to find a balance and achieve a work-life balance. Although the official language of Sweden is Swedish, almost every Swedish citizen has excellent English communication skills. Even if exchange students cannot speak Swedish, they can still live in the Stockholm without worrying about language barriers. Therefore, it is highly recommended to study in Sweden.