

A. 學校簡介:

達姆斯塔特工業大學（Technical University of Darmstadt）為德國 TU9 聯盟成員，該聯盟匯聚德國九所歷史悠久且以研究為核心的頂尖理工大學。學校創立於 1877 年，位於法蘭克福南方的達姆斯塔特市，該地亦為歐洲太空總署（ESA）、Fraunhofer 研究所及 Merck 製藥總部等科研與產業機構的所在地，因而享有「科學之城」的美譽。

B. 國外研修之課程學習（課內），推薦受益最多/最喜歡的課程:

我覺得受益最多的課程是 Nanoelectronics，課程中從微觀的角度講解電子和奈米電子元件的運作原理，由於現代科技規模越來越趨近奈米尺度，因此在奈米度下電子的行為模式會不相同。這門課的教授是科學怪人，邏輯清晰且各方面知識都涉略頗深，面對學生的提問總是能從源頭開始解釋，而上課的觀念講解也非常清楚。因為這門課讓我對電子學的理解更透徹，相比在學校修習電子學(一)和(二)，只有公式計算。期末考也以很不一樣的方式進行，雖然老師上課講解許多公式，但期末口試的時候卻沒有要求我們背誦任何一條公式，反而是引導我們說出上課講解的觀念，不停問為甚麼會導致這樣、解決方法有哪幾種，以及這些方法如何運作的。透過準備期末口試，我對整堂課的觀念非常清晰，也明確知道課程脈絡和架構，可以說收穫頗多。然而，我對於我的口試表現不甚理想，因為教授邏輯思維非常好，導致跟他對話時會感到緊張而腦袋一片空白，有幾題我甚至無法思考，然而老師還是會以引導的方式讓我回想起來。整個考試過程像聊天一樣輕鬆，但是也需要時時刻刻繃緊神經。我想透過這堂課的上課模式，讓我更理解學習一門知識的正確方式，以及從頭到尾徹底理解一門學問是什麼樣子的，因此覺得自己的學習方式還有待加強。

C. 國外研修之生活學習（課外）:

剛到德國時，心情很慌張，感覺當地的人把我們當外來者，隨時會搶走我們的東西。但是在這裡生活一陣子之後，逐漸適應走在德國街道上，其實是沒有人會注意你的，大家都沉浸在自己的生活裡，而我也開始習慣德國辦事效率和一些複雜的行政流程，不過這些事情都是幾封電子郵件可以解決的。我很喜歡在歐洲的獨立生活，有一種活著的感覺，什麼事情都可以自己決定，但相對的也需要對自己的行為負責。在這段交換生活的前半部我們都在旅遊，在旅遊的過程學習到很多不一樣的事物。像是同時需要處理學校選課的事情，旅遊前要規劃行程、安排住宿和訂飛機票。然而這些事情並不是在第一趟旅程就可以做到滿意的，也會發生一些突發狀況需要當下和朋友一起討論解決。在去過許多國家旅行之後，發現踏出舒適圈並不困難，只要有想法就去做、出發去走走。我發現之前所在意的一些龜毛小事都會被省略，因為身在很美的地方，或是像德國這種舒服的環境裡，我們會把所有精神放在走訪每個景點和街角上，幾乎不會再在意以前一些潔癖小習慣，反而是花更多時間去整理照片或感受這個地方帶來的沉浸式體驗。

D. 交換/研修之具體效益（請條列式列舉）:

1. 規劃每天生活

在歐洲生活最大的體悟就是一天的時間真的很長，有可能是因為晚上九點才天黑的關係，或這裡生活步調很慢。一天中從早上開始就不太會賴床，因為那邊的太陽很溫和舒適，總是會想起床做點什麼。沒事的話我會去 Mensa 用餐然後到校園走走，然而通常都是到圖書館讀書。下午可以完成些個人的事情然後和朋友們在卡村球場打球，晚餐到朋友家煮飯聊天，飯後喝點啤酒散步。一天中總是可以劃分出自己和聚會的時間，這樣的生活模式對我來說很舒適。我們也會在漫無目的的下午搭上一台不常搭的公車到附近森林晃晃，在裡面散步很舒服。

2. 說走就走的旅行

在德國，交通非常方便，特別是 TU Darmstadt 有學生學期票，因此可以搭所有德國的大眾運輸。有時候我們會搭上火車去附近的城市，感受河畔城市的氣氛。德國的城市不管大小，內容物總是一座高塔、一座老橋、一棟山上城堡和沿著河畔的草地和人行道，隨處可見人們坐在草地上聊天喝酒、玩耍，這讓我們體會到生活不一定要塞滿正事，而享受生活應該要被首要考量進每日行程表裡面。

3. 對於生活更有目標

由於在這裡多出很多休閒時間，我開始思考自己未來想做什麼。也透過結交朋友了解他們對於未來的想法。相比台灣一致的升學制度，歐洲人大多對於自己所學的專業領域是有理想的，這對於在台灣讀工程的我有所體悟。之前的我選擇工程類是因為未來就業機會和薪水，但是卻少了像歐洲人那樣對於專業的熱忱，一股發自內心的初衷，而他們對於生活上的想法是在交談中可以感受到的，而我也想透過這樣的氛圍找到我的生活目標。

E. 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？

對我來說，這段交換沒有太多不順遂的事情，比較掙扎的是課程上聽不懂，而因此落後一整個月的課程。不過這對於交換生的我其實也不是很大的事情，畢竟交換的重心不是課業。但是在這個過程中我還是有努力找學校資源、問助教問題去克服這個困難，最後有成功通過這門課。

F. 海外生活期間是否曾遭遇文化衝擊，您如何去面對及適應？

最大的衝擊是跟室友的相處。因為我們交換生常常會輪流到其他人家裡煮飯，食材費用平分、可以一起煮台灣食物，也因為朋友圈都是交換生所以常聚在一起。我室友是埃及人，他認為邀請朋友應該到宿舍的公共空間而不是房間裡。針對這一點我有跟他溝通，我有權利邀請朋友到我的房間裡但我可以保證不會製造髒亂在公共空間，也不會打擾他們的生活。而室友最後有明白我的立場，我也盡量避免頻繁帶太多朋友到房間裡，因此我和室友之間的氣氛有稍微緩和。

G. 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？

我覺得最大的成長是找到自己的生活節奏，在台灣很常被時間推著跑或是跟著身邊的人趕時間的感覺，而在歐洲每個人都可以決定自己的步調，他們不會被手機綁架，也不會一直裝忙，在課業之餘還會好好享受生活。而我學習到的是減少手機的使用時間，多花時間去觀察環境、認識新的人，了解不同想法，同時也放慢自己的步調，感受時間充裕的節奏，如此一來效率不但提升不少，對於生活也更開朗樂觀。

H. 感想與建議：

每個人在交換中所追求的事物都不一樣，而我認為在歐洲生活半年後所感受到的對每個人來說都很不一樣。對我來說，我喚醒了一個更會思考的自己，也在生活中學會放鬆、學會歐洲人的鬆弛感和他們的樂觀，生活中的所有事情不需要都有目的或是意義，而是那份熱愛與體悟。在這趟旅程中，我想我學會了生活。我想建議所有正在考慮是否要去交換的人，如果你的目標不單單只是想要去很多國家旅遊，而是想要尋找人生方向，來歐洲一定會有不一樣的看法，也許可以改變你的一生。

I. 英文心得

During my exchange experience in Germany, one of the most influential courses I took was *Nanoelectronics*. This course explored the fundamental principles of electronics and nanoelectronic devices from a microscopic perspective. As modern technology increasingly approaches the nanoscale, the behavior of electrons changes in ways that differ significantly from larger systems. The professor, whom many students affectionately described as a “scientific genius,” possessed both remarkable clarity and a broad knowledge base. He could always explain a concept by tracing it back to its origin, and his logical approach to teaching helped me gain a deeper understanding of electronics than I had ever achieved through my home university’s *Electronics I* and *Electronics II* courses, which had focused mainly on formula manipulation. What made the course even more special was the final exam format. Instead of requiring us to memorize and recite formulas, the oral examination emphasized explaining concepts, identifying causes, and describing possible solutions. The professor continuously asked “why” questions, guiding us to think critically and articulate our reasoning. Preparing for this oral exam clarified the entire course framework for me and allowed me to grasp the logic behind the subject more thoroughly. Although I felt nervous during the exam and sometimes went blank, the professor’s guiding questions helped me recall and restructure my thoughts. This experience taught me that true learning lies not in rote memorization but in building a clear and logical understanding of an entire field.

Outside the classroom, adapting to life in Germany was equally transformative. At first, I felt anxious, even fearful, as if locals might see us as outsiders. However, over time I realized that most people were immersed in their own lives and paid little attention to strangers. This helped me relax and gradually feel more comfortable. I also grew accustomed to Germany’s bureaucratic efficiency and learned how a few emails could resolve seemingly complicated administrative processes. Independent living in Europe gave me a strong sense of agency; I could decide everything for myself, but it also meant I had to take full responsibility for my actions. Traveling across Europe was another highlight of my exchange. With the TU Darmstadt semester ticket, transportation was extremely convenient, and spontaneous trips to nearby cities became a regular part of life. Every German city, no matter the size, seemed to share common features: a tall tower, an old bridge, a hilltop castle, and riverside spaces where people gathered casually to talk, drink, or play. This environment taught me that life does not need to be filled with constant productivity. Instead, enjoying the moment and prioritizing relaxation are equally important.

Daily life also carried valuable lessons. I learned to plan my days with balance—studying at the library in the morning, engaging in sports or social activities in the afternoon, and sharing meals with friends in the evening. Sometimes, my friends and I would take a random bus to explore nearby forests, simply enjoying walks in nature. Such experiences taught me to live more purposefully and appreciate the slower pace of European life. I also reflected on my career goals. Conversations with international friends revealed how deeply many Europeans were motivated by passion for their chosen fields, whereas my own decision to study engineering had been driven largely by financial prospects. This realization pushed me to reconsider my future path and search for more intrinsic motivation.

Cultural differences also shaped my growth. For instance, I had disagreements with my Egyptian roommate about inviting friends into our dorm. Through communication, I expressed my right to host friends in my room while assuring him that I would respect the shared spaces and his comfort. Eventually, we reached a compromise, and this experience taught me the importance of balancing personal rights with mutual respect.

Looking back, the greatest transformation I experienced was finding my own rhythm of life. In Taiwan, I often felt pushed by time and pressured to keep up with others. In Germany, however, I learned to slow down, reduce my reliance on my phone, and immerse myself in real experiences—whether through conversations,

observations, or quiet reflection. This not only improved my efficiency but also made me more optimistic and open-minded.

Overall, this exchange awakened a more thoughtful and relaxed version of myself. I learned to embrace uncertainty, enjoy the present, and understand that not every action needs a clear purpose or outcome. For anyone considering exchange, I believe the real value lies not only in traveling to many countries but also in discovering new perspectives and possibly even redefining one's life direction. For me, this journey was truly a lesson in how to live.